

December 26, 2006

Mr. J. Conway  
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 PROBLEM IDENTIFICATION AND RESOLUTION  
INSPECTION REPORT 05000263/2006008

Dear Mr. Conway:

On December 1, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed a team inspection at the Monticello Nuclear Generating Plant. The enclosed report documents the inspection findings which were discussed on December 1, 2006, with you and other members of your staff during an exit meeting.

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

On the basis of the samples selected for review, there were no findings of significance identified during this inspection. The team concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution programs. However, during the inspection, several examples of minor problems were identified where the documentation of an issue was incomplete, in that the extent of the evaluation and the status of the corrective actions could not be clearly discerned. Additionally, there were several examples where operating experience was not properly evaluated for applicability to the station. Each of these issues were also identified during prior Problem Identification and Resolution Inspections occurring in 2004 and 2005.

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), accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

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

Docket Nos. 50-263  
License Nos. DPR-22

Enclosure: Inspection Report 05000263/2006008  
w/Attachment: Supplemental Information

cc w/encl: M. Sellman, Chief Executive Officer  
and Chief Nuclear Officer  
Manager, Nuclear Safety Assessment  
J. Rogoff, Vice President, Counsel, and Secretary  
Nuclear Asset Manager, Xcel Energy, Inc.  
State Liaison Officer, Minnesota Department of Health  
R. Nelson, President  
Minnesota Environmental Control Citizens  
Association (MECCA)  
Commissioner, Minnesota Pollution Control Agency  
D. Gruber, Auditor/Treasurer,  
Wright County Government Center  
Commissioner, Minnesota Department of Commerce  
Manager - Environmental Protection Division  
Minnesota Attorney General's Office

J. Conway

-2-

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), accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

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

Docket Nos. 50-263  
License Nos. DPR-22

Enclosure: Inspection Report 05000263/2006008  
w/Attachment: Supplemental Information

cc w/encl: M. Sellman, Chief Executive Officer  
and Chief Nuclear Officer  
Manager, Nuclear Safety Assessment  
J. Rogoff, Vice President, Counsel, and Secretary  
Nuclear Asset Manager, Xcel Energy, Inc.  
State Liaison Officer, Minnesota Department of Health  
R. Nelson, President  
Minnesota Environmental Control Citizens  
Association (MECCA)  
Commissioner, Minnesota Pollution Control Agency  
D. Gruber, Auditor/Treasurer,  
Wright County Government Center  
Commissioner, Minnesota Department of Commerce  
Manager - Environmental Protection Division  
Minnesota Attorney General's Office

DOCUMENT NAME: C:\FileNet\ML063600391.wpd

Publicly Available       Non-Publicly Available       Sensitive       Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII		RIII				
NAME	BBurgess for NShah:dtp		BBurgess				
DATE	12/26/06		12/26/06				

**OFFICIAL RECORD COPY**

DISTRIBUTION:

TEB

PST

RidsNrrDirIrib

GEG

KGO

GLS

CST1

CAA1

LSL (electronic IR's only)

C. Pederson, DRS (hard copy - IR's only)

DRPIII

DRSIII

PLB1

TXN

[ROPreports@nrc.gov](mailto:ROPreports@nrc.gov) (inspection reports, final SDP letters, any letter with an IR number)

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-263  
License Nos: DPR-22

Report No: 05000263/2006008

Licensee: Nuclear Management Company, LLC

Facility: Monticello Nuclear Generating Plant (MNGP)

Location: Monticello, Minnesota

Dates: November 13 to December 1, 2006

Inspectors: N. Shah, Project Engineer, DRP–Team Lead  
L. Haeg, Resident Inspector, DRP  
R. Winter, Reactor Engineer, DRS

Approved by: B. Burgess, Chief  
Branch 2  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000263/2006008; 11/13/2006 - 12/01/2006; Monticello Nuclear Generating Plant; biennial baseline inspection of the identification and resolution of problems. No violations or findings were identified. The inspection was conducted by a regional projects inspector, a resident inspector, and a regional electrical engineering specialist.

### Identification and Resolution of Problems

The team identified that the licensee was effective at identifying problems and incorporating them into the corrective action program (CAP). In general, the licensee was effectively prioritizing, evaluating, and correcting issues. However, the team identified that the licensee demonstrated a lack of sensitivity to internal CAP performance indicators, in that some of these indicators, which showed potential deficiencies in the program, had not been evaluated. Additionally, the team identified examples where the documentation of an issue did not clearly indicate whether it had been properly evaluated, what the status of the corrective actions were, or whether it had been effectively resolved. Some of these examples were similar to those identified during prior Problem Identification and Resolution (PI&R) inspections occurring in 2004 and 2005.

Although the licensee was effective at screening and disseminating operating experience (OE), the team identified several examples where OE was not considered as a precursor to events during cause evaluations. In particular, the team noted that the licensee's revised guidance for performing apparent cause evaluations specifically precluded a review of operating experience as part of the evaluation. As stated above, consideration of operating experience was also an issue identified during prior PI&R inspections.

Licensee audits and self-assessments were generally thorough, probing, and made good use of outside resources to maintain independence. The team noted that identified issues were properly tracked in the CAP.

