December 17, 1999

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: NRC SUPPLEMENTAL INSPECTION REPORT 50-254/99024(DRS); 50-265/99024(DRS)

Dear Mr. Kingsley:

On November 17, 1999, the NRC completed a pilot program supplemental inspection at your Quad Cities Nuclear Station. The results of the inspection were discussed with Mr. J. Kudalis and other members of your staff on that date. The enclosed report presents the final results of that inspection.

This supplemental inspection was an examination of the extent of the condition, your root cause evaluation and corrective actions relating to a white performance indicator in the Safeguards Strategic Performance Area. Specifically, we assessed your evaluation associated with the risk significance of the Protected Area Security Equipment Performance Index that fell within the Increased Regulatory Response Band (WHITE). Additionally, we reviewed your evaluation of the discrepancy in collecting and reporting the data.

Based on our inspection results, we concluded that you performed a comprehensive analysis of the performance issues associated with the unavailability of protected area security equipment. Your corrective actions resulted in improved performance of protected area security equipment, and the performance indicator information submitted for the most recent period (October 1999) accurately shows your performance within the Licensee Response Band (GREEN). Also, your evaluation and corrective action appear to have resolved those issues which caused the reporting discrepancy.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice", a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR). No response to this letter is necessary.

Sincerely,

/s/ S A. Reynolds (for)

John A. Grobe, Director
Division of Reactor Safety

Docket Nos. 50-254; 50-265
License Nos. DPR-29; DPR-30

Enclosure: Inspection Report 50-254/99024(DRS); 50-265/99024(DRS)

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President, Nuclear Operations
H. Stanley, Vice President, Nuclear Operations
R. Krich, Vice President, Regulatory Services
DCD - Licensing
J. Dimmette, Jr., Site Vice President
G. Barnes, Quad Cities Station Manager
C. Peterson, Regulatory Affairs Manager
M. Aguilar, Assistant Attorney General
State Liaison Officer, State of Illinois
State Liaison Officer, State of Iowa
Chairman, Illinois Commerce Commission
W. Leech, Manager of Nuclear
MidAmerican Energy Company

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REGION III

Docket Nos:	50-254; 50-265
License Nos:	DPR-29; DPR-30
Report No:	50-254/99024(DRS); 50-265/99024(DRS)
Licensee:	Commonwealth Edison Company (ComEd)
Facility:	Quad Cities Nuclear Power Station, Units 1 and 2
Location:	22710 206th Avenue North Cordova, IL 61242
Dates:	November 15-17, 1999
Inspector:	Terry J. Madeda, Physical Security Inspector
Approved by:	James R. Creed, Safeguards Program Manager Division of Reactor Safety

SUMMARY OF FINDINGS

Quad Cities Nuclear Power Station, Units 1 & 2
NRC Inspection Report 50-254/99024(DRS); 50-265/99024(DRS)

This supplemental inspection was performed because the Protected Area Security Equipment Performance Indicator in the Physical Protection Cornerstone was reported to be within the Increased Regulatory Response Band (WHITE). The inspection was performed to assure that the root and contributing causes for the security equipment performance issue were understood, to assure the extent of the condition was identified and to assure corrective actions were sufficient to address root causes and to prevent recurrence. We also reviewed the causes and corrective actions relating to the inaccurate reporting of performance indicator information.

Cornerstone: Physical Protection

- The licensee conducted comprehensive evaluations for the causes of the unavailability of protected area security equipment. The evaluation appropriately identified that the root cause for the protected area security equipment issue was the result of inadequate practices and procedures involving the scheduling and completion of maintenance for the security equipment. Adequate corrective actions were verified to have been implemented that should improve security equipment performance. Accurate Protected Area Security Equipment Performance Indicator information submitted for October 1999 showed system performance to be in the Licensee Response Band (GREEN). Security equipment performance was also effective.

- An error in data collection resulted in the Protected Area Security Equipment Performance Index for the first and second quarters of calender year 1999 being reported in the Licensee Response Band (GREEN). The accurate data showed the index was in the Increased Regulatory Response Band (WHITE). Our review of the licensee's evaluation showed that the root causes for the discrepancy were adequately identified, and that adequate corrective actions were taken.

Report Details

01. Inspection Scope

The inspector reviewed licensee's assessment and corrective actions to improve the performance of the security equipment associated with a white (Regulatory Response Band) performance indicator for Protected Area Security Equipment Performance. The inspector also assessed licensee's evaluation of inaccurate data submitted to the NRC for the Protected Area Security Equipment Performance Index, which resulted in a white performance index window for the first and second quarters of calender year 1999. The inspection finding related to the performance indicator (PI) was identified as an Unresolved Item in NRC Inspection Report 50-254/99016; 50-265/99016 and is related to the physical protection cornerstone.

