NORTHARD EXHIBIT 46

Transmittal Manifest
Xcel Energy Nuclear
Nuclear Oversight Department
Prairie Island Nuclear Generating Plant

Management Safety Review Committee Meeting Summary Meeting No 2010-01
MSRC Meeting Date: March 17 and 18, 2010

Prairie Island Site Distribution

M A Schimmel, Site VP
B Sawatzke, Dir of Site Operations
K P Ryan, Plant Manager
S D Northard, Recovery Manager
D B Kettering, Site Engr Director
J J Muth, Nuclear Oversight Manager
TG Roddey, Engr Design Manager
S C Skoyen, Engr Programs Manager
J L Sternisha, Training Manager
C C England, RP-Chem Manager (acting)
J D Lash, Ops Manager
M R Milly, Maint Manager
R J Flynn, Safety and Human Perf Mgr
R Madjerich, Production Planning Manager
S J Larson, Manager of Projects (PI)
J S Anderson, Regulatory Affairs Manager
T W Bacon, Ops Support Manager
P Schmidt, Senior Safety Consultant
K Petersen, Business Support Manager
P J Kluskowski, Work Control Center Manager
D H Albarado, Org Effectiveness Manager
J A Verbout, Information Tech Manager
M E Hall, Procedures Manager
D A Axt, Security Manager
J Kivi, ECP Coordinator
K L Defusco, Emergency Planning Manager
D J Dancer, Supply Chain Manager
J J Erickson, Bus. & Strategic Planning Manager
R Womack, Outage Manager
S J Lappegaard, On Line Manager
S Seilhymer, Assistant Ops Manager
W H Kappes, MSRC Coordinator (PI)
MSRC File

Xcel Energy Distribution

R C Kelly, Chairman & CEO
(Gale Shuster)
D L Koehl, Vice President Group Ops/CNO
(Sharleen Johnson)
C R Bomberger, VP Nuclear Projects
(Christine Sinn)
T Taylor, NOS Manager (MT)
D S Crofoot, MSRC Coordinator (MT)
M E Reddemann, MSRC
J P Sorensen, MSRC
C N Hessen, MSRC
M D Werner, General Manager Nuclear Oversight

External Distribution

Hub Miller, MSRC Chairman (PI)
J Callan, MSRC Chairman (MT)
C H Cruse, MSRC
M B Sellman, Chairman Nuclear Oversight Committee
R E Burris, Senior Representative INPO

Approval of the meeting minutes is required at the next MSRC meeting (July 2010).
Approval of the subcommittee meeting minutes is required at the next subcommittee meeting (July 2010).
NOTE: These minutes will be submitted for microfilming after they are approved at the formal MSRC meeting (July 2010).

MANAGEMENT &
SAFETY
REVIEW
COMMITTEE

Chairman,
Hubert Miller

Member,
Joseph Callan

Member,
Charlie Cruse

Member,
Mark Reddemann

Member,
Corey Hessen

Xcel Energy

Prairie Island Nuclear Generating Plant

Management & Safety
Review Committee

Meeting

March 17 & 18, 2010

Minutes written by:

Bill Kappes 04/30/2010
MSRC Coordinator Date

Minutes approved by:

Hubert Miller 04/30/2010
MSRC Chairman Date

PRAIRIE ISLAND MSRC
MEETING
MARCH 17 AND 18, 2010

Attendees:	Hub Miller	Corey Hessen
	Charlie Cruse	Mike Sellman
	Joe Callan	Mark Reddemann
Others Present:	Kevin Ryan	Jim Lash
	Mark Schimmel	Joe Muth
	Brad Sawatzke	Robert Seipel
	David Kettering	
	Mark Huting	

The Prairie Island MSRC met on March 17 and 18, 2010. Quorum requirements as prescribed by the MSRC Charter were met and the meeting was called to order.

OVERVIEW

Prairie Island is operating safely. Senior management has stepped up accountability and engagement with the staff, but improvement efforts are still producing mixed results. The Station must address numerous issues to get and sustain needed turnaround in performance. Three significant issues requiring special senior management attention are:

- Continuing failure to rigorously and consistently use human performance tools and procedures, leading to some significant errors and plant impacts.
- Large maintenance and corrective action program backlogs which pose additional risk and burden the Station. Beyond applying appropriate resources, improving efficiency and productivity of work management and CAP processes is vital to reaching and sustaining performance goals.
- A very large workload and numerous competing demands. This requires senior executives set priorities, adjust Excellence Plans and engage the workforce extensively to improve coordination among Station groups. Properly targeting and supplementing engineering resources is particularly important as the Station works to resolve a number of potentially significant safety, design and regulatory issues.

At a broader level, achieving and sustaining top levels of performance will require senior Station and Fleet executives make continued strengthening of the Prairie Island leadership team a top priority.

SUMMARY

While onsite, Committee members spent considerable time speaking with Prairie Island employees and first line supervisors to get, first hand, workforce perspectives on Station performance, challenges and attitudes. These interviews coupled with insights gained in Subcommittee meetings were discussed at length in the full Committee meeting.

The MSRC concluded that Prairie Island is operating safely. However, efforts to improve Station performance continue to yield mixed results. Improving human performance remains the principal challenge. While there was some forward motion near the end of 2009, a recent Level 3 reactivity event which resulted from operators failing to use basic human performance tools illustrates the significance of this performance gap. Failures of staff to use human performance tools and rigorously adhere to procedures are serious. Interviews reveal that informal approaches to plant evolutions and procedures are still imbedded in the Prairie Island culture. This appears to be founded on the thought that assiduous placekeeping and step-by-step execution of procedures is not necessary for "experienced personnel".

The current management team has done a better job of communicating to the workforce where Prairie Island performance really stands with respect to the industry. For example, in a recent all-hands meeting, management used plant events, performance indicators and independent assessments to paint a realistic picture of the gaps that exist and make the case for needed behavior changes. The level of accountability for meeting expectations has increased, disciplinary actions being taken where significant lapses occur. Increased engagement of some key managers with the workforce in the field and daily meetings was cited by staff. This engagement must continue and positive reinforcement provided, where appropriate, if the Station is to turn performance. Management must address the deep seated cultural issues that lead to lax human performance.

While "vertical communications" have improved, recent events and Committee interviews reveal problems with lateral communications and coordination among Station groups. This is disappointing given the Station's attempts over the past year to improve in this area through the Pride Initiative that was focused on the work management process. While there has been some movement from a "relationship based" to "process driven" culture, results of the Initiative are difficult to see. Efforts to improve work management and efficiency of maintenance processes must continue to be a top priority if the Station is to reduce and sustain backlogs at manageable levels. Recent use of outside maintenance efficiency experts to observe work in process and identify barriers is a good step. Some progress has been made in improving FIN productivity, but more can be done to effectively use this resource. The Committee will continue to closely watch efforts to improve work management.

Greater workforce acceptance of the need for change has been accompanied by strong desire to understand management's vision of the path to improvement. There is a sober mood on site and some uncertainty about how things can be turned around. The path forward is currently laid out in the Station's Excellence Plans (which has been modified to incorporate Recovery Plan actions) but these plans have not been well communicated ***(GAR-01229713).*** Prairie Island continues to have a heavy workload as it proceeds with numerous special projects on top of improvement initiatives. Recent guidance from the Station Vice President to the Station on near-term priorities was well received. Much remains, however, to assure the guidance is executed properly, coordination among groups is improved and unintended messages are avoided. This includes assuring suspension of procedurally driven requirements (e.g., work management coordination meetings) are handled rigorously through procedure changes. There must be a sense of

urgency about renewing long-term plans to avoid simply postponing work and exacerbating the current large backlog situation.

Borrowing from industry experience, steps are being taken to more efficiently and effectively implement the corrective action program. This includes revising screening criteria to assure Station resources are utilized most effectively – targeted to risk significant issues. Strong management support and close coordination within the CAP peer group will be required if changes are to be made promptly and consistency is to be maintained across the Fleet. Current large and growing CAP backlogs burden the staff and actually hamper improvement efforts. Revising screening criteria may help in identifying items of very low value that can be dropped but, given numerous past efforts to "scrub backlogs", focusing resources on backlog reduction will likely be needed as well.

