

Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402)825-3811
FAX (402)825-6211

NLS940111

November 7, 1994

Mr. L. J. Callan
Regional Administrator
NRC Region IV
611 Ryan Plaza Drive
Suite 400
Arlington, Texas 76011

Subject: Progress on Improvements at Cooper Nuclear Station
NRC Docket No. 50-298

Dear Mr. Callan:

The public meeting of the NRC's Restart Panel on November 8, 1994 is an important milestone for the Cooper Nuclear Station. As the licensee, NPPD's responsibility for safely managing the operation of Cooper places the burden squarely on us to demonstrate to the NRC and the public that we are fulfilling that responsibility. To facilitate an open and productive dialogue with the Restart Panel, this letter provides my assessment of the challenges NPPD faces in improving performance and the progress made in meeting those challenges.

As you know, the major performance improvement challenges for Cooper relate to management's responsibility to set clear expectations and performance standards, to provide clear direction, and to hold personnel accountable for performance results. Management's failure to meet these responsibilities has led to the majority of the deficiencies NPPD is currently addressing. Although the safety consequences of our past management weaknesses have been isolated and limited, and there have been reductions in safety margins to some plant systems, the ultimate safety functions of those systems would have been satisfied. In addition, the material condition problems we have seen have not been significant.

Over the past 20 years, Cooper Nuclear Station has been a safe operating plant. However, it became increasingly evident that management had not instilled the type of questioning attitude and essential focus on safe plant operations necessary for achieving a high level of confidence such that safety issues would be consistently and promptly identified and completely resolved. This resulted in a decline in station performance and our subsequent concern that there may have been significant material condition issues associated with essential plant systems.

Even though the potential existed for an impact to safety from these deficiencies, our extensive reviews over the past months of surveillance and testing programs, operating experience use, and maintenance practices have demonstrated that former management practices did not result in significant material condition problems. In fact, many of the issues that we have

9505190174 950512
PDR ADOCK 05000298
PDR

Powerful Pride in Nebraska

recently identified, including design of the intake weir wall, containment penetrations, and some surveillance and testing deficiencies, have existed since original plant startup. Taken collectively, these circumstances lead us to conclude that the staff at Cooper, while very capable at operating the plant, placed too much confidence in the initial plant design and operating practices. The questioning attitude to challenge the adequacy of existing designs and practices was not sufficient to raise and resolve these issues earlier.

Several management practices clearly resulted in hardware deficiencies that reduced the design margin of plant systems. In assessing the extent of findings, we have bounded the potential impact of equipment degradation on the safety functionality of plant systems. We concluded that the most significant potential impact was associated with the diesel generators, their ability to shed non-safety loads, and implementation of vendor recommended upgrades and maintenance. Even with these deficiencies, our engineering analyses have shown that the diesel generators would still have performed their safety function.

Even though past management practices did not result in significant hardware problems, management did not aggressively identify and correct the causes of such problems. We have reviewed these areas and have implemented sound resolutions, several of which are discussed in this letter. These resolutions will eliminate unacceptable practices and establish processes and program controls to ensure that appropriate design margins will be maintained. Improving the safety ethic at Cooper has been our major thrust. It is for this reason that our major initiatives are management-related.

As further discussed below, we have brought in managers with significant experience in successfully changing culture and management practices at other utilities. The major tools used to accomplish this improvement and a status of our progress and plans are described below.

Management and Organizational Changes. Past management practices reflected a downward-directive management style with an overemphasis on power production. A clear vision of how to balance the potentially conflicting pressures of safety, production, and cost was absent. This promoted inefficiencies in management systems, work processes and practices, and it did not adequately address management development.

Real change in management capability must originate with senior management and carry through all levels of the organization, including replacing or moving individual managers as necessary. NPPD has demonstrated its commitment in this area and has established the critical mass of talent to drive organizational change and performance improvement. In addition to myself, we have a new plant manager, QA manager, safety assessment manager, plant engineering manager, licensing manager, and new manager for the corrective action program and operating experience review. We are actively recruiting new managers for engineering and construction, operations, planning and

scheduling, and on-site human resources. The new managers are providing the organization with leadership role models and setting high standards and expectations as the first step in performance improvement. This talent upgrade will enable us to create effective management development plans, including rotations, that will provide the management depth necessary to maintain high performance standards. We will continue to assess manager performance and will not hesitate to make additional changes that are necessary. The NPPD Board of Directors and executive management have consistently supported these decisions.

