

March 31, 2000

Mr. R. P. Powers  
Senior Vice President  
Nuclear Generation Group  
American Electric Power Company  
500 Circle Drive  
Buchanan, MI 49107-1395

SUBJECT: PLANT PERFORMANCE REVIEW - D. C. COOK

Dear Mr. Powers:

The purpose of this letter is to communicate our assessment of your performance and to inform you of our planned inspections at your facility. On March 7, 2000, we completed a Plant Performance Review (PPR) of D. C. Cook. We conduct these reviews to develop an integrated overview of the safety performance of each operating nuclear power plant. We use the results of the PPR in planning and allocating inspection resources and as inputs to our senior management meeting (SMM) process. This PPR evaluated inspection results and safety performance information for the period from February 1, 1999, through January 31, 2000, but emphasized the last 6 months to ensure that our assessment reflected your current performance. Our most recent PPR summary of plant performance at D. C. Cook was provided to you in the mid-cycle PPR letter dated September 29, 1999, and was discussed with you during a routine meeting following issuance of the PPR. Through the Inspection Manual Chapter 0350, "Staff Guidelines for Restart Approval" process, the NRC plans to continue to hold regular public meetings with your staff to discuss plant performance, including progress toward restart of the units.

The NRC has been developing a revised reactor oversight process that will replace our existing inspection and assessment processes, including the PPR, the SMM, and the Systematic Assessment of Licensee Performance (SALP). We recently completed a pilot program for the revised reactor oversight process at nine participating sites and are making necessary adjustments based on feedback and lessons learned. With the exception of D. C. Cook, we plan to begin initial implementation of the revised reactor oversight process industry-wide on April 2, 2000.

This PPR reflects continued process improvements as we make the transition into the revised reactor oversight process. You will notice that the following summary of plant performance is organized differently from our previous performance summaries. Instead of characterizing our assessment results strictly by SALP functional area, we have begun to organize the results into the strategic performance areas embodied in the revised reactor oversight process. The results of this PPR were used to establish the inspection plan in accordance with the phased in approach D. C. Cook will undergo to fully transition to the revised reactor oversight process. During this transition we understand that you will begin submitting performance indicator data, including some historical data. Although this letter incorporates some terms and concepts associated with the new oversight process, it does not reflect the much broader changes in

inspection and assessment that will be evident after we have fully implemented our revised reactor oversight process at the D. C. Cook facility.

Both units remained shutdown throughout the assessment period. D. C. Cook has made significant progress in resolving programmatic and technical issues that contributed to the plant shutdown. We have conducted inspections of your corrective actions to resolve restart related issues and confirmed that problems are being corrected. This was evidenced by the closure of the Confirmatory Action Letter in February 2000, and by closure of over half of the NRC Inspection Manual Chapter 0350 Restart Panel Case Specific Checklist items. Your approach to restart has generally been characterized by a methodical approach with emphasis on quality and safety.

Throughout the past 6 months, inspections have been conducted to review the effectiveness of your efforts to correct the deficiencies identified through your discovery efforts. The inspections have confirmed progress in resolving many of the restart issues. The majority of the technical issues identified in the Inspection Manual Chapter 0350 Restart Panel Case Specific Checklist, in addition to the nine Confirmatory Action Letter issues, have been resolved adequately to support restart. Issues involving the ice condenser and the containment spray systems, for example, were adequately resolved. As discussed with you in our March 10, 2000, public meeting, implementation of the revised reactor oversight process and the revised assessment process will be delayed until restart of Unit 2 to minimize the impact on your staff. This is consistent with minimizing the regulatory impact on your organization so that they can remain focused on a safe restart of Unit 2.

In the reactor safety performance area, performance improved as reflected in the controlled and deliberate manner both units were defueled, and recent observations of good operator control of testing evolutions. Improvements in operations training and the emergency operating procedures program were implemented. Major maintenance activities, including installation of modifications, electrical breaker refurbishment, ice condenser reloading, motor-operated valve testing and repair, open vessel testing, and Unit 1 Steam Generator replacement activities generally have been conducted in a controlled and deliberate manner. Sufficient improvements have been noted in the areas of preventive maintenance and contractor control such that these areas are adequate to support plant restart.