The Station is in the midst of addressing several important design issues that have surfaced over the past year. These include issues associated with potential turbine building flooding and high-energy line break impacts on the Unit 2 component cooling water system. Need to address these issues, prepare for the upcoming Unit 2 outage, support numerous major projects and upcoming NRC component design bases inspection, as well as resolve equipment reliability issues, require management take a hard look at engineering resources and priorities. Managing these issues successfully is paramount if the Station is to move forward with improvement efforts. The Committee plans to examine how these competing priorities are being managed in its July meeting.

Priority must be given to increasing depth of the emergency response organization to account for relatively high turnover in ERO positions. Prompt action is needed to resolve concerns about timeliness of staff augmentation. This is vital to assure ERO effectiveness and better recognition across the Station of significant regulatory consequences if shortfalls occur. Increased senior management attention to the overall ERO function is needed given limited experience of the ERO coordinator and the number of problems being identified by NOS and NRC.

The training organization is making solid contributions. However, the maintenance and engineering curriculum review committees are missing opportunities to identify and develop training to improve Station performance.

The Nuclear Oversight Organization continues to identify problems not found by the line and provide critical assessment of Station performance. However, a number of improvement opportunities came to light during the meeting and interviews. Greater effort must be made by both NOS and line organizations to assure clear understanding and alignment on the issues being raised by NOS. During the meeting, there were disconnects on a number of issues, importantly including how operability determinations are to be handled. From this and interviews, it does not appear line managers provide needed support to NOS or value its findings. NOS assessments are not being effectively communicated across the Station ***(GAR-01229719)***. Many staffers do not read even the summary of NOS reports. Performance and respect for the organization will increase when it becomes clear that an assignment to NOS is a career enhancing move. There needs to be wider recognition across the Station that NOS effectiveness

depends upon support and leadership from line managers and staff as much as from NOS leaders.

Moving Prairie Island solidly forward with the large scope of work on its plate will be determined by the strength and consistency of Station leadership. The leadership team – senior executives through first line supervisors – must continue stepping up the level of engagement with the workforce. Much of what ails Prairie Island is deeply imbedded in its culture. Actions taken at both site and Fleet levels to strengthen the leadership team are vital and will be followed closely by the Committee.

APPROVAL OF PRECEDING MEETING MINUTES:

A full meeting was not conducted during the last MSRC visit to the Station in October 2009. A summary of the visit was developed and issued on November 20, 2009 (by Joe Muth email) after review by Committee members and approval of the Chairman.

ACTION ITEMS:

Past Meetings:

(CAP-01207301) Examine alternatives and implement a program to more promptly reduce maintenance backlogs considering potential use of supplemental resources.

CE was completed on 1/21/10. The CE described actions being taken to address the backlogs. This item remains open as these initiatives have yet to yield significant results. This item remains open.

(CAP-01207304) Examine alternatives and implement a program to more promptly reduce corrective action program backlogs.

This CAP was closed to CAP-01187837. CAP-01187837 is the "A" level CAP on the governance and oversight of Performance Improvement Programs. This remains a concern to the Committee as documented in this report. The item remains open.

(CAP-01207308) Reexamine the scope of ongoing design basis reconstitution activities (e.g., CRIP) in light of recent design related findings, root cause evaluations and planned December focused self-assessment.

A CE was completed on 2/4/10. From this CE, a CA was initiated to perform a review of the 2010 CDBI Self Assessment, and other external assessments, to determine if there are additional CRIP scope items. This CA, assigned to the Design Engineering Manager, is due 6/3/10. This item remains open.

(CAP-01207313) Examine ways to better assure continuous coordination between the Station and Projects organizations at first-line / mid-level management levels. Consider formation of a joint coordination group.

The Prairie Island Manager of Projects has a CE due for this issue on 3/31/10. The reason for the extended due date is documented in the "In-Progress" notes of the CE.

Steps taken to strengthen coordination with the Projects organization (e.g., changes in organizational structure) are addressing Committee concerns and have yielded some positive results. Sufficient action has been taken to close this item.

(CAP-01207314) Reexamine and revise Radiation Protection and Chemistry excellence plans to address MSRC feedback.

The CA to address this issue was completed on 3/10/10. As documented in the Operations Subcommittee report, steps have been taken to address this item. The item is closed.

(CAP-01207316) Examine alternatives to improve support to the security organization with emphasis on condition of equipment and facilities.

The CE to address this issue resulted in initiation of two additional CEs. One of these two new CEs has a due date of 3/23/10 to evaluate designating a full-time Security Systems Engineer. The other new CE was completed on 3/4/10. This CE resulted in initiation of 4 CAs. One CA is completed, two are due in Sept 2010 and one is due in Nov 2010. Steps are being taken but results have not been observed. This item remains open.

(CAP-01207327) Reexamine and revise, as necessary, Station priorities and resources to assure Recovery Plan actions are not only challenging but well focused, realistic and sustainable.

There was one CA and one CE assigned to address this issue. Both actions are complete. This remains a concern to the Committee. The item remains open.

Other Items:

Beyond Action Items, the Subcommittees reviewed Station response to previous Suggestions and, except where noted otherwise in the Subcommittee reports, considered actions taken were acceptable.

Current Meeting:

See Attachment 6 for the Action Items, Suggestions and Observations identified during the March Committee Meeting:

Attachments:

Attachment 1 – MSRC Meeting Agenda
Attachment 2 – Training Excellence Subcommittee Meeting
Attachment 3 – Operational Excellence Subcommittee Meeting
Attachment 4 – Organizational Excellence Subcommittee Meeting
Attachment 5 – Equipment Excellence Subcommittee Meeting
Attachment 6 – Action Items, Suggestions and Observations
Attachment 7 – Documents sent to the MSRC for review

Attachment 1
MSRC Meeting AGENDA
March 17 and 18, 2010

Wednesday, March 17, 2010

0700 – Training Center (Badging)

0800 – 0820 – MSRC Plans Their Day (NGS B)

0820 – 0930 – VP / Senior Management -- Station Overview (NGS B)
Plant Manager -- Outage Overview - Mark Schimmel, Brad Sawatzke (Optional), Kevin Ryan (Optional)

0945 – 1130 – Plant Observations

1130 – 1200 – Lunch (NGS B)

1200 – 1500 – Observations

1500 – 1600 – MSRC Discussion (NGS B)

Thursday, March 18, 2010

0630 – 1130 – Observations (OCC Shift Update)

1130 – 1200 – Lunch (NGS B)

1200 – 1300 – PI Reg Status:
Charles England, Scott Nelson, Jon Anderson (NGS B)

1300 – 1530 – MSRC Discussion (NGS B)

1530 – 1700 – MSRC Debrief with Site VP, Site Director of Ops, Plant Manager, and Engineering Director (NGS B)

Observation Opportunities:

0630 OCC Shift Update, NAB 2B&2C Conf Room
0700 Management Review, NAB PMCR
1400 AR Screening (October 12)
1400 PARB (October 13)
Observe field activities

Attachment 2
Prairie Island
Training Excellence Subcommittee

March 10, 2010

Members Present:	Mark Reddemann Jim Sternisha		
Presenters:	Scott Nelson Betsy Rogers	Andy Pullam Matt Weller	Scott Feuerhelm Mike Fish

Discussion: The Training Excellence Subcommittee meeting was held on March 10, 2010. The subcommittee discussed the recent focused self-assessment (FSA) of Technical Training, Mechanical Maintenance qualification issues, the current and next initial license training (ILT) class status, observed an Operations simulator training session, and interviewed several instructors.

Technical Training FSA

Scott Nelson, Betsy Rogers and Andy Pullam described the areas for improvement (AFI) from the February 2010 FSA of objectives 3 - 5 for the Technical Training programs. The first AFI is related to objective 3: In some instances during the administration of on-the-job training and task performance evaluation (OJT/TPE) guides in the Chemistry Training Program, the Chemistry Training Program owner inappropriately removed required performance elements and/or prerequisites. While the condition evaluation is in progress, the immediate and likely corrective actions and extent of condition were discussed. The subcommittee concluded the initial corrective actions and extent of condition reviews appear reasonable.

The other AFI is associated with objective 4: All tasks/topics selected for RP continuing training are not included in the continuing training plan. Specifically, some tasks do not have periodicities assigned. The condition evaluation for this issue is also underway; however, the initial extent of condition (EOC) was discussed. Since the establishment of continuing training periodicities is a new requirement, this effort has been completed for only a few of the training programs; therefore, the EOC appears to be limited to the RP training programs at both plants. Furthermore, the majority of the problem is with the fleet common RP tasks.