The recent plant personnel reorganization provides the needed focus on safe operations and has allowed a better use of our existing management talent. For example, we have replaced the operations supervisor with the best shift supervisor at Cooper. The site support manager has been temporarily assigned as operations manager until this position can be filled with a new hire. We have transferred I&C maintenance from operations to maintenance to allow the operations department to focus on its primary responsibility, and the former plant manager has been assigned as the manager of our consolidated maintenance department. We have also restructured plant engineering and created new engineering supervisory positions. Additional organizational changes are continuing at lower levels.

To effect the management changes needed, we have had to reexamine our performance standards and replace them with standards that are appropriate for a top-performing nuclear organization. By establishing fundamental changes in the management team's capabilities and management systems, we have directed our essential changes to:

- Establishing ownership and accountability throughout the organization to continually improve our performance.
- Learning from our performance results and industry experience to ensure we manage the change required, and
- Ensuring that performance problems are correctly identified and properly resolved.

To support these essential changes in standards, we are making the following changes in basic management skills that directly enable the behavior and performance results required:

- Make self assessment and problem solving an inherent management and organizational value such that instinctively, problems are identified and resolved and the generic implications with respect to safety are fully addressed.
- Establish higher expectations for performance, and communicate and ensure they are absorbed by managers such that they know what is expected and are accountable for their organization's performance.

Excuses for substandard performance are no longer acceptable.

- Develop a plan and criteria for success with the participation, buy-in, and ownership of the organization. The Phase 1 Performance Improvement Plan is the vehicle to demonstrate and develop this skill.
- Base the management systems upon clear responsibility, accountability and ownership of programs and processes for achieving high levels of performance, not upon downward direction of actions.

Corrective Action Program. A cornerstone of our performance improvement is the identification of problems and their satisfactory and timely resolution. In the past, Condition Reports (CRs) were not being written on all identified problems, corrective actions were not effective, and generic implications of problems were not identified. We have made significant progress in this area. The major increase in CR initiation rate is a testament to rising standards. To address the impact of CRs, we have elevated performance indicators for open CRs as a topic at regular management reviews, allowing us to prioritize and direct resources to resolving the important issues we face. We also are improving our ability to resolve CRs through the Condition Review Group and improving the CR closeout process by our management review through the Corrective Action Review Board. Our new corrective action program manager along with an increased staff are improving the quality and efficiency of corrective actions and are allowing us to reduce the backlog that has been created.

Conduct of Operations. We believe that an essential element of a top-performing nuclear organization is a singular focus on safe plant operations. Cooper has experienced and capable operators who have successfully operated the station despite problems associated with the management systems and work processes. We had not adequately focused plant resources on addressing operations issues. Improvement was needed in sensitivity to procedural controls, thoroughness of operability determinations, and conservative Technical Specification implementation.

Past operations were often compliance-oriented with too much emphasis on reliable production. The new management team, in conjunction with realigning responsibility and accountability for performance results, provides the appropriate balance between production and safety. For example, we have already made significant changes in critical areas including resolving the preconditioning issue, eliminating the ability to bypass engineering through SORC-approved Maintenance Work Requests (MWRs), and substantially upgrading ownership of key programs including work control and surveillance testing. In addition, we are focusing on Technical Specification compliance and allowed outage times for surveillance testing.

Independent Oversight. To achieve the performance results required, our organization must have an effective independent oversight capability. Our two oversight bodies, SRAB and SORC, were not effective in identifying and ensuring correction of safety issues and providing a broad overview of Cooper activities. To address needed changes, the membership has been revised, charters and direction established and expectations clearly communicated. This is leading to both SRAB and SORC becoming more effective at identifying the important safety issues for the station.

Effective oversight also depends on having an active QA organization. In the past, QA did not effectively assess line management performance, self-assessments or the safety ethic that existed in the organization. We have completed a self-assessment of needed improvements, and a plan has been developed to address performance improvement. QA is providing the needed confidence for long-term compliance, and their assessment function is continuing to improve.