Through interviews, the team concluded that workers at the site were encouraged to identify issues through the CAP and were generally familiar with the various other avenues available. However, the team identified that the level of rigor associated with the Differing Professional Opinions (DPO) program was less than appropriate. Specifically, there was no clear interface between the DPO and CAP programs and documentation of how DPO issues were resolved was less than adequate. The team also noted that the originator often had to assume the burden of ensuring that their DPO was appropriately resolved. Overall, the team was concerned that these issues could result in some individuals being reluctant to use the DPO process in the future.

#### **A. Inspector-Identified and Self-Revealed Findings**

No findings of significance were identified.

**B. Licensee-Identified Violations**

No violations of significance were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (71152B)

##### a. Assessment of the Corrective Action Program

##### (1) Inspection Scope

The team completed one biennial PI&R inspection sample by assessing the licensee's processes for identifying and correcting problems. This included a review of program procedures, interviewing plant personnel, and attending various station meetings to understand the implementation of the licensee's CAP and related activities.

The team reviewed selected CAP products, such as CAP action requests (ARs), audits, self-assessments, and other documents to determine if problems were being identified at the appropriate threshold and entered into the CAP. This review primarily covered those items generated since the 2005 NRC PI&R inspection (Inspection Report No. 05000263/2005006).

The team evaluated whether issues were effectively documented, evaluated, and corrected in the CAP. The team reviewed selected ARs, apparent and root cause evaluations, prompt investigations, operability determinations, and common cause analyses. Attributes reviewed included the technical adequacy of the cause determinations and the adequacy of the extent of condition reviews including evaluations of potential common cause or generic concerns.

Other attributes reviewed by the team included the quality of the licensee's trending of conditions and the corresponding corrective actions. The team searched for items or issues that looked like potential trends and assessed whether the licensee had appropriately identified and captured these trends within the corrective action program. The team also reviewed licensee corrective actions stemming from previous Non-Cited Violations and other NRC identified issues and assessed their appropriateness.

The team also evaluated whether the licensee was appropriately tracking ARs that were closed to work requests or orders, and whether there was appropriate justification for those issues that had been downgraded since the initial screening. These were considered vulnerabilities in the CAP program due to the potential for issues to go unresolved.

During this inspection, the team reviewed 12 self-assessments, 14 audits, 62 CRs, 11 trend evaluations, and 23 apparent or root cause evaluations.

##### (2) Assessment

No findings of significance were identified.

On November 15 and 30, 2006, the team attended meetings of the Performance Assessment Review Board. This board, comprised of senior licensee management, was responsible for reviewing the quality of root and apparent cause evaluations and for monitoring the overall health of the CAP. The team noted that the Board effectively challenged the sponsors/authors of the cause evaluations being reviewed and appeared to provide effective high-level oversight of the CAP.

#### Identification of Issues

The licensee implemented a broad CAP governed by corporate-level policies and procedures. A shared computerized database was used for creating individual reports and for subsequent management of the processes of issue evaluation and response. This included determining the issue's significance, addressing such matters as regulatory compliance and reporting, and assigning any actions deemed necessary or appropriate. Workers were encouraged to raise concerns and typically identified issues at a low threshold. This was evidenced by the large number of ARs generated annually which were reasonably distributed across the various departments. While workers were familiar with the various avenues for raising concerns (NRC, CAP, etc), most preferred to bring issues directly to their supervision.

However, the team identified an apparent lack of sensitivity with the licensee's evaluation of some of the internal performance indicators monitoring the CAP. For example, the team noted that the licensee had experienced a large drop in the number of issues identified through November 2006 (about 3500) compared to the average annual number identified since 2003 (about 5300/yr). The licensee believed the drop was due to changes in the CAP made since 2005, but had not done a formal evaluation to verify this assumption. The team also observed that the licensee has been unable to meet the goal for the number of trends identified per quarter since 2005, and that about 30 percent of the total number of open items were open beyond their expected due dates. However, the licensee had not performed any evaluation to determine the cause of not meeting these goals. A similar observation was also identified in the 2003 PI&R (Inspection Report No. 05000263/2003009) report. The licensee documented this issue in AR 01064612.

The NRC had previously evaluated the licensee's trending program in the inspection quarter ending June 30, 2006. The inspection results were documented in Inspection Report 05000263/2006003. As stated in this report, the licensee's trending program was considered effective at identifying and resolving trends. However, the team identified one example where trends may be missed due to the "rolling up" of ARs. The team noted that there had been two ARs written for similar problems with 50.59 screenings, but that one of the ARs had been closed (i.e., "rolled up") to the other AR which resulted in only one being trend coded. This meant that a trend search of 50.59 screening issues in the CAP database would only identify one instance rather than two. The team was concerned that this practice could result in potential missed trends. The licensee documented this issue in AR 01064258.