The subcommittee was informed that the conduct of OJT/TPE was not thoroughly assessed during the FSA; however, goals have been added to the instructors' IPADs to observe OJT/TPE.

> ***Suggestion* – Given the ongoing challenges in the RP and Chemistry areas, the Subcommittee suggests Training management expedite the completion of multiple OJT/TPE observations by both the line and training. (GAR-01229725)**

Mechanical Maintenance Qualification Issues

Scott Feuerhelm and Andy Pullam discussed the three recent Mechanical Maintenance (MM) qualification violations that resulted in a failed effectiveness review for the Technical Training program qualification AFI captured in the December 2008 FSA. One involved inadequate control of a vendor who was not qualified to perform rigging in the plant screenhouse. During the discussion, the Subcommittee discovered there are two significant differences in the MM shop's approach to qualifications for internal and vendor employees that should be addressed. The current process does not support 200% accountability since the vendors are not expected to verify their qualifications and the process MM supervisors use to verify vendor qualifications relies on communication from training staff rather than a check of a qualification matrix.

> ***Suggestion* – The Subcommittee suggests a vendor qualification matrix similar to the one used in the shop for plant employees be created and placed in the Maintenance shops for specialty vendors and contractors. Also, Maintenance supervision should assess how the desired second check of qualifications to support the concept of 200% accountability will be handled for these specialty vendors. (GAR-01229732)**

Current and Next ILT Class

Matt Weller and Mike Fish discussed the status of the current ILT class. The current class will be examined the week of March 15th. Ten of the original 12 candidates will take the exam. Both of the license candidates who did not take the exam were removed following the audit exam. While they did not perform as well as the rest of their classmates during the entire training program, we were surprised they did not perform better during this final evaluation. An assessment of the causes will be performed following completion of the NRC exams. The NRC exam development process was also discussed. One of the most important lessons learned is to start earlier, particularly when a new chief examiner is involved. Another is to complete the exam revisions during the NRC preparation week to enable sufficient time for validation of the changes.

The next ILT class, which is expected to include 12 candidates, is being selected now. It will begin June 7, 2010 and the NRC exam is scheduled for May 2012. We have been informed the NRC may write this exam.

> ***Suggestion* – Since our NRC exam processes are written with the expectation that we will write the exam, the associated fleet procedures will need to be revised to support the unique challenges and timelines involved. The subcommittee suggests Operation Training benchmark other stations where the NRC wrote their exam to gather lessons learned to support this procedure rewrite. (GAR-01229738)**

Observation of Operations Simulator Training

Mark Reddemann observed the initial hour of a licensed operator requalification training simulator session. A newly qualified simulator instructor handled the simulator floor duties while two experienced simulator instructors (one was the LOR supervisor)

manned the simulator booth. The floor instructor provided a thorough crew brief, including the review of operating experience, prior to the start of the session. Also, he was appropriately supervised and coached by his supervisor during the session. While not a focus of the observation, the crew was observed to be somewhat tentative and not particularly crisp in responding to the simulated failures.

> **Observation - The simulator freeze capability was used several times to reinforce certain items; however, the instructor left the simulator in freeze during a crew brief and a break was taken while the appropriate emergency classification was being determined. The observer provided his simulator observations to the supervisor, who indicated he would share them with the floor instructor. *(GAR-01229743)***

Discussion with Instructors

Mark Reddemann interviewed four instructors to assess their understanding of the need to change behaviors and the station recovery plan, their assessment of station teamwork and accountability, and the Training department's role in improving station performance.

Need for change – The message around the need for change is clear. The recent all-hands meeting did a good job in reinforcing this need by describing the potential impact on the long term operation of the station and their jobs. The instructors interviewed recognize their role in reinforcing this message as well as the use of human error prevention tools in training. They believe the recent disciplinary actions and the reactivity management event have gotten plant employees' attention. They indicated there was no real employee buy-in to use the human performance tools, with the people who have been here the longest (including supervisors) the worst. They believe the supervisors weren't being critical or reinforcing expectations. They are hopeful the need for change will be internalized by these employees.

Recovery plan – The recovery plan is perceived to have been kept at the management level other than to discuss it periodically during all-hands meetings. Some employees recognize the reductions in operator burden and corrective maintenance achieved, but most employees believe the recovery plan is overwhelming and too complicated. They don't see the results and believe the station needs to focus on just a few items.

Accountability – They indicated many represented employees believe the union will protect them, but that attitude may be changing. One suggested that station management engage union management in helping change this attitude since a plant shut down will result in loss of jobs. Most employees disagree with the disciplinary actions taken for manipulation of unlabeled equipment, but the response to the reactivity management incident was believed to be proper. They believe that Training management does a good job in positively recognizing employees and valuing their contributions. All suggested that station management needs to provide greater emphasis on positive reinforcement of the correct behaviors. One instructor noted that the green sheets (positive recognition) were routinely coded as self-read whereas the red and yellow sheets were always something that was to be discussed by the supervisor in D-15 meetings. Furthermore, routine employee recognition is usually captured as either self-read or nice to know.

***Suggestion* – The subcommittee suggests station management assess the directions provided to supervisors to ensure D-15 meetings appropriately recognize positive contributions. (GAR-01229745)**

Teamwork – The instructors indicated vertical teamwork was good, but across departments it's quite poor. Rather than helpful behaviors and ownership they observe a lot of finger pointing. They agreed this was the biggest challenge across the site. It is very difficult to get help from other groups. This lack of teamwork is believed to be a contributor to the station's outage struggles. They also believe some employees including some managers are not taking personal responsibility for the results.

Training's role in improving station performance – The instructors clearly understand and accept their role in reinforcing management expectations regardless of what the instructors believe. They believe Operations values Training's role in helping to improve station performance; however, the Maintenance and Technical departments are not using Training to help them improve their performance. The Maintenance and Technical instructors believe they are driving this more than line management.

***Suggestion* – Maintenance, Technical and Training management should assess the effectiveness of the non-operations curriculum review committees in identifying areas where training can be used to improve station performance. Appropriate corrective actions should be taken to address the findings. (GAR-01229748)**

Potential Agenda Items for the Next Meeting

1. Follow-up on previous subcommittee meeting suggestions.
2. Results of last ILT class throughput assessment.
3. Technical training FSA AFI evaluation results, corrective actions and any results.
4. Results of accelerated observations of RP/Chemistry OJT/TPE.
5. Operations accreditation board results and lessons learned.
6. Classroom training observations.

Attachment 3

Prairie Island Management and Safety Review Committee
Meeting 2010-01 Minutes

Operational Excellence Subcommittee
March 17, 2010

Subcommittee Members: Charlie Cruse (Chairman)
Terry Bacon
Scott Nelson

Presenters: Terry Bacon – Operations
Charles England – Radiation Protection
Chuck Nash – Chemistry
Kerrie DeFusco – Emergency Response

Discussion:

The subcommittee meeting convened at 8:30am. Employee group interviews here held in the morning and presentations followed in the afternoon. All agenda items were reviewed. Highlights of the meeting are noted below:

Interviews

Group interviews were held with NLO's, RO's, Shift Managers, RP/Chemistry Techs, and RP/Chemistry first line supervisors. A step improvement was noted in employee knowledge of Prairie Island performance as compared to previous visits. Employees were aware of the INPO E&A results and the recent NRC concerns with the site. One weak area was that employees had little knowledge of NOS quarterly reports. First line supervisors received the NOS assessments, but did not read or only scanned the reports. Below first line supervisors there was very little knowledge of the NOS assessments. Operations noted that the assessments often contained only self revealing issues. They also noted that there was no one from operations in NOS.

> ***Suggestion – Operations should develop a plan to rotate top performing operators through NOS to enhance NOS assessments, improve perceived value of NOS reports by operations, and provide a career enhancing opportunity for promising operators. (GAR-01229756)***

Relative to the recent accountability actions following the reactivity event, employees generally believed the accountability for the RO and SRO was appropriate. There was more mixed feeling with regard to the accountability actions for the SS and SM. Most employees saw the actions as a change from the past. Some expressed concern that the accountability might cause a work slow down. RP/Chem technicians felt increased accountability may result in employees being less willing to volunteer for work outside of

their job descriptions. Several employees commented that they do not know what the new target looks like. The subcommittee chairman concluded that the increased accountability is necessary to improve site performance and that the use of excellent communication tools and change management techniques will ease the transition.