Improved Critical Work Processes. To improve our performance, it is essential that our management work processes facilitate the efficient and effective achievement of the results we require. In the past, management systems to monitor performance indicators were ineffective. Basic work control processes did not support operations, and they introduced distractions to operators including challenges to divisional separation. The management and work processes also created challenges in reducing the corrective action backlog. A key improvement in Cooper Nuclear Station management processes is the implementation of performance monitoring of the work load in key plant organizations; these include operations, maintenance, and plant and design engineering.

Since workloads were not previously prioritized and appropriate goals for work backlogs and the efficiency of completing work were not established, we expect significant increases in work completion now that these new management systems are in place. A particular area where significant benefits will be achieved is work control. Our focused improvements in work control will reduce the work load on the Shift Supervisors, reduce challenges to safety due to multiple divisional outages, and increase safety system availability through to efficient scheduling of system outages for maintenance. These types of process improvements, when implemented at plants in similar conditions, have doubled work through-put by removing inefficiencies. These changes will significantly increase the station's ability to reduce our backlogs while simultaneously improving our safety performance.

Engineering Support. Shortcomings in our ability to solve problems promptly also evolved from management and control of our technical resources. The results were, in part, poor technical support, due primarily to a lack of focus and integration of our engineering resources at Columbus and at the site. A plan is being developed to solve this issue by:

- 1) Refocusing plant engineering on day-to-day system engineering and

operations needs,

- 2) Creating a strong on-site engineering and project management organization that will promote engineering ownership and accountability for plant performance results, and
- 3) Focusing the remaining engineers on discipline-oriented design engineering.

By mid-November, 1994, we will have implemented the interim stage of the engineering performance improvement and restructuring plan. This will allow us to focus our engineering staff on the important startup issues and to begin the longer-term process of strategically redefining the engineering role from design modifications to technical support for reliable operation and maintenance of the design basis. We have already enlarged the on-site design engineering staff to assist our operating staff.

Planning, Ownership and Accountability. As previously noted, a downward-directive management style was used at Cooper instead of one based on clear ownership and accountability to high standards and expectations. Improvement plans were either not implemented, or there was not a reliable method for confirming that desired results were achieved. The first crucial step has been to create a Phase 1 Performance Improvement Plan that clearly identifies our most important work activities. This plan is owned by line management, and accountability for results is being enforced by senior management. The Phase 1 action plans are key to teaching the staff the skills of ownership and accountability while simultaneously addressing those activities required to restart the plant. In addition, management processes, notably our management review meetings and new performance indicators, are now in place to establish and reinforce expectations by which we will live.

Looking ahead, our management team initiated the Phase 2 and 3 performance improvement planning in two off-site workshops to lay out clearly for our owners, employees and external parties where we are going from here and why. An initial version of the Phase 2 and 3 Plans will be issued in the near future.

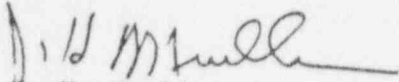
Restart Readiness Program. To manage our return to power operation safely and effectively, we will use a Restart Readiness Program that provides the transition from our Phase 1 performance improvement activities to implementation of our power ascension plan. The Restart Readiness Program addresses how Cooper will use restart lists and schedules, Phase 1 action plans, DSAT findings, SET inspection findings, confirmatory action letter closeouts, and NRC Restart Panel conclusions regarding activities that will provide a consistent basis for determining restart readiness. The results of these efforts will be incorporated into final restart readiness determinations. In addition, issues such as plant material condition, miscellaneous hardware deficiencies, and organizational readiness will be assessed and dispositioned appropriately prior to startup.

L. J. Callan
November 7, 1994
Page 7

Conclusion

I am pleased with the pace and results of the changes to date. NPPD executive management has been kept fully apprised, and they have been supportive of our efforts. In the next several weeks we will have additional indications of how rapidly these changes can produce the expected level of performance results, and the time frame for accomplishing key milestones, including resumption of plant operations. The NRC's SET assessment results are being integrated with our current plans and programs to ensure we are addressing all of the right issues. I will continue to provide periodic updates on our progress and significant issues as circumstances warrant.