## Prioritization and Evaluation of Issues

The team attended CAP AR screening meetings held on November 7, 8 and 9, 2006. The inspectors noted that issues were being appropriately challenged and that reportability, repetitiveness, and trending were discussed where appropriate. The team also observed that potential operability issues were being routed to the operating shift for review. The majority of issues were screened at a level appropriate for a condition evaluation or were simply closed to trend. In some cases, a root cause evaluation had initially been proposed, but the significance of the issue had later been downgraded to an apparent cause evaluation. Many low level issues were closed to a work request; however, this required that both the initiating AR and the associated work request have the necessary verbiage to document the interrelationship. Since 2005, the licensee had initiated and/or completed 10 root cause evaluations and about 168 apparent cause evaluations.

The team identified several examples where there was a lack of rigor in enforcing expectations; introducing potential vulnerabilities in the CAP. There were examples where ARs were closed to work requests or orders without the associated verbiage and where issues had been downgraded from a root to an apparent cause evaluation without having a clearly documented justification. Similar observations were also identified by the Nuclear Oversight group during audits and by other licensee staff in the CAP. The team was concerned that if uncorrected, this lack of rigor could result in some significant issues going unresolved. This issue was documented in licensee AR 01064602.

While root cause evaluations were generally of good quality, issues were identified with some of the apparent cause evaluations reviewed by the team. These issues were similar to those identified during prior PI&R inspections occurring in 2003 and 2005. The level of detail in the evaluations were not always sufficient to allow an independent reviewer to reach the same conclusion as the author. In some cases this was due to missing or unclear information contained in the evaluation. As discussed in Section (b), there were also examples where applicable operating experience was not evaluated. The team noted that the most recent revision (November 10, 2006) of the licensee's Apparent Cause Evaluation Manual no longer required that either operating experience or programmatic/organizational issues be reviewed as part of the evaluation. This appeared inconsistent with industry practice and raised the question whether future issues would receive an appropriate level of review. A similar issue was documented in the CAP as AR 01059029. During this inspection, the licensee implemented the following corrective actions to address this issue. First, select individuals were counseled regarding the expectations for documentation in apparent cause evaluations and second, industry benchmarking was initiated to determine the current industry practice regarding the scope of apparent cause evaluations.

## Effectiveness of Corrective Actions

Corrective actions were generally well implemented, effective in addressing the parent issues, and timely. The team also noted some examples where licensee staff had identified potentially inadequate corrective actions requiring revision. The team identified one minor example where a corrective action had not been assigned to an issue. Specifically, AR 01034607 regarding the alignment of emergency filtration train

dampers, had an action item to verify the alignment of those dampers without bushings. The team noted that a specific work request had not been assigned to perform this action. This was discussed with licensee staff and a work request was subsequently generated. Effectiveness reviews were generally considered good, although the team questioned the adequacy of some of the reviews. These examples were minor in nature and were subsequently discussed and resolved with licensee staff.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The team reviewed the licensee's program for handling operating experience. Specifically, the team reviewed the implementing procedure, attended weekly operating experience screening meetings, reviewed operating experience evaluated by the plant, and verified that the licensee had adequately addressed some examples of operating experience provided to the team. The team also reviewed how the licensee considered operating experience for applicability in cause evaluations.

During this inspection, the team reviewed 18 ARs generated by the licensee addressing industry operating experience.

(2) Assessment

No findings of significance were identified.

On a daily basis, the licensee's corporate office provided a summary of all new operating experience information to the station operating experience coordinator. This information was discussed during weekly screening meetings and all pertinent experience was sent to specific departments for review. Operating experience requiring review was documented in the CAP along with associated corrective actions.

In general, operating experience was being well utilized at the station. The team observed that it was discussed as part of the daily station planning meetings and as part of pre-job briefings. During interviews with the team, various licensee staff commented favorably on the use of operating experience in daily activities. The team also noted that the licensee had appropriately evaluated the specific examples of operating experience selected for review, and that operating experience was properly evaluated during the weekly screening meetings.

The team noted that operating experience was not always considered as a precursor to events in cause evaluations. The team observed several examples of cause evaluations where the review of operating experience, though applicable, was lacking. For example, AR 0860041, regarding the parallel operation of the essential service water pump with the river service water pump, listed a number of applicable operating experience reports in the evaluation, but did not discuss whether this experience had ever been evaluated prior to the event. Additionally, as noted above, the November 2006 revision to the Apparent Cause Evaluation Manual did not require that operating experience be reviewed as part of future cause evaluations. The team was concerned that by not performing these evaluations the licensee was potentially

missing contributing causes for events and missing an opportunity to verify the efficacy of the operating experience program. As stated in section (a), the licensee had scheduled benchmarking trips to assess, in part, current industry practice regarding the use of operating experience in cause evaluations.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed selected department self-assessments and Nuclear Oversight audits of the corrective action, operations, maintenance, engineering and plant support (radiation protection, security, and emergency preparedness) programs. The team evaluated whether these audits were being effectively managed, adequately covered the subject areas and whether identified issues were properly captured in the CAP. In addition to the document review, the team also interviewed licensee staff regarding the implementation of the audit and self-assessment programs. The team focused on those audits and assessments completed since 2004.

During this inspection, the team reviewed 12 self-assessments and 14 audits.

(2) Assessment

No findings of significance were identified.