Employees feel good about new site management. They expressed concern that the new site director, plant general manager and RP/Chemistry manager are all temporary and may be leaving.

With regard to Work Management, employees felt that changes had successfully moved the site from a relationship based system to a process based system. However some thought the new process was clumsy. Often operations did not receive the whole scope of a job. They just received one task at a time. Prejob briefs were noted as excessively lengthy.

Operations felt that their procedures were good. RP/Chem expressed frustration with procedures. Their concern was that they now had both fleet and site procedures and one had to shuffle back and forth between them to get work done.

> ***Suggestion: RP should work with the fleet and ensure that fleet procedures contain sufficient detail to permit the elimination of similar site procedures. (GAR-01229769)***

Employees seemed to have a good understanding of their roles. One operator said, "Use human performance tools, peer check, and take ownership, treating the plant like it was your own backyard". A RP/Chem supervisor said, "Align with site expectations and priorities, set expectations for my people, and hold them accountable".

Operations

The subcommittee was briefed on actions to improve control room log keeping. Operations is focusing on the "Three C's", context, clarity, and closure. Training has been provided. Operations supervisors are reviewing logs and e-mailing feedback to the Shift Managers.

> ***Suggestion – Encourage Shift Managers to provide log keeping feedback to their crews using face to face communication. Develop a metric on log keeping quality and post the indicator with crew score cards. (GAR-01229771)***

The subcommittee discussed human performance and the recent reactivity event. Operations is stressing the use of the "THINK" model, which is being used at Monticello, as another human performance tool. Following the reactivity clock reset, missed human performance tools were identified, but no feedback was developed relative to the 'THINK" model.

> ***Suggestion – Provide feedback to operators on items missed from the "THINK" model on the reactivity event and any future events. (GAR-01229777)***

Suggestion – Where possible use people involved in events in subsequent training. Messages may be more powerful coming from peers. The employee will get the opportunity to turn a negative into a positive. (GAR-01229780)

Suggestion – Consider refresher training for all hands on why nuclear is special. (GAR-01229782)

Operations is counting on improved use of ODMI and integrated risk management to improve the performance of activities that change plant configuration.

Suggestion – Consider using job performance measures to test the effectiveness of ODMI and integrated risk management training. (GAR-01229784)

PORC

The committee had reviewed the minutes of PORC meetings and had no comments.

Radiation Protection

The subcommittee noted a significant improvement in RP and Chemistry excellence plans. The brevity of past plans had been a concern and improving the plans was a subcommittee suggestion.

The subcommittee was briefed on the missing low level radioactive source clock reset. Radiation Protection has provided training on the event lessons learned within RP, but has not yet provided similar training to involved sections outside of RP.

Suggestion – Schedule training to chemistry, I&C, and warehouse employees on the lessons learned from the loss of low level radioactive source event. (GAR-01229790)

Effective review for the corrective actions for this event includes checking for no new similar events or CAPS.

Suggestion – The effectiveness review for corrective actions for the loss of low level radioactive source event should include a management assessment with an outside peer. (GAR-01229791)

Chemistry

Past subcommittee suggestions have been to escalate management attention on the cold lab sampling system. It is still out of service. Repair is scheduled for this summer, but apparently has a high probability of slipping.

Suggestion – Maintain a high level of management attention on the chemistry cold lab repairs to ensure* that this important system is returned to service in a timely fashion. *(GAR-01229944)

Environmental Monitoring

The subcommittee was briefed on the high number of reportable effluent spills at Prairie Island. The Chemistry Department has a number of corrective actions to address this issue, but they are not captured in the Chemistry Excellence Plan.

> ***Suggestion – Include the effluent spill corrective actions and effectiveness reviews in the Chemistry excellence plan. (GAR-01229960)***

Emergency Response

ERO is being challenged by the high turnover of people in ERO positions. The subcommittee was briefed on the existence of a fleet procedure (FP–PA–CMP–01) that requires a transition plan be prepared to identify normal duties, outage duties, and E-plan duties of an individual being moved. Apparently management is unaware of this requirement and the forms are not being prepared.

> ***Suggestion – Come into compliance with the existing assignment transition plan procedural requirements or make a procedural change as appropriate. (GAR-01229963)***

Previously the subcommittee has expressed concerns with regard to ERO staff augmentation. NOS has identified this issue and an NRC URI exists in this area. The NRC has also challenged the way PI calculates the start time of an ERO staff augmentation drill. Complying with the NRC interpretation will apparently reduce the actual time available to report to the site by several minutes. The subcommittee was not convinced that site has taken sufficient actions to ensure that ERO staff augmentation requirements can be met within the prescribed time frame. The subcommittee believes that the site may not be aware of the significance of failing to meet ERO staff augmentation requirements during a drill.

> ***Action – Ensure that Prairie Island supervision and the ERO organization understands of the importance of passing the pending ERO staff augmentation drill, reach agreement with the NRC on clock start time determination, and take the necessary actions to ensure the site has a high probability of a successful drill. (CAP-01229845)***

> ***Suggestion – The subcommittee previously made a recommendation to increase the level of coaching to the ERO coordinator, who is relatively new to the site and the nuclear industry. The subcommittee still has concerns in this area and repeats the same recommendation. (GAR-01229965)***

Attachment 4
Prairie Island Management and Safety Review Committee
Meeting 2010-01 Minutes
Organizational Excellence Subcommittee

Subcommittee members: Joe Callan (Chairman), Kevin Ryan

The Prairie Island Organizational Excellence Subcommittee met on March 17, 2010. The subcommittee relied primarily on interviews with representative workers and supervisors for insights, similar to the methodology used during the April 2009 MSRC meeting. The purpose for adopting this methodology was to more effectively assess attitudes and organizational culture at Prairie Island.

Summary

In contrast to the October 2009 MSRC meeting, all the interviewees exhibited an excellent grasp of where Prairie Island's overall performance was relative to industry standards of excellence. Most persons interviewed were able to clearly summarize the performance gaps facing their individual work groups. On the other hand, not all interviewees expressed optimism that the organization would be successful in its efforts to substantially improve performance. In general, the interviewees conveyed a sense of being overwhelmed by the task ahead.

The Prairie Island organization seems poised for performance improvement, but to be successful the leadership team will have to redouble its efforts to engage the workforce in ways that will convince the organization that it can succeed in achieving the defined near and long term goals. **In other words, the organization needs an infusion of energy and enthusiasm for change, qualities that were largely missing at the time of the MSRC meeting.**

The two key focus areas at Prairie Island are human performance and work management. Gains in human performance will involve improved worker behaviors, particularly in terms of procedure use and adherence. Gains in work management performance will involve improved horizontal organizational alignment and elimination of significant process inefficiencies. A common theme during the interviews was how difficult it was to accomplish work at Prairie Island.

Corrective Action Program

The station continues to make progress in improving the corrective action program, but feedback from the NRC, INPO, NOS, and self assessments all point to substantial remaining performance gaps, especially in the areas of causal evaluation quality, issue identification and classification, and corrective action implementation. Additionally, the high CAP throughput combined with process inefficiencies have resulted in large and growing CAP backlogs. Interviews revealed that there is a growing sense that the station is losing ground on the CAP workload, and this perception is having a deeply demoralizing effect on the organization and is challenging management's efforts to improve CAP.

Recent benchmarking has highlighted several processes enhancements that, if implemented, could greatly improve both the quality and efficiency of CAP. The subcommittee was encouraged by the "picture of excellence" that the new CAP supervisor now has as a result of this recent benchmarking. However, it will take strong senior management support to successfully implement the proposed enhancements. Equally important, it will require fleet alignment on this new picture of CAP excellence. **The subcommittee strongly urges Xcel to give serious consideration to the recent benchmarking insights, as both Prairie Island and Monticello have growing CAP backlogs, suggesting the need for fundamentally rethinking the CAP business model. Simply applying brute force to the existing process does not seem to be working.**

> ***Suggestion - The subcommittee strongly urges Xcel to give serious consideration to the recent benchmarking insights, as both Prairie Island and Monticello have growing CAP backlogs, suggesting the need for fundamentally rethinking the CAP business model. Simply applying brute force to the existing process does not seem to be working. (GAR-01229972)***

Safety Culture / Safety Conscious Work Environment

The subcommittee met with the Prairie Island ECP Coordinator and reviewed the site's ECP status, NRC allegation status, and results from safety culture pulse surveys. No concerns were identified during this review, and the subcommittee concluded that Prairie Island has a healthy nuclear safety culture.