02. Evaluation of Inspection Requirements

02.01 Problem Identification

a. Determine that the evaluation identified who and under what conditions the issue was identified.

During our initial pilot inspection, documented in NRC Inspection Report No. 99016, a member of the licensee's staff identified that the Protected Area Security Equipment Performance Indicator had been reported incorrectly and should have been in the white rather than the green response band.

b. Determine from the evaluation documents how long the issue existed, and prior opportunities for identification.

The licensee determined that the white PI had existed since the start of the collection process in the second quarter of 1998. They identified that there wasn't a process to verify or validate the accuracy of the information being submitted. The licensee's evaluation determined that if they had implemented a verification and validation (V&V) process they may have had an opportunity to discover the poorer equipment performance and could have improved security equipment performance prior to the submittal of the PI information to the NRC.

c. Determine that the evaluations document the plant's specific risk consequences (as applicable) and compliance concerns associated with the issue.

The licensee conducted a qualitative assessment of the specific risk consequence of the issue regarding the unavailability of protected area security equipment. Their evaluation compared the risk associated with the operable systems and the risk associated with the compensatory measures. They concluded that the white index window for the Protected Area Security Equipment PI had a low risk consequence to the plant because compensatory measures were implemented as required. The inspector agreed with the licensee's conclusion regarding the low risk and determined that compensatory measures were implemented in accordance with security plan requirements.

02.02 Root Cause and Extent of Condition Evaluation

a. Determine that the problem was evaluated using a systematic method(s) to identify root cause(s) and contributing cause(s).

The licensee used their Event and Casual Factor Charting Method to evaluate the problems relating to the protected area security equipment unavailability. The licensee utilized this method because it was an effective systematic approach that identified human performance situations, process problems, and equipment failures in one integrated format. The inspector verified that the licensee's analysis followed their procedure guidance (Root Cause Investigation and Report Hand Book, (CAP-3, Revision 1)) for performing the root cause analysis. The procedure required that an effective investigation identify root cause(s), develop corrective action(s), and that the results be documented in writing. The licensee's analysis included interviews of cognizant personnel, reviewed appropriate records, and evaluated equipment performance and risk.

b. Determine that the root cause evaluations were conducted at a level of detail commensurate with the significance of the problem.

The inspector verified that the evaluation was thorough and identified both primary and contributing factors. The root cause for the excessive compensatory hours for the protected area security equipment, which had resulted in a white PI index window was caused by weak practices and procedures regarding scheduling and completion of maintenance for security equipment. Several contributing factors were also identified, which included: (1) no established performance standard or consequences for inadequate equipment performance, (2) work practices that did not allocate sufficient resources to meet the workload, and (3) maintenance management personnel that applied low sensitivity when failures occurred. The inspector concluded that the licensee's root cause evaluations for the security equipment performance issues were conducted at a level commensurate with the significance of the problem.

c. Determine that the root cause evaluations included a consideration of prior occurrences of the problems and knowledge of prior experience.

The licensee's evaluation examined their problem identification system (PIFs), security event reports and other required security logs, and their long-standing tracking and trending system for monitoring security equipment performance. The inspector verified that the licensee's review of prior occurrences was broad in scope and revealed no previous events or problems of the type referred in this report.

d. Determine that the root cause evaluations included consideration of potential common cause(s) and extent of condition of the problems.

The inspector determined that the licensee's root cause investigations did not document potential common causes or extent of condition. Further inspector review determined that those activities had been completed, but had not been documented in the root cause reports because the licensee's corporate root cause procedure (CAP-3) did not require that the extent of condition or common cause be documented in root cause reports. In response to our finding, the licensee amended the root cause investigations to document

the extent of condition or common cause(s). The licensee's review had not identified any common causes or extent of condition related to performance indicator data or excessive unavailability of other security equipment at the site. In response to our finding the licensee initiated action to revise CAP-3 to require documentation in the root cause analysis of the extent of condition or common cause. Those actions were included in the licensee's corrective action tracking program (Reference No. Q1999-04006).

02.03 Corrective Actions

a. Determine that appropriate corrective action(s) are specified for each root/contributing cause or that there is an evaluation that no actions were necessary.