The Expanded System Readiness Reviews you conducted were comprehensive and rigorous. Engineering training programs were enhanced, and other important programs and procedures were assessed and modified as necessary. Procedures which implemented the design control process were substantially revised, the 10 CFR 50.59 review process was strengthened to remove potential bypass mechanisms, and modification implementation procedures were upgraded. The overall impact of these initiatives has resulted in the establishment of processes to effectively maintain the plant design basis. However, the adequacy of 10 CFR 50.59 safety evaluations and screenings has been dependent on the involvement of outside engineering contractors and consultants who will remain in place through plant restart. We intend to perform further inspection in this area to confirm the quality of safety screenings and evaluations in the long term.

Your performance during the 1999 biennial emergency preparedness exercise successfully demonstrated your ability to respond to an emergency, but revealed two exercise weaknesses. Emergency response facilities, equipment, and supplies had been well maintained, with the exception of the technical support center air conditioning units. Post exercise critiques were self-critical and detailed.

Prior to Unit 2 restart, inspection focus will be placed on assessing the adequacy of corrective actions related to NRC Inspection Manual Chapter 0350 Restart Panel Case Specific Checklist Items. For example, surveillance testing issues and issues related to the motor operated valve program and plant modifications that need to be completed prior to restart will be evaluated. A Restart Readiness Team Inspection is planned for approximately 3 weeks before restart to evaluate the readiness of plant hardware, plant staff and management programs to support a safe restart and the continued operation of D. C. Cook Unit 2. In addition, an inspection will be conducted by the Region III Senior Reactor Analysts to evaluate the risk impact of degraded systems and work deferred until after restart. Following Unit 2 restart, inspections will be focused consistent with the revised reactor oversight process, including augmented inspection where reactor safety cornerstone performance indicators have not been established. Increased inspector oversight of operator response to transients, the conduct of major evolutions, maintenance and tests, and startups and shutdowns are examples where augmented inspections will be performed. For Unit 1, restart related activities will also be assessed in a similar manner with additional inspections of the steam generator replacement project, and risk significant modifications on Unit 1.

We did not identify any significant performance issues in the radiation safety or safeguards strategic performance areas. The radiation safety baseline inspection program will be augmented with additional inspection to compensate for the lack of insight into plant performance due to the absence of performance indicators. In addition, an inspection will be conducted to assess radiological controls performance during transition of Unit 2 to power operation. The safeguards assessment process is currently undergoing modification and transition. Additional modifications to the inspection program and schedule may occur. Additionally, pending final resolution, the scheduled date for the Operational Safeguards Response Evaluation inspection has been extended.

Enclosure 1 contains a historical listing of plant issues, referred to as the Plant Issues Matrix (PIM), that were used during this PPR process to arrive at our integrated view of your performance trends. The PIM for this assessment is grouped by the prior SALP functional areas of operations, maintenance, engineering and plant support, although the future PIM will be organized along the cornerstones of safety as described in the revised reactor oversight process. The attached PIM includes items summarized from inspection reports or other docketed correspondence regarding D. C. Cook. We did not document all aspects of licensee programs and performance that may be functioning appropriately. Rather, we only documented issues that we believe warrant management attention or represent noteworthy aspects of performance. In addition, the PPR may also have considered some predecisional and draft material that does not appear in the attached PIM, including observations from events and inspections that had occurred since our last inspection report was issued. We will make this

material publically available as part of the normal issuance of our inspection reports and other correspondence.

Enclosure 2 lists our planned inspections for the period April 2000 through March 2001 at D. C. Cook to allow you to resolve scheduling conflicts and personnel availability in advance of our inspector arrival onsite. The inspection schedule for the latter half of the period is more tentative and may be adjusted in the future due to emerging performance issues at D. C. Cook or other Region III facilities. We also included some NRC non-inspection activities in Enclosure 2 for your information. Routine resident inspections are not listed due to their ongoing and continuous nature.

We will inform you of any changes to the inspection plan. If you have any questions, please contact me at 630-829-9700.

Sincerely,

*/RA/*

John A. Grobe, Director  
Division of Reactor Safety

Docket Nos. 50-315; 50-316  
License Nos. DPR-58; DPR-74

Enclosures: 1. Plant Issues Matrix  
2. Inspection Plan

See Attached Distribution

**SEE PREVIOUS CONCURRENCES**

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