The subcommittee is impressed with the overall Xcel ECP model, with effective teamwork exhibited between the Monticello and Prairie Island ECP Coordinators combined with strong corporate management support. The Xcel ECP team maintains healthy regulatory interfaces, and maintains the NRC's confidence even though Prairie Island's NRC 2009 allegation traffic is high by current industry standards.

The Prairie Island ECP Coordinator is relatively new to the job, but he receives excellent coaching and mentoring and has been allowed to attend recent ECP national workshops. A recognized area for improvement is for him to expand his outreach activities across the organization.

Human Performance

Interviews revealed just how challenging it will be to change worker behaviors at Prairie Island. In one interview a non-licensed operator noted that some operators consider procedure place-keeping to be unnecessary, and that a recent human performance incident related to poor place keeping was not sufficient reason for them to change their long-standing practices. This operator further noted that a contingent of operators consider the "old" way of doing business on shift superior to current management standards and expectations. This operator had been at Prairie Island over 20 years, and he considered his views to be representative of several others of that vintage. The subcommittee was encouraged, however, by the attitude displayed by a relatively new non-licensed operator. The management challenge will be to build on the more positive and receptive attitudes of the new generation of workers before they are compromised by the legacy culture.

Industry experience has shown that management can be successful in improving human performance even when faced with seemingly intractable behaviors and attitudes as those described above. However, to be successful requires relentless and consistent leadership engagement at all levels of the organization. Interviews with supervisors suggest that this needed level of engagement is not yet present to the degree necessary. **Current leadership behaviors of most of the Prairie Island management team are not optimized for bringing about the cultural changes that are essential for sustainable human performance improvement.** Recent examples in the industry of successful cultural change all involved almost continuous one-on-one and small group interactions of the workforce by the management team in order to observe, communicate, coach, reinforce, and motivate.

Nuclear Oversight

Continuing equipment and human performance challenges at Prairie Island are forcing Nuclear Oversight to critically assess its effectiveness in leveraging station improvement. For example, insights gained from recent site clock reset events have caused Oversight to question the effectiveness of its observation activities in the control room. The subcommittee considers this critical self-reflection by Nuclear Oversight to be appropriate, just as it is for the MSRC to critically assess its own effectiveness relative to Prairie Island's continuing performance challenges. An area for improvement is for Nuclear Oversight to identify the various contributors to performance issues in addition to identifying the issues themselves. **Another area for improvement is for Nuclear Oversight to improve the quality of its communication with station management. The MSRC observed too many instances during its meeting on March 18 of disconnects in understanding of key issues between senior line management and Nuclear Oversight.**

> ***Suggestion - Another area for improvement is for Nuclear Oversight to improve the quality of its communication with station management. The MSRC observed too many instances during its meeting on March 18 of disconnects in understanding of key issues between senior line management and Nuclear Oversight. (GAR-01229975)***

Nuclear Oversight continues to implement the QA audit program effectively. Audit reports are well written and audit findings are well supported. The subcommittee reviewed the two-year audit schedule and had no comments.

Attachment 5
Prairie Island Management and Safety Review Committee
Equipment Excellence Agenda
Meeting 2010-01 Minutes
March 17 and 18, 2010

Members Present: Corey Hessen (Chair for Joel Sorenson)
Mike Milly
Dave Kettering
Mark Huting

Presenters: Robert Seipel
Steve Skoyen
Rick Way
Samual Schibonski
Dwain Walker
Ben Horner
Martin Cabiro
Dwain Lambert
Scott Hughes

NOS perspective for ER (Robert Seipel)

NOS observes that in the area of Equipment Reliability most of the issues are derived from less than optimum use of the corrective action program. Some examples include:

- Quality of corrective action processing can be driven by due date rather than the need to do a thorough job.
- Close out reviews by "owed to" are not always thorough and have resulted in issues not being resolved.
- CAPs are often not written expeditiously and issues can languish in the analysis phase too long.
- Technical rigor of Operability Evaluations is not always acceptable. This concern is being addressed and tracked through an NOS finding with an apparent cause evaluation by the station (CAP-01198830).

Suggestion - Consider continued training for Engineers on the usage of corrective action system to document and solve equipment issues. (GAR-01229976)

Equipment Reliability KPI outliers (Skoyen, Way, Schibonski, Walker)

The Fleet ER Engineer, Program Engineering personnel and the FIN Team Supervisor discussed KPIs related to work management. Some of the key issues discussed were:

- T-26 meeting is effective and is providing true value to the station by carefully examining preventive maintenance requirements

- Work week scope is not cut in a timely way causing last minute shifting of resources and wasted planning effort.
- Better engagement by all parties (operations, maintenance, engineering, supply chain) several weeks in advance would improve the ability to accurately forecast the work week and avoid last minute schedule drops.
- Dedication to routine work is not near as strong as to emergent
- Bundling of work activities to avoid redundant system outages is required.
- The lack of SRO experience in Engineering /Projects results in equipment solutions that are not always operationally feasible.
- There is not a permanent FIN team in place which is difficult to manage due to constant change in personnel or lack of certain skill sets.
- Changes to work week schedule are done routinely and casually without a sense of accountability.
- Large backlog of work in all steps of the work management process results in completed work from one person's backlog simply moving to another person's backlog; long delays in getting a completed work activity result.
- A large backlog of (PMCRs) Preventive Maintenance Change Requests (560) exists, this is causing multiple negative effects; PMs that have been justified to be moved out in frequency are being done at the old frequency; value of worker feedback is not being realized; value of T-26 work week meeting is lost
- Many of the meaningful initiatives of PRIDE to improve the work management process were never completed. Significant resources were spent and wasted when few improvement items were ever implemented.

Suggestions -

1. ***Review the abandoned improvement initiatives from PRIDE to determine if continued effort should be made to implement. (GAR-01229994)***
2. ***Consider a HIT team with potential outside support to work down the backlog of PMCRs. (GAR-01230003)***
3. ***Consider the implementation of a permanent FIN team. (GAR-01230005)***

Equipment Issues

Presentation were given to the team on the performance of Emergency Diesel Generators, Reactor Coolant Pump seals, and the AFW pump Bearing issue during the fall 2009 refueling outage. Following are some conclusions made:

RCP Seals

- The cause of 12 RCP pump seal failure appears to be debris on the seal faces. Both RCP pumps were back seated for 25 days which is longer than normal. This situation can cause crud build up in the seals which ultimately caused the increased leakage on 12 RCP.
- The Reactor make up tank is believed to be the main source of debris; flushing of tanks did not occur as planned and may have precluded the failure

Suggestion - Consider options for system clean up to avoid future fouling of seal faces resulting in excessive leakage. (GAR-01230008)

D5/D6 EDGs

A summary was presented for D5 and D6 performance. All INPO index points are being lost due to unavailability; efforts are being made to move maintenance window to refueling outages to reduce this. January 2012 is the best timing for receiving all INPO points. The biggest issues with diesels are crank case pressure increase, cylinder blow-by and, carbon deposit on cylinder piston rings. Actions need to be taken to improve the breather system in order to preclude this unacceptable performance.

Suggestion - Revisit the breather modification to alleviate excessive oil into the air intake via turbo-charger resulting in carbon deposit and excessive wear in cylinder liner. Breather blockage can also be a cause of false high crankcase pressure. (GAR-01230010)

D1/D2 EDGs

Combined unavailability of D1/D2 is significantly more than D5 and D6 due to a number of issues over the past 18 months. D1 exceeds maintenance rule maximum by 38% and is red and D2 is green with 46% of the maintenance rule unavailability exceeded. Major maintenance activities are being moved to 1R27 to avoid more unavailability time.