Sincerely yours,



W. H. Mueller
Site Manager

cc: U. S. Nuclear Regulatory Commission
Attention: Document Control Desk

Region Administrator
USNRC - Region IV

NRC Resident Inspector
Cooper Nuclear Station

NPG Distribution

OPTIONAL FORM 99 (7-93)



Federal Emergency Management Agency

FAX TRANSMITTAL

of pages = 3

To: CHARLES HARKAY	From: FEMA R7
Dept./Agency: NRC IV	Phone #: 816 283-7016
Fax #: 817 860-8710	Fax #: 816 283-7098
NSN 7540-01-317-7388	5099-101
GENERAL SERVICES ADMINISTRATION	

NOV 23 1994

Richard L. Semm, Assistant Director
State Civil Defense Agency
1300 Military Road
Lincoln, Nebraska 68508-1090

Dear Mr. Semm:

SUBJECT: Deficiency Observed at the November 16, 1994,
Cooper Nuclear Station Exercise - Response Due:
December 5, 1994

The purpose of this letter is to officially inform you of the Deficiency identified during the emergency phase of the November 16, 1994, exercise of the state and local radiological emergency response plans for the Cooper Nuclear Station. This Deficiency is being assessed against the Nebraska Field Command Post/Information Authentication Center.

Field Command Post/Information Authentication Center

1. Objective number 11, the capability to coordinate the formulation and dissemination of accurate information and instructions to the public, was not adequately demonstrated resulting in a Deficiency. Specifically, the following concerns were identified with the issuance of Emergency Broadcast System (EBS) messages: (NUREG-0654, E.7)

- * The EBS messages prepared by the state following the protective action decision to evacuate were not provided to the public in a timely manner. The protective action decision to evacuate areas 1, 2, 3, and 4 was made at 0921. This information was provided to the state EOC at 0925. However, the EBS station was not contacted until 0950 and the complete information to the public required to effect this evacuation was not broadcast until 1007. This was a delay of 46 minutes before the complete instructions were provided to the public regarding the evacuation process.
- * The state EOC did not combine critical information, concerning the evacuation of subareas 1, 2, 3, and 4, into one message in accordance with the Annex G of the state plan. Instead of one EBS message, the state EOC generated four separate messages to provide this information to the public. Message number 1, broad-

remedial actions, including remedial exercises, drills, and other actions.

cast at 0954, provided the protective action decision to evacuate and the appropriate landmark descriptions of the affected areas. Messages number 2 and 3, broadcast at 1000, indicated the locations of the reception centers for evacuees and provided specific evacuation instructions to assist the evacuees. Message number 4, broadcast at 1007, provided the evacuation routes to the reception centers. Issuing this information as four separate messages, instead of one, would be confusing to the public. Providing a protective action decision to evacuate and the description of the affected areas, without immediately providing the evacuation routes to utilize or the location of the reception centers, could result in evacuees using roads that might lead them into the path of the plume and could also result in evacuees not reporting to the reception centers to be monitored.

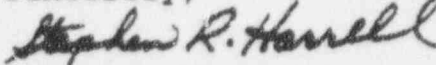
Remedial action will require submission of a plan amendment to clearly indicate that critical information concerning protective actions (areas affected, landmarks, evacuation routes, and reception centers) will be provided concurrently to the public. It is recommended that the EBS messages be modified in the manner that was accomplished for the Fort Calhoun Nuclear Station plans. In addition to the plan amendment, a remedial exercise must be conducted to demonstrate objective number 11 in accordance with the modified plan.

In accordance with 44 CFR 350.9(d) and the FEMA Radiological Emergency Preparedness Exercise Manual (FEMA-REP-14), September 1991, a Deficiency is defined as a demonstrated and observed inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant. Because of the potential impact of Deficiencies on emergency preparedness, they are required to be promptly corrected through appropriate remedial actions, including remedial exercises, drills, and other actions.

Based on the above, remedial action must be completed by March 16, 1995. Please provide this office with a projected date for the completion of the remedial action, to include the remedial exercise, by December 5, 1994.

If you have any questions, please contact Robert Bissell at (816) 283-7004.

Sincerely,

for 
John A. Miller
Regional Director

cc: Kathryn Cole, FEMA HQ
Charles Hackney NRC IV