The audits and assessments were performed primarily under well-defined and focused procedures. Generally, the audits and assessments were critical and probing and used outside resources to maintain independence. There were a number of findings and observations identified across the spectrum of performance, including issues of proper CAP implementation. As appropriate, the audit/assessment findings were documented in ARs. However, the team noted that some recommendations identified in the audits or assessments were not always tied to a specific AR for resolution. The team verified, however, that in most cases the recommendations were being properly evaluated. The team also noted that self-assessments of the CAP program performed in 2005 and 2006 had identified similar, potentially recurring weaknesses to a 2004 self-assessment. However, the later assessments did not discuss why the issues were recurring or how the stated corrective actions were different than those previously taken. The team later determined that the licensee had considered these issues, but had not documented this in the later assessments. This was considered another example of poor documentation as discussed in section (a).

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed 15 members of the plant staff, across varying major work groups and all levels of responsibility. The purpose of the interviews was to assess whether a safety-conscious work environment existed at the station. The interviews

were conducted using the guidance provided in Appendix 1 of NRC Inspection Procedure 71152, "Suggested Questions for Use in Discussions with Licensee Individuals Concerning PI&R Issues."

In addition to the interviews, the inspectors looked for evidence that plant employees might be reluctant to raise safety concerns during document reviews and observations of activities. The inspectors reviewed the station procedures related to the Employee Concerns (ECP) and DPO programs, and discussed the implementation of both programs with licensee staff. The team reviewed selected issues captured under both programs since 2004 and interviewed some employees who had utilized one of these programs.

As an aid in assessing this area, the inspectors referred to "Principles for a Strong Nuclear Safety Culture," which was an industry guidance document developed in 2004.

(2) Assessment

No findings of significance were identified.

The licensee had not conducted a specific assessment of safety culture since the 2005 PI&R inspection. Based on interviews with employees, the inspectors determined that employees were comfortable identifying issues and discussing concerns with supervision without fear of reprisal. The inspectors observed that all personnel interviewed were aware of the different avenues through which they could express concerns, including the CAP, DPO, and ECP programs or by coming to the NRC; however, most employees said they preferred reporting issues directly to their immediate supervisor.

The team noted that the ECP process was not readily utilized by plant staff as, typically, there were only about four issues processed annually. The team did not notice a particular trend in those issues documented since 2003 and observed that they were generally well resolved and documented. Given the generally positive feedback received during the employee interviews, the team concluded that the relatively low number of issues captured in the ECP did not indicate a potential problem with licensee safety culture.

Although the number of issues processed as DPOs was also low (about 3 since 2001), the team noted that the level of rigor over this program was significantly less than for the ECP. The licensee's corporate office administered the DPO program and there was no designated site individual to assist program users. Although generally familiar with the program's existence, those wanting to use the programs typically had to assume the burden in assuring that issues were being properly resolved. The team noted that there was no clear interface between the DPO and the CAP, in that DPO issues were not captured in the CAP nor were related CAP issues generally linked to DPO items. For example, the team noted that a CAP documenting some issues with secondary containment damper testing was not linked to a similar DPO item for different secondary containment dampers. The team also had some difficulty in obtaining sufficient documentation from the corporate staff to verify that issues were appropriately resolved. For example, in order to verify that the status of the secondary containment damper

testing DPO, the team had to obtain uncontrolled documents maintained by the originator. The team was concerned that the overall lack of rigor over the DPO process may result in some workers feeling reluctant to raise concerns and/or some issues not being properly evaluated or documented. The licensee initiated ARs 01062966 and 01063040 to document this concern.

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Conway and other members of licensee management at the conclusion of the inspection on December 1, 2006. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. The licensee stated that all proprietary information provided to the inspectors had been returned.

ATTACHMENT: SUPPLEMENTAL INFORMATION

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee

- B. Cole, Nuclear Oversight Supervisor
- J. Conway, Site Vice President
- J. Fields, Performance Assessment Supervisor
- J. Grubb, Site Engineering Director
- W. Guldemon, Nuclear Safety Assurance Manager
- K. Jepson, Radiation Protection and Chemistry Manger
- B. MacKissock, Operations Manager
- J. Mestad, Employee Concerns Program Manager
- S. Radebaugh, Maintenance Manager
- J. Rieder, Corrective Action Program Coordinator
- B. Sawatzke, Plant Manager

Nuclear Regulatory Commission

- B. Burgess, Chief, Reactor Projects Branch 2
- C. Thomas, Senior Resident Inspector

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

None

Closed

None

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 report.