Suggestion - Continue with plans to optimize maintenance outages by working around the clock and move major maintenance activities to RFO as currently planned. Follow through with EC 14908 to add a heat shield to reduce governor oil temperature and limit governor isolations which have been occurring. (GAR-01230014)

CDBI Preparations

A CDBI inspection will be performed by NRC starting 6-28-10. The station has completed a detailed self assessment in January of 2010. The station has taken the following actions to prepare:

- Assembled a dedicated team in a central war room to work on preparation
- Performed a detailed self assessment in January, 2010
- Established management sponsors and a technical lead
- Brought in contract support to assist

The ER subcommittee has several concerns however, including:

- Only 4 people of a 9 person team have been engaged full time; the technical lead is frequently pulled away to support plant issues due to his expertise and importance to the station; one of the key contract personnel from MPR was transferred to EPU; one team member has not started due to other priorities
- The self assessment revealed significant issues across the board and some of them are repeat issues from previous CDBIs. For example there were findings

with calculations with incorrect assumptions, lack of margin, incorrect inputs and lack of calculation result impact.
- Numerous plant systems are at yellow and red status
- 22 CAPs remain open from the previous self assessment and CDBI and the prospect of closing all of them prior to the inspection appears challenged.

It is the opinion of the ER subcommittee that there is significant vulnerability that the CDBI inspection success will be challenged without prompt management attention to focus on preparation. The following action items and suggestions are given:

Action - Bring a full compliment to the team ASAP and isolate them from daily station issues. Management must drive this expectation. (CAP-01229850)

Suggestion - Consider augmenting the team further with additional contract resources (GAR-01230017)

Action - Perform an immediate independent assessment of team progress and schedule for adequacy. (CAP-01229851)

Suggestion - Lay out a plan for completing the corrective actions from the 2010 self assessment and previous self assessment. (GAR-01230020)

HELB/Flooding

A summary was provided for the work being done to prepare for 95001 inspection to clear the NRC White finding for HELB interface with the component cooling water system. A team has been pulled together and is making progress toward a closure date of mid to late June, 2010.

The flooding analysis for the Turbine building is progressing and nearing completion while the NRC evaluates significance. Good progress is being made in keeping with the dates committed to.

The ER subcommittee encourages the station to continue on path with their current effort.

Attachment 6
Action Items, Suggestions and Observations

Meeting Summary

Suggestion #1 (GAR 101229713)
The Recovery Plan should be effectively communicated to station personnel.

> Greater workforce acceptance of the need for change has been accompanied by strong desire to understand management's vision of the path to improvement. There is a sober mood on site and some uncertainty about how things can be turned around. The path forward is currently laid out in the Station's Excellence Plans (which has been modified to incorporate Recovery Plan actions) but these plans have not been well communicated.

Suggestion #2 (GAR-01229719)
The Results of NOS assessments should be effectively communicated across the Station.

> The Nuclear Oversight Organization continues to identify problems not found by the line and provide critical assessment of Station performance. However, a number of improvement opportunities came to light during the meeting and interviews. Greater effort must be made by both NOS and line organizations to assure clear understanding and alignment on the issues being raised by NOS. During the meeting, there were disconnects on a number of issues, importantly including how operability determinations are to be handled. From this and interviews, it does not appear line managers provide needed support to NOS or value its findings. NOS assessments are not being effectively communicated across the Station.

Training Subcommittee

Suggestion # 3 (GAR-01229725)
Given the ongoing challenges in the RP and Chemistry areas, training management should expedite the completion of multiple OJT/TPE observations by both the line and training.

> The subcommittee was informed that the conduct of OJT/TPE was not thoroughly assessed during the FSA; however, goals have been added to the instructors' IPADs to observe OJT/TPE.

Suggestion # 4 (GAR-01229732)
A vendor qualification matrix similar to the one used in the shop for plant employees should be created and placed in the Maintenance shops for specialty vendors and contractors. Also, Maintenance supervision should assess how the desired second check of qualifications to support the concept of 200% accountability will be handled for these specialty vendors.

A discussion took place concerning the three recent Mechanical Maintenance (MM) qualification violations that resulted in a failed effectiveness review for the Technical Training program qualification AFI captured in the December 2008 FSA. One involved inadequate control of a vendor who was not qualified to perform rigging in the plant screenhouse. During the discussion, the Subcommittee discovered there are two significant differences in the MM shop's approach to qualifications for internal and vendor employees that should be addressed. The current process does not support 200% accountability since the vendors are not expected to verify their qualifications and the process MM supervisors use to verify vendor qualifications relies on communication from training staff rather than a check of a qualification matrix.

Suggestion # 5 (GAR- 01229738)
Since our NRC exam processes are written with the expectation that we will write the exam and the NRC has informed us they may write this exam, the associated fleet procedures should be revised to support the unique challenges and timelines involved. Operations Training should benchmark other stations where the NRC wrote their exam to gather lessons learned to support this procedure rewrite.

The next ILT class, which is expected to include 12 candidates, is being selected now. It will begin June 7, 2010 and the NRC exam is scheduled for May 2012. We have been informed the NRC may write this exam.

Observation # 6 (GAR- 01229743)
The following simulator observation should be evaluated for improvement opportunities. The simulator freeze capability was used several times to reinforce certain items; however, the instructor left the simulator in freeze during a crew brief and a break was taken while the appropriate emergency classification was being determined. The observer provided his simulator observations to the supervisor, who indicated he would share them with the floor instructor.

The initial hour of a licensed operator requalification training simulator session was observed. A newly qualified simulator instructor handled the simulator floor duties while two experienced simulator instructors (one was the LOR supervisor) manned the simulator booth. The floor instructor provided a thorough crew brief, including the review of operating experience, prior to the start of the session. Also, he was appropriately supervised and coached by his supervisor during the session. While not a focus of the observation, the crew was observed to be somewhat tentative and not particularly crisp in responding to the simulated failures.

Suggestion # 7 (GAR- 01229745)
Station management should assess the direction provided to supervisors to ensure D-15 meetings appropriately recognize positive contributions.

Instructor interviews indicate a belief that Training management does a good job in positively recognizing employees and valuing their contributions. All suggested that station management needs to provide greater emphasis on positive reinforcement of the correct behaviors. One instructor noted that the green sheets (positive recognition) were routinely coded as self-read whereas the red and yellow sheets were always something that was to be discussed by the supervisor in D-15 meetings. Furthermore, routine employee recognition is usually captured as either self-read or nice to know.

Suggestion # 8 (GAR- 01229748)
Maintenance, Technical and Training management should assess the effectiveness of the non-operations curriculum review committees in identifying areas where training can be used to improve station performance. Appropriate corrective actions should be taken to address the findings.

Instructors clearly understand and accept their role in reinforcing management expectations regardless of what the instructors believe. They believe Operations values Training's role in helping to improve station performance; however, the Maintenance and Technical departments are not using Training to help them improve their performance. The Maintenance and Technical instructors believe they are driving this more than line management.

Operational Subcommittee

Suggestion # 9 (GAR- 01229756)
Operations should develop a plan to rotate top performing operators through NOS to enhance NOS assessments, improve perceived value of NOS reports by operations, and provide a career enhancing opportunity for promising operators.

Group interviews were held with NLO's, RO's, Shift Managers, RP/Chemistry Techs, and RP/Chemistry first line supervisors. A step improvement was noted in employee knowledge of Prairie Island performance as compared to previous visits. Employees were aware of the INPO E&A results and the recent NRC concerns with the site. One weak area was that employees had little knowledge of NOS quarterly reports. First line supervisors received the NOS assessments, but did not read or only scanned the reports. Below first line supervisors there was very little knowledge of the NOS assessments. Operations noted that the assessments often contained only self revealing issues. They also noted that there was no one from operations in NOS.

Suggestion # 10 (GAR- 01229769)
RP should work with the fleet and ensure that fleet procedures contain sufficient detail to permit the elimination of similar site procedures.

RP/Chem expressed frustration with procedures. Their concern was that they now had both fleet and site procedures and one had to shuffle back and forth between them to get work done.

Suggestion # 11 (GAR- 01229771)
Shift Managers should be encouraged to provide log keeping feedback to their crews using face to face communication. A metric on log keeping quality should be developed and the indicator posted with crew score cards.

The subcommittee was briefed on actions to improve control room log keeping._Operations is focusing on the "Three C's", context, clarity, and closure. Training has been provided. Operations supervisors are reviewing logs and e-mailing feedback to the Shift Managers.