The inspector determined that the licensee's corrective actions had adequately addressed each root cause and contributing factor for the security equipment performance issues. Corrective actions for the excessive compensatory hours for the protected area security equipment included: the establishment of regular management oversight (security and maintenance) of security equipment performance, a procedure change to put a high priority on repair of protected area security equipment (changed from 14 days to within 24 hours to start work), and implemented a call-in program for maintenance department personnel.

b. Determine that corrective actions have been prioritized with consideration of the risk significance and regulatory compliance.

The inspector concluded that the licensee's corrective actions were properly prioritized to address the risk significance of the issues in that actions taken addressed the timely and effective repair of equipment to improve performance and reduce the need for compensatory measures. The licensee's corrective action plan also addressed a review of NRC regulatory requirements. No regulatory issues were identified.

c. Determine that a schedule has been established for implementing and completing the corrective actions.

The inspector verified that the licensee's corrective action program identified assigned individuals, completion dates, and reference numbers to the licensee's corrective action tracking program to ensure that the actions taken to improve PI accuracy and protected area security equipment performance were conducted in a timely and effective manner. With the exception of a final, broad evaluation of the continuing effectiveness of the corrective actions already completed and a review of security equipment performance, no additional action was outstanding. NRC's review showed that all interim corrective action implementation dates were met.

d. Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence.

The inspector verified that the licensee's corrective action program also included an action plan to further validate the effectiveness of the implemented corrective actions. This review will include future assessments and audits, follow up interviews of cognizant personnel, and trending of equipment effectiveness.

4CC4 Other

.1 (Closed) Unresolved Item 50-254/99016-01; 50-265/99016-01: The licensee identified that the process used to determine and compute the index value number for the Protected Area Security Equipment Performance PI did not capture all applicable information.

During the inspection referenced above, errors were identified in the performance indicator noted above. The licensee identified a discrepancy regarding the accuracy of the data submitted to the NRC for the Protected Area Security Equipment PI for the first and second quarter of calender year 1999. The original data indicated performance within the "Licensee Response Band" (GREEN). The revised data indicated performance in the "Increased Regulatory Response Band" (WHITE). However, because these errors were not wilful and were associated with data submitted during the voluntary pilot plant program, we are exercising Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation.

The licensee's analysis identified that the root cause for the inaccurate data was an inadequate turnover between the former and present security event report database personnel. The licensee also determined that a contributing factor was a failure to establish and implement a verification and validation process when the PI program was first developed and implemented.

Corrective actions for the inaccurate PI data included: establishing security management oversight of the PI program, and conducting a monthly verification and validation process for all PA equipment performance data.

4CC5 Management Meetings

.1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the onsite inspection on November 17, 1999. The licensee representatives acknowledged the findings presented and did not identify any information discussed as proprietary or Safeguards Information.

On November 24, 1999, the licensee advised the inspector that PI data submitted in November for October 1999 showed that the PI for protected area security equipment was in the Licensee Response Band (GREEN).

PARTIAL LIST OF PERSONS CONTACTED

Licensee

E. Anderson, Manager, Radiation Protection
K. Bethard, NRC Coordinator
G. Boesschy, Engineer
R. Jeisy, Nuclear Oversight
J. Kudalis, Services Manager
R. Lane, Corporate Nuclear Security Manager
K. Leech, Station Security Administrator
M. McDowell, Operations Manager
C. Peterson, Regulatory Assurance Manager
B. Rittmer, Assistant Station Security Administrator

Illinois Department of Nuclear Safety

R. Ganser, Resident Inspector

NRC

L. Collins, Resident Inspector
C. Miller, Senior Resident Inspector
K. Walton, Resident Inspector

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

50-254;265/99016-01	URI	Protected Area Security Equipment Performance Index Values

Discussed

None

LIST OF BASELINE INSPECTIONS PERFORMED

The following procedure was used to perform the inspection during the report period. Documented findings are contained in the body of the report.

IP 95001	Supplemental Inspection For One Or Two White Inputs In A Strategic Performance Area.

LIST OF DOCUMENTS REVIEWED

Action Report No. 14387-5
Quad Cities Root Cause Analysis Package
Action Report No. 14387-26
Root Cause Investigation and Report Handbook (CAP-3), Revision 1, dated April 29, 1999
Problem Identification Form No. Q1999-04006
Problem Identification Form No. Q1999-02416
Problem Identification Form No. Q1999-02548
P.O.D Security Information, dated November 15, 1999
Work Screening and Classification (WC-AA-101), dated February 12, 1999