### Station Procedures

FP-PA-ARP-01, "CAP Action Request Process," June 30, 2006  
FP-PA-RCE-01, "Root Cause Evaluation Manual," June 30, 2006  
FG-PA-CAE-01, "Corrective Action Effectiveness Review Manual," June 30, 2006  
FP-PA-ACE-01, "Apparent Cause Evaluation Manual," June 30, 2006 and November 10, 2006  
FP-PA-OE-01, "Operating Experience Program," July 3, 2006  
FP-PA-DRUM-01, "Department Roll Up Meeting (DRUM) Manual - Department Performance Trending," April 21, 2006  
FP-EC-ECP-01, "Employee Concerns Program," Revision 3  
FG-PA-PAR-01, "Performance Assessment Review Board Guideline," Revision 3  
EWI-10.01.04, "Equipment Reliability Trending Process," Revision 2  
FG-PA-CCE-01, "Common Cause Evaluation Manual," Revision 0  
FL-ESP-TPD, "Prepare and Review Calculations and Engineering Evaluations," August 18, 2006  
FP-PA-SA-01, "Focused Self-Assessment Planning, Conduct and Reporting," Revision 4  
DP-NO-IA-03, "Internal Assessment Issue Characterization and Tracking," Revision 0  
FG-PA-CTC-01, "CAP Trend Code Manual," Revision 6  
EWI-05-02.02, "Equipment Performance Information Exchange (EPIX) System," Revision 4

### Self-Assessments

SAR01005167, "PI&R Self Assessment," May 31, 2006  
SAR00840771, "Conduct Focused Self-Assessment of Reactor Engineering," May 3, 2005  
SAR00848289, "Conduct Focused Self-Assessment of Operator Logging/Rounds/Operations," May 23, 2005  
SAR00840800, "Service Water Systems Focused Self-Assessment," October 29, 2005  
CAP00834829, "Perform Focused Self-Assessment of the PM Program/PMO Process," April 18, 2005  
CAP00883776; "Conduct Focused Self-Assessment of the MT&E Program," September 6, 2005  
MT-FSA-06-04, "PI&R Self-Assessment," May 5, 2006  
SA023679, "Self-Assessment of the Corrective Action and Human Performance Programs," December 7, 2004  
CAP00844186, "Conduct Focused Self-Assessment of the Self-Assessment Program," May 11, 2005  
AR00890485, "NMC Fleet Employee Concerns Program Focused Self-Assessment," February 10, 2006  
SA025895, "Conduct Focused Self-Assessment of Emergency Preparedness," May 25, 2005  
OTH020378, "Perform a Self-Assessment of Operating Experience Program," November 20, 2003

## Nuclear Oversight Observation Reports

2005-001-5-041, "Conduct of Operations - Personnel Performance During Non-Routine Evolutions," May 10, 2005  
2005-002-5-016, "Corrective Actions - Quarterly Effectiveness Review and Attribute Review," July 26, 2005  
2006-002-5-015, "Equipment Reliability," June 28, 2006  
2005-003-5-15, "Maintenance and Work Control," October 24, 2005  
2005-004-5-002, "Self-Assessment Process," November 29, 2005  
2005-004-5-006, "Engineering Support," January 20, 2006  
2005-001-5-009, "Management Systems," March 10, 2006  
2005-003-5-019, "Engineering Programs," October 3, 2006  
2006-003-5-018, "Human Performance," September 25, 2006  
2005-004-5-014, "Adequacy of Corrective Actions to Prevent Recurrence," January 23, 2006  
2006-002-6-017, "Fitness for Duty," July 12, 2006  
2006-001-5-018, "Radiological Protection," April 4, 2006  
2006-002-5-021, "Fleet CAP Assessment," June 28, 2006  
2006-004-5-006, "Operating Experience," October 20, 2006  
CAP01010870, "QAF-Failure to Identify CAPRs for SCAQs," January 18, 2006

## Corrective Action Program documents

This listing includes those items previously identified by the NRC which are being tracked in the licensee's CAP.

CAP0103188, "10 CFR 50.59 not performed fo procedure 8197 Rev 9 revision," May 15, 2006  
CAP01030184, "10 CFR 50.59 not performed for Temp Change 8197 Rev 9," May 15, 2006  
CAP01030171, "10 CFR 50.59 not performed for Temp Change 8275 Rev 9," May 15, 2006  
CAP01022326, "Degraded wiring in RPS MG Set found during PM," April 5, 2006  
CAP01018555, " sv 4937b #12 rhsw mtr clg solenoid valve stuck open," March 15, 2006  
CAP01045090, "ACE's assigned to "A" CAPs without justification," August 17, 2006  
CAP01058245, "Level of Effort Exceptions not documented for "A" CAPs," October 27, 2006  
CAP01017364, "Failure to Address Organizational Factors in Causal Evals," March 4, 2006  
CAP01045114, "Level A CAP did not receive CAPRs as required by procedure," August 17, 2006  
CAP01008240, "Actions documented in ACE004353 will not prevent recurrence," December 21, 2005  
CAP00771138, "Numerous Errors And Inconsistencies Noted In MNGP Calcs Noted By NRC Inspector," November 1, 2004  
CAP00772248, "Error in Mod 80M007 Calculating Battery Room Time To Detonable Atmosphere," November 3, 2004  
CAP00772322, "HPCI Discharge Line Temperature Monitoring Limit May Not Be Conservative Enough," November 3, 2004  
CAP00792956, "Initial Oper Screening For CAP035964 Did Not Consider Single Failure Criteria," January 1, 2005  
CAP00860041, "ESW Pump Operation In Parallel With SW Creates Potential To Degrade ESW Pump," June 22, 2005  
CAP01019238, "ECP Fleet Procedure Requirement Not Being Performed," March 18, 2006  
CAP01039657, "Failure to Comply With NMC Policy CP 0060," July 13, 2006