Suggestion # 12 (GAR- 01229777)
Feedback should be provided to operators on items missed from the "THINK" model on the reactivity event and any future events.

Human performance was discussed concerning the recent reactivity event. Operations is stressing the use of the "THINK" model, which is being used at Monticello, as another human performance tool. Following the reactivity clock reset, missed human performance tools were identified, but no feedback was developed relative to the 'THINK" model.

Suggestion # 13 (GAR- 01229780)
Where possible, people involved in events should be used in subsequent training.

Messages may be more powerful coming from peers. The employee will get the opportunity to turn a negative into a positive.

Suggestion # 14 (GAR- 01229782)
Refresher training should be considered for all hands on why nuclear is special.

Suggestion # 15 (GAR- 01229784)
Job performance measures should be used to test the effectiveness of ODMI and integrated risk management training.

Operations is counting on improved use of ODMI and integrated risk management to improve the performance of activities that change plant configuration.

Suggestion # 16 (GAR- 01229790)
Training should be scheduled to chemistry, I&C, and warehouse employees on the lessons learned from the loss of low level radioactive source event.

A briefing was conducted on the missing low level radioactive source clock reset. Radiation Protection has provided training on the event

lessons learned within RP, but has not yet provided similar training to involved sections outside of RP.

Suggestion # 17 (GAR- 01229791)
The effectiveness review for corrective actions for the loss of low level radioactive source event should include a management assessment with an outside peer.

Effective review for the corrective actions for the loss of low level radioactive source event includes checking for no new similar events or CAPS.

Suggestion # 18 (GAR-01229944)
A high level of management attention should be maintained on the chemistry cold lab repairs to ensure that this important system is returned to service in a timely fashion.

Past MSRC suggestions have been to escalate management attention on the cold lab sampling system. It is still out of service. Repair is scheduled for this summer, but apparently has a high probability of slipping.

Suggestion # 19 (GAR-01229960)
The effluent spill corrective actions and effectiveness reviews should be included in the Chemistry excellence plan.

A briefing was conducted on the high number of reportable effluent spills at Prairie Island. The Chemistry Department has a number of corrective actions to address this issue, but they are not captured in the Chemistry Excellence Plan.

Suggestion # 20 (GAR-01229963)
Compliance should be attained with the existing assignment transition plan procedural requirements or a procedural change should be made as appropriate.

ERO is being challenged by the high turnover of people in ERO positions. A briefing was conducted on the existence of a fleet procedure (FP–PA–CMP–01) that requires a transition plan be prepared to identify normal duties, outage duties, and E-plan duties of an individual being moved. Apparently management is unaware of this requirement and the forms are not being prepared.

Action # 1 (CAP-01229845)
Ensure that Prairie Island supervision and the ERO organization understands of the importance of passing the pending ERO staff augmentation drill, reach agreement with the NRC on clock start time determination, and take the necessary actions to ensure the site has a high probability of a successful drill.

Previously the subcommittee has expressed concerns with regard to ERO staff augmentation. NOS has identified this issue and an NRC URI exists in this area. The NRC has also challenged the way PI calculates the start time of an ERO staff augmentation drill. Complying with the NRC interpretation will apparently reduce the actual time available to report to the site by several minutes. The subcommittee was not convinced that site has taken sufficient actions to ensure that ERO staff augmentation requirements can be met within the prescribed time frame. The subcommittee believes that the site may not be aware of the significance of failing to meet ERO staff augmentation requirements during a drill.

Suggestion # 21 (GAR-01229965)
The level of coaching to the ERO coordinator, who is relatively new to the site and the nuclear industry, should be increased.

Organizational Subcommittee

Suggestion # 22 (GAR-01229972)
It is strongly urged that Xcel Energy should give serious consideration to the recent benchmarking insights, as both Prairie Island and Monticello have growing CAP backlogs, suggesting the need for fundamentally rethinking the CAP business model. Simply applying brute force to the existing process does not seem to be working.

Recent benchmarking has highlighted several processes enhancements that, if implemented, could greatly improve both the quality and efficiency of CAP. The subcommittee was encouraged by the "picture of excellence" that the new CAP manager now has as a result of this recent benchmarking. However, it will take strong senior management support to successfully implement the proposed enhancements. Equally important, it will require fleet alignment on this new picture of CAP excellence.

Suggestion # 23 (GAR-01229975)
Nuclear Oversight should to improve the quality of its communication with station management. The MSRC observed too many instances during its meeting on March 18 of disconnects in understanding of key issues between senior line management and Nuclear Oversight.

Continuing equipment and human performance challenges at Prairie Island are forcing Nuclear Oversight to critically assess its effectiveness in leveraging station improvement. For example, insights gained from recent site clock reset events have caused Oversight to question the effectiveness of its observation activities in the control room. The subcommittee considers this critical self-reflection by Nuclear Oversight to be appropriate, just as it is for the MSRC to critically assess its own effectiveness relative to Prairie Island's continuing performance challenges. An area for improvement is for Nuclear Oversight to identify

the various contributors to performance issues in addition to identifying the issues themselves.

Equipment Subcommittee

Suggestion # 24 (GAR-01229976)
Continued training should be considered for Engineers on the usage of corrective action system to document and solve equipment issues.

NOS observes that in the area of Equipment Reliability most of the issues are derived from less than optimum use of the corrective action program. Some examples include:

- Quality of corrective action processing can be driven by due date rather than the need to do a thorough job
- Close out reviews by "owed to" are not always thorough and have resulted in issues not being resolved
- CAPs are often **not** written expeditiously and issues can languish in the analysis phase too long
- Technical rigor of Operability Evaluations is not always acceptable

Suggestion # 25 (GAR-01229994)
The abandoned improvement initiatives from PRIDE should be reviewed to determine if continued effort should be made to implement.

Many of the meaningful initiatives of PRIDE to improve the work management process were never completed. Significant resources were spent and wasted when few improvement items were ever implemented.

Suggestion # 26 (GAR-01230003)
A hit team with potential outside support should be considered to work down the backlog of PMCRs.

A large backlog of (PMCRs) Preventive Maintenance Change Requests (560) exists, this is causing multiple negative effects; PMs that have been justified to be moved out in frequency are being done at the old frequency; value of worker feedback is not being realized; value of T-26 work week meeting is lost

Suggestion # 27 (GAR-01230005)
The implementation of a permanent FIN team should be considered.

There is not a permanent FIN team in place which is difficult to manage due to constant change in personnel or lack of certain skill sets.

Suggestion # 28 (GAR-01230008)
Options for system clean up should be considered to avoid future fouling of seal faces resulting in excessive leakage.

The cause of 12 RCP pump seal failure appears to be debris on the seal faces. Both RCP pumps were back seated for 25 days which is longer than normal. This situation can cause crud build up in the seals which ultimately caused the increased leakage on 12 RCP. The Reactor make up tank is believed to be the main source of debris; flushing of tanks did not occur as planned and may have precluded the failure

Suggestion # 29 (GAR-01230010)
The breather modification should be revisited to alleviate excessive oil into the air intake via turbo-charger resulting in carbon deposit and excessive wear in cylinder liner. Breather blockage can also be a cause of false high crankcase pressure.

For D5 and D6 performance, all INPO index points are being lost due to unavailability and efforts are being made to move maintenance window to refueling outages to reduce this. January 2012 is the best timing for receiving all INPO points. The biggest issues with diesels are crank case pressure increase, cylinder blow-by and, carbon deposit on cylinder piston rings. Actions need to be taken to improve the breather system in order to preclude this unacceptable performance.

Suggestion # 30 (GAR-01230014)
Plans should be continued to optimize maintenance outages by working around the clock and move major maintenance activities to RFO as currently planned. Follow through with EC 14908 to add a heat shield to reduce governor oil temperature and limit governor isolations which have been occurring.

Combined unavailability of D1/D2 is significantly more than D5 and D6 due to a number of issues over the past 18 months. D1 exceeds maintenance rule maximum by 38% and is red and D2 is green with 46% of the maintenance rule unavailability exceeded. Major maintenance activities are being moved to 1R27 to avoid more unavailability time.

Action # 2 (CAP-01229850)
Bring a full compliment to the CDBI Inspection preparation team ASAP and isolate them from daily station issues. Management must drive this expectation.