CAP01020301, "Secondary Containment Isolation Dampers AS FOUND Closure Time Not Tested," March 24, 2006  
CAP01044808, "No Scheduled Inspection or PM For Plenum Room Secondary Containment Dampers," August 16, 2006  
CAP00628710, "Converted Issue #200456 'CST and SW Header in RHR and Torus Rooms are Not Qualified to Post Accident Temperatures," May 13, 2002  
CAP00697529, "Converted Issue #4004164 Title, Discovered Drive Lugs Sheared," April 28, 2004  
CAP00710997, "Self-Assessment Identified Failure to Track on NRC Commitment," May 10, 2004  
CAP00711929, "Apparent Conflict Between Site Practice for Closing Actions," May 12, 2004  
CAP00798452, "ACE 004247 States two Procedures were Revised that Appear Not To Be," January 19, 2005  
CAP00829254, "11 Circwater Pump Has Overload on Initial Startup," April 5, 2005  
CAP00805220, "Single Failure Identified that Could Prevent Energizing Bus," February 4, 2005  
CAP00810539, "MO-2008 and MO-2009 Actual Weight may be More than Weight used In Analyses," February 21, 2005  
CAP00816656, "Conflicting Valve Positioning Indication Results in Mispositioning of Valve," March 8, 2005  
CAP00828133, "Loss of Power to Bus 16 During PMT for W/O 0505600," April 2, 2005  
CAP00860041, "ESW Pump Operation in Parallel with SW Creates Potential to Degrade the Pump," June 22, 2005  
CAP01015238, "RHR Unavailability Data," February 17, 2006  
CAP01001324, "CA-2 Determine Issues of Loss of ESW Auto Start Function," June 28, 2006  
CAP01027787, "NRC Notice of Violation," May 3, 2006  
CAP01016865, "Some Ckt Bkr PM Due Date Mapped incorrectly into PassPort," March 1, 2006  
CAP01016889, "Failure to Input WO Trend Code Limits Site Ability to Trend," March 1, 2006  
CAP01016953, "CAP Actions Not Completed as Written," March 1, 2006  
CAP01018161, "Department Clock Resets Not Completed For Overdue CAPs," March 10, 2006  
CAP01020382, "Rosemount Trip Units are Susceptible to Spurious Actuation," March 24, 2006  
CAP01020961, "Pre-emptive Cap Closure," March 28, 2006  
CAP01022601, "Age Related Degradation of Spare H2 Monitor Components," April 6, 2006  
CAP01023243, "Errors Discovered in Setpoint Calculation CA-03-039, Rev. 0," April 10, 2006  
CAP01023755, "Daughter Procedures Can Not Be Found in PassPort," April 12, 2006  
CAP01027783, "NOV Not Entered Into CAP," May 3, 2006  
CAP01028014, "Potential Trend CAPs not Upgraded When Trend is Confirmed," May 4, 2006  
CAP01029293, "Battery Re-Torque Values Potentially 5% < OEM Spec," May 10, 2006  
CAP01032198, "Incorrect Assumption in Calc CA 94-086," May 24, 2006  
CAP01034522, "Incorrect Use of NPSHA in CA-04-230 for HPCI /RCIC Suction PS," June 7, 2006  
CAP01036494, "CDBI Question: Could Fire Pump Runout Occur for RPV Injection," June 21, 2006  
CAP01036939, "Simulator Not Notified of Revised Predicted Core Response," June 29, 2006  
CAP01040251, "Adverse Trend in Design Engr for 'Inadequate Verification'," July 18, 2006  
CAP01045389, "NUC-03.06 Fuel Preconditioning Guidelines Exceeded," August 19, 2006  
CAP01045376, "Percent of CAP Due Date Extensions Adverse Trend," August 19, 2006  
CAP01009973, "Perform Effectiveness Review of NRC NCV 2005-013-01," January 10, 2006

CAP01002810, "Potential NRC Violation for Sprinkler Obstruction in EDG Room," November 3, 2005  
CAP00629858, "Converted Issue #2005494 Title: Sprinkler Coverage in Lube Oil Tank Room," June 13, 2002  
CAP01002629, "Perform Effectiveness Review of Actions–NRC NCV 05-04-01," November 2, 2005  
CAP01041204, "Station Needs to Evaluate NRC Violation in IR 200603," July 25, 2006  
CAP01017455, " Certain ECCS [Emergency Core Cooling System] Check Valves Have no System Design Requirement to Close," March 6, 2006  
CAP01017854, "Steam Leak Through Packing of HPCI Root Valve," March 8, 2006  
CAP01025847, "Inaccurate EAL Declaration by Shift Manager During Simulator Evaluation," April 24, 2006  
CAP01017323, "Received a Positive Test on a Delivery Truck at the OCA," March 3, 2006  
CAP01022921, "Security Railroad Derailer(s) May be Installed Incorrectly," April 7, 2006