Only 4 people of a 9 person team have been engaged full time; the technical lead is frequently pulled away to support plant issues due to his expertise and importance to the station; one of the key contract personnel from MPR was transferred to EPU; one team member has not started due to other priorities

Suggestion # 31 (GAR-01230017)
Consideration should be given to augmenting the CDBI Inspection preparation team further with additional contract resources.

- The self assessment revealed significant issues across the board and some of them are repeat issues from previous CDBIs. For example

there were findings with calculations with incorrect assumptions, lack of margin, incorrect inputs and lack of calculation result impact.
- Numerous plant systems are at yellow and red status
- 22 CAPs remain open from the previous self assessment and CDBI and the prospect of closing all of them prior to the inspection appears challenged.

Action # 3 (CAP-01229851)
Perform an immediate independent assessment of CDBI Inspection preparation team progress and schedule for adequacy.

- The self assessment revealed significant issues across the board and some of them are repeat issues from previous CDBIs. For example there were findings with calculations with incorrect assumptions, lack of margin, incorrect inputs and lack of calculation result impact.
- Numerous plant systems are at yellow and red status
- 22 CAPs remain open from the previous self assessment and CDBI and the prospect of closing all of them prior to the inspection appears challenged.

Suggestion # 32 (GAR-01230020)
A plan should be laid out for completing the corrective actions from the 2010 self assessment and previous self assessment.

- The self assessment revealed significant issues across the board and some of them are repeat issues from previous CDBIs. For example there were findings with calculations with incorrect assumptions, lack of margin, incorrect inputs and lack of calculation result impact.
- Numerous plant systems are at yellow and red status
- 22 CAPs remain open from the previous self assessment and CDBI and the prospect of closing all of them prior to the inspection appears challenged.

Attachment 7
2010 MSRC
Items Sent

- Site Notice dated 10/15/09, 1R26 Work Activities
- RAI Related to Response to GL 2008-01, dated 9/28/09
- Summary of Pre-Submittal Meeting to Discuss Proposed Alternate Source Term LAR, dated 10/2/09
- Notification of Deletion of Commitment Made in the PINGP 30-day Response to NRC Bulletin 2003-02
- Site Notice: Equipment Reliability Decisions during 1R26 dated 10/19/09
- News Release: NRC Issues Final SER Report for License Renewal dated 10/16/09
- Site Announcement regarding Judge's recommendation on additional dry cask storage and extended power uprate dated 10/23/09
- Unit 1 NRC Supplemental Inspection Report 2009011 dated 10/15/09
- Site Notice – NRC Issues Final Ser for PINGP License Renewal, 10/16/09
- 2009 Biennial Report of Changes, Tests, and Experiments for he PI ISFSI and PI ISFSI SAR, dated 10/16/09 (note – this contains the cover letter and enclosure 2, Summary of Changes to ISFSI SAR (does not include the ISFSI SAR revised pages as it is too large to email)
- Notice of Violation, NRC Inspection Report 2009014, dated 10/27/09
- NRC 3rd Qtr 2009 Integrated Inspection Report 2009004, dated 10/23/09
- NRC Final Safety Evaluation Report Related to License Renewal of PINGP U1 & U2, dated 10/16/09
- October's MRM presentation, dated 10/29/09
- Message from Mark Schimmel re Extended Power Uprate, dated 11/5/09
- Site Notice – Outage Update from Kevin Ryan, dated 11/7/09

- PORC Meeting Minutes #3070 dated 10/01/2009
- PORC Meeting Minutes #3071 dated 10/08/2009
- PORC Meeting Minutes #3072 dated 10/12/2009
- PORC Meeting Minutes #3073 dated 10/15/2009
- PORC Meeting Minutes #3074 dated 10/22/2009
- PORC Meeting Minutes #3075 dated 10/24/2009
- PORC Meeting Minutes #3076 dated 10/30/2009
- PORC Meeting Minutes #3077 dated 11/13/2009
- PORC Meeting Minutes #3078 dated 11/05/2009
- PORC Meeting Minutes #3079 dated 11/19/2009
- PORC Meeting Minutes #3080 dated 11/21/2009
- PORC Meeting Minutes #3081 dated 12/03/2009
- PORC Meeting Minutes #3082 dated 12/08/2009
- PORC Meeting Minutes #3083 dated 12/16/2009
- PORC Meeting Minutes #3084 dated 01/07/2010
- PORC Meeting Minutes #3085 dated 01/14/2010
- PORC Meeting Minutes #3086 dated 01/21/2010

- PORC Meeting Minutes #3087 dated 01/29/2010
- PORC Meeting Minutes #3088 dated 01/30/2010
- PORC Meeting Minutes #3089 dated 02/04/2010
- PORC Meeting Minutes #3090 dated 02/11/2010
- PORC Meeting Minutes #3091 dated 02/18/2010

- Notice of Public Meeting to Discuss Human Performance Issues at PI dated 11/10/09
- Outage Update 11/7/09
- Outage Update dated 11/5/09
- Xcel Communications regarding MPUC approves additional storage and generating capacity for PI, dated 11/13/09
- RAI Related to LAR to Revise TS IAW TSTF-448, Rev.3 – CR Habitability, dated 11/17/09
- Clarification of Cooling Water System Emergency Intake Line Minimum Flow Capacity, dated 11/20/09
- Supplement to Responses to GL 2008-001, dated 11/24/09
- Revised Non-Cited Violation in Inspection Report 2009002, dated 11/20/09
- Site Notice: Unit 1 heading back to Column 1 from Mark Schimmel, dated 12/08/09
- LER 1-09-07, Unanalyzed Condition due to a Breached Fire Barrier, dated 12/21/09
- LAR for Measure Uncertainty Recapture – Power Uprate, dated 12/28/09 (did not include the proprietary reports)
- LAR to Exclude the Dynamic Effects Associated with Certain Postulated Pipe Ruptures from the Licensing Bases Based Upon Application of Leak-Before-Break Methodology, dated 12/22/09 (did not include proprietary reports)
- Second RAI for TN-40HT LAR, dated 11/25/09
- Site Notice, Unit 1 heading back to Column 1, dated 12/07/09
- 50.59 Evaluation Summary Report, dated 12/10/09
- Site Notice, Engineering Organizational Announcement, dated 12/15/09
- Supplement to LAR to Revise TSs in Accordance with TSTF-448, Rev. 3 – Control Room Habitability, dated 12/21/09
- LER 1-09-06, Unanalyzed Condition Due to Potential Safety System Susceptibility to Turbine Building Flooding Due to a Postulated High Energy Line Break, dated 12/17/09
- December MRM Presentation, dated 12/17/2009
- NRC Notification email dated 01/19/2010 re missing isotope sources of low level radiation
- Site Notice, Report on Onsite Fire, email dated 1/20/2010
- Supplement to LAR to Modify TN-40 Cask Design (TN-40HT), dated 1/18/2010
- LAR and Exemption Request to Support the Use of Optimized ZIRLO Fuel Rod Cladding, dated 11/29/09
- Site Notice dated 1/21/2010, INOP E&A Results
- Site Notice dated 1/22/2010, Organizational Announcement
- January MRM Presentation, dated 1/28/2010

- NRC Supplemental Inspection Report 2009015 for the 95001 Rad Material Shipment White Finding, dated 1/12/2010
- R to Revise TS 3.8.3, Diesel Fuel Oil, Storage Requirements, dated 1/27/2010
- NRC 4th Quarter Inspection report and OI Report 3-2009-05, dated 2/8/10
- Site Notice, dated 2/8/10, U2 LCO associated with D5 EDG
- NRC Review of US SG Tube Inspection Report, dated 1/15/10
- Site Notice, dated 2/2/10, Organization Announcement – Maintenance Manager Hired
- NRC Closeout of GL 2008-01, Managing Gas Accumulation in ECC, Decay Heat Removal and CS Systems, dated 1/27/2010
- LER 1-09-08, Unanalyzed Condition due to an Inadequate Fire Barrier, dated 2/11/10
- LER 1-09-09, Radioactive Source Inventory Discrepancy, dated 2/16/10
- 90 Day 1R26 Post-Outage Report Pursuant to GL 2008-01, dated 2/18/10
- NRC Acceptance Review of MUR LAR, dated 2/19/10
- February MRM Package, dated 2/26/2010
- PI Org Charts
- Site Notice dated 03/05/2010, Site Organizational Announcement re Kurt Petersen