#### Operating Experience ARs

CAP009475, "Reactor Protection System Motor Generator Set Control Wiring Heat Degradation," July 3, 2002  
OE027174, "Station Evaluation of External OE - NRC IN 2005-23," August 19, 2005  
OEE01003461-03, "Perform an OE Evaluation of NRC RIS 2005-25 for station" November 11, 2005  
OEE01003462-05, "Perform station OE evaluation of NRC IN 2005-30," November 11, 2005  
OEE01045320-04, "Station OE Evaluation of NRC IN 2006-15," August 18, 2006  
OEE01004844-01, "Perform Station OE Evaluation of Palisades Rapid OE," November 22, 2005  
CAP00889558, "Station Evaluation of External OE - GE Safety Communication SC05-08," September 22, 2005  
CAP01019191, "Station Evaluation of NRC IN 2006-05," March 27, 2006  
CAP01022810, "Elgar Technical Bulletin #19 for UACY71 and Y81," April 7, 2006  
CAP01020455, "Consider Impact/Changes to PRA Model for NRC IN 2006-06," June 28, 2006  
CAP01021824, "Station OE Screening Team Review of OE for 3/31/2006," April 3, 2006  
OE023593, "DAEC CAP 033494 ' Failure of a new FRV Positioner,'" December 3, 2004  
OE023557, "NRC IN 04-19, 'Problems Associated with Back-Up Power Supplies to Emergency Response Facilities and Equipment,'" December 1, 2004  
OE025326, "Station Evaluation of External OE-NRC IN 2005-08," April 15, 2005  
OE025866, "Station Evaluation of External OE NRC IN 2005-011," May 23, 2005  
CAP00887344, "Station Evaluation of External OE–NRC IN 2005-25," September 16, 2005  
CAP01014492, "OE Evaluation of NRC IN 2006-01," April 4, 2006  
CAP01047497, "Station OE Evaluation of GE SIL 644 R2," August 30, 2006

#### Licensee Identified Trends

This list includes common cause evaluations as applicable.

Department Roll-up Meeting Results, Engineering, First Quarter 2006  
Department Roll-up Meeting Results, Engineering, June and September 2006  
Department Roll-up Meeting Results, Operations, First Quarter 2006  
Department Roll-up Meeting Results, Operations, June 2006

Department Roll-up Meeting Results, Operations, September 2006  
 Department Roll-up Meeting Results, Performance Assessment, 1st and 2nd Quarters 2006  
 Department Roll-up Meeting Results, Radiation Protection-Chemistry, 1st, 2nd and 3rd Quarters 2006  
 Department Roll-up Meeting Results, Security, 1st, 2nd and 3rd Quarters 2006  
 Department Roll-up Meeting Results, Maintenance, 1st, 2nd and 3rd Quarters 2006  
 CAP00864623, "Engineering Dept Event Free Clock Reset Adverse Trend," July 7, 2005  
 CAP01036005, "Adverse trend of unplanned LCOs," June 19, 2006  
 CAP01040251, "Adverse Trend in Design Engr for Inadequate Verification," July 18, 2006  
 CAP01003605, "Potential Adverse Trend in ERO Response Stats," November 14, 2005  
 CAP01034837, "Potential Trend CAPs are Not Identifying if Adverse Trend," June 9, 2006  
 CAP00846442, "Adverse Trend for Vehicle Barrier Gate," May 17, 2005  
 CAP01014715, "Problems Noted in RCE/ACE Quality and Documentation," February 14, 2006  
 CAP01015572, "Potential Adverse Trend in ACE Quality," February 20, 2006  
 CAP01007702, "Potential Adverse Trend Identified For Critical Diesel Systems," December 15, 2005  
 CAP010145376, "Percent of CAP Due Date Extensions Shows and Adverse Trend," September 21, 2006  
 CAP00791062, "RBV WRGM Iodine Release Rate Increases Indicate a Potential Trend," December 30, 2004

#### Root and Apparent Cause Evaluations

RCE01045389-03, "Fuel Preconditioning Guidelines Exceeded," September 22, 2006  
 RCE000870, "Unexpected Trip of #16 Bus," June 14, 2006  
 RCE01001324, "Unrecognized Plant Configuration Change (ESW Pump Auto Start)," November 17, 2005  
 ACE004303, "Single Failure Identified that could prevent energizing Bus 15 and 16"  
 ACE004364, "Adverse Trend in the Tag-out/Lock-out Process"  
 ACE004247, "Unexpected Transient High Radiation Condition Created in RCIC Room," February 23, 2005  
 ACE004303, "Single Failure Identified that Could Prevent Energizing Bus 15 and 16," February 14, 2005  
 ACE004309, "Conflicting Valve Positioning Indication - Valve Closed Going Counterclockwise," March 8, 2005  
 ACE004358, "ESW(EDG) Pump Operation in Parallel with Service Water Creates Potential to Degrade ESW Pumps," July 12, 2005  
 ACE004375, "Engineers were Granted Qualification Without Satisfying JPR," August 26, 2005  
 ACE0100704101, "During RHRSW Quarterly Pump and Valve Test, Check Valves SW-21-1 and SW-22-1 did not pass Close Test," February 5, 2006  
 ACE01031850, "Evaluation of a Trend in Verification/Validation Errors," June 8, 2006  
 CAP01032706, "Procedure Issue with C.4-B.08.07.A during execution," May 28, 2006  
 CAP00890410, "Structural Beam Running Between Division in 1<sup>st</sup> Floor EFT Without Fire Insulation," September 25, 2005  
 CAP01034607, "Unplanned LCO Entry for 'A' CRV [Control Room Ventilation]," June 8, 2006  
 CAP0874344, "Unplanned 24-Hour LCO Due to Both CRV Inoperable," August 6, 2005  
 CAP01011457, "Increased in Vibration Levels on 12 EDG," January 23, 2006  
 CAP01024239, "Diesel Fire Pump Failed To Pressurize Fire Header," April 14, 2006  
 CAP01045374, "Adverse Trend In CAP Generation Rate," August 19, 2006

CAP00871104, "16 Non-CAP Actions Have Been Determined to be CAP Related," July 28, 2005  
CAP00888473, "Inspection Results From 13 Diesel 4909-PM Indicate Potential for Excessive Vibration," September 20, 2005  
CAP01045399, "'B' Fuel Pool Radiation Monitor High Spike Causes ESF Actuation," August 19, 2006  
CAP00796191, "Potential Violation Discussed During NRC EP Exit," January 13, 2005

#### Licensee CRs Initiated As a Result of the PI&R Inspection

CAP01064258, "CAP closed without trend coding applied," November 29, 2006  
CAP01063040, "Shortcomings in CAP Dispositions for DPOs," November 21, 2006  
CAP01064612, "Sensitivity to CAP Indicators," November 30, 2006  
CAP01059029, "ACE Quality Improvement Progress Insufficient," November 1, 2006  
CAP01062966, "Procedure Revision Due to Modification," November 20, 2006  
CAP01064602, "Shortcomings in Cross-Referencing CAPs and WRs," November 30, 2006  
CAP01062986, "Lack of Rigor in DPO Process," November 20, 2006  
CAP01063940, "Item Identified as a CAPR is not Labeled as a CAPR in Passport," November 27, 2006  
CAP01063937, "Lack of Specified Criteria for PARB Review of ACE," November 27, 2006  
CAP01064189, "CAP Number Not Cross Referenced in Work Request," November 28, 2006  
CAP01064422, "NRC IN Action Closed Without Action Taken," November 29, 2006  
CAP01064392, "NRC Question Regarding OE and Risk Significant Equipment," November 29, 2006

#### Other

NMC Policy no. CP 0060, "Differing Professional Opinions," Revision 3  
NMC Policy CP 0017, "Nuclear Safety Culture," Revision 2  
4822-PM, "Reactor Protection System Motor Generator Set Maintenance Procedure," Revision 7  
Operating Experience Station Review Package for December 1, 2006  
Performance Board Assessment Meeting minutes for October 4, 11, and 18, 2006.  
Fleet Operating Experience Screening & Peer Group Conference Call Standing Agenda; dated November 30, 2006  
Maintenance Rule Evaluation AR 01001324, "Unrecognized LCO Actions Associated w/EFT Logic," October 18, 2005  
Maintenance Rule Evaluation AR 01042035, "B Fuel Pool Rad Monitor High Spike Causes ESF Actuation," July 30, 2006  
Operability Recommendation CAP035380, "Steam Void evaluation for HPCI Alignment to the Torus or CSTs," March 1, 2005

## LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agency-wide Documents and Management System
AR	Action Request
CAP	Corrective Action Program
CAPR	Corrective Action to Prevent Recurrence
CDBI	Component Design Bases Inspection
CRV	Control Room Ventilation
CST	Condensate Storage Tank
DAEC	Duane Arnold Energy Center
DPO	Differing Professional Opinion
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
DRUM	Department Roll-Up Meeting
EAL	Emergency Action Level
ECCS	Emergency Core Cooling System
ECP	Employee Concerns Program
EDG	Emergency Diesel Generator
EFT	Emergency Filtration Train
EP	Emergency Preparedness
EPIX	Equipment Performance Information Exchange
ERO	Emergency Response Organization
ESF	Engineered Safety Feature
ESW	Essential Service Water
FRV	Feedwater Regulating Valve
GE	General Electric
HPCI	High Pressure Coolant Injection
IN	Information Notice
LCO	Limiting Condition for Operation
MNGP	Monticello Nuclear Generating Plant
MT&E	Materials Test and Equipment
NCV	Non-Cited Violation
NMC	Nuclear Management Company
NPSH	Net Positive Suction Head
NRC	U. S. Nuclear Regulatory Commission
OCA	Owner Controlled Area
OE	Operating Experience
OEM	Original Equipment Manufacturer
PARB	Plant Action Review Board
PARS	Publicly Available Records
PI&R	Problem Identification and Resolution
PM	Preventive Maintenance
PMT	Post-Maintenance Test
QAF	Quality Assurance Finding
RBV	Reactor Building Ventilation
RCE	Root Cause Evaluation
RCIC	Reactor Core Isolation Cooling

RHR	Residual Heat Removal
RPV	Reactor Pressure Vessel
SCAQ	Significant Condition Adverse to Quality
SIL	Service Information Letter
SW	Service Water
WO	Work Order
WR	Work Request
WRGM	Wide Range Gas Monitor