

August 19, 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 SECURITY INSPECTION REPORT 50-254/99016(DRS); 50-265/99016(DRS)

On July 22, 1999, the NRC completed a routine, pilot program inspection at your Quad Cities Nuclear Station. The enclosed report presents the results of that inspection. The results of this inspection were discussed with Mr. Wozniak and other members of your staff on that date. A subsequent telephone discussion with your staff was conducted on August 16, 1999, to provide an updated status of our assessment.

The inspection was an examination of activities conducted under your license as they relate to the Safeguards Strategic Performance Area and to compliance with the commission's rules and regulations. Within this area, the inspection consisted of a selective examination of procedures and representative records, observation of activities, and interviews with personnel. Specifically, this inspection focused on performance involving the Physical Protection cornerstone.

During this inspection, your staff identified a major discrepancy regarding the accuracy of the data submitted to the NRC for the Protected Area Security Equipment Performance Index for the first and second quarters of calendar year 1999. A major discrepancy is a problem with the accuracy or completeness of information that may have affected NRC response because a performance indicator was exceeded or because the performance indicator data did not accurately reflect plant performance. The original information indicated performance that fell within the "Licensee Response Band" (green). Our inspection planning and assessment of your performance was based on that. The revised data indicated performance in the "Increased Regulatory Response Band" (white).

We recognize that your staff identified the problem relating to the accuracy of the performance indicator data. We also understand that the security staff will take action to ensure future accuracy. We plan to conduct a supplemental inspection to evaluate your corrective actions and the detailed bases for the performance indicator data. Secondly, the revised data indicates that the performance of some protected area security equipment is different from that previously reported. We understand that you plan to take action to evaluate the equipment and we acknowledge that compensatory measures were implemented as required by your security plan. We plan to conduct a supplemental inspection that will examine your actions, the performance of the equipment and evaluate the potential impact that performance may have on risk. We will coordinate the scheduling of our activities prior to initiation.

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,

Original /s/ J. A. Grobe

John A. Grobe, Director  
Division of Reactor Safety

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

Enclosure: Inspection Report 50-254/99016(DRS);  
50-265/99016(DRS)

cc w/encl: D. Helwig, Senior Vice President  
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

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report Nos: 50-254/99016(DRS); 50-265/99016(DRS)

Licensee: Commonwealth Edison Company (ComEd)

Facility: Quad Cities Nuclear Power Station, Units 1 and 2

Location: 22710 206<sup>th</sup> Avenue North  
Cordova, IL 61242

Dates: July 19-22, 1999

Inspectors: Terry J. Madeda, Physical Security Inspector  
Gary L. Pirtle, 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 50-254/99016(DRS); 50-265/99016(DRS)

The report covers a four day, announced inspection by two regional security specialists. This inspection focused on the Physical Protection Cornerstone, within the Safeguards Strategic Assessment area and included a review of the access authorization program, access control program, performance indicator verification, changes to the security plan, and review of previous inspection findings.

“Inspection findings were assessed according to potential risk significance, and were assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while not necessarily desirable, represent little risk to safety. WHITE findings would indicate issues with some increased risk to safety, and which may require additional NRC inspections. YELLOW findings would be indicative of more serious issues with higher potential risk to safe performance and would require the NRC to take additional actions. RED findings represent an unacceptable loss of margin to safety and would result in the NRC taking significant actions that could include ordering the plant shutdown. The findings, considered in total with other inspection findings and performance indicators, will be used to determine overall plant performance.”

Cornerstone: Physical Protection - Performance Indicator Verification (4CC2)

- URI. The licensee identified that the process used to determine and compute the index value number for the Protected Area Security Equipment Performance Index did not capture all application information. The subsequent calculation of the correct data changed the established response band and placed performance in the white response band for the first two calendar quarters of 1999 instead of the green response band which the licensee had reported to the NRC. A response threshold was crossed. The licensee has entered this issue in their corrective action system.

The revised Protected Area Security Equipment Performance Index showed that for the first two quarters of 1999, the equipment performed in the white response zone. The risk significance of the equipment performance has not been evaluated. Regulatory requirements were met because compensatory measures were properly implemented. The licensee has entered this issue in the corrective action system. (Section 4CC2.b)

- There were no findings identified and documented during this inspection relating to the submitted data for the Fitness-for-Duty Personnel Reliability Performance Indicator (PI) or the Personnel Screening Program PI. (Section 4CC2.b)

## Report Details

### 1. REACTOR SAFETY Cornerstone: Physical Protection

#### 1RO2 Change to License Conditions (Physical Protection)

##### a. Inspection Scope

The inspector reviewed Revision 45 of the Commonwealth Edison Quad Cities Nuclear Power Station Security Plan, which was submitted by licensee letter, dated June 7, 1999. The security plan revision was submitted in accordance with 10 CFR 50.54 (p).

##### 2. Observations and Findings

The inspector determined that the changes did not decrease the effectiveness of the security plan.

### 3. SAFEGUARDS Cornerstone: Physical Protection

#### 3PH1 Access Control (Identification, Authorization and Search of Personnel, Packages, and Vehicles)

##### a. Inspection Scope

The inspectors reviewed testing and maintenance procedures, observed licensee testing activities, and interviewed and monitored security personnel regarding the staffing and operational requirements for the following protected area access control equipment:

- Metal and Explosive Detectors
- X-Ray Devices
- Biometric Hand and Card Readers

The inspectors also conducted random observations and interviewed selected security personnel responsible for access control measures for packages and vehicles that entered the protected area.

##### 2. Observations and Findings

There were no findings identified and documented during this inspection.

#### 3PH2 Access Authorization (AA) Program (Behavior Observation only)

##### a. Inspection Scope

The inspectors interviewed six supervisors and six non-supervisors ( both licensee and contractor employees) to determine their knowledge of behavior observation responsibilities. Procedures pertaining to the Behavior Observation Program and fitness-for-duty semi-annual test result reports were also reviewed.

##### 2. Observations and Findings

There were no findings identified and documented during this inspection.

4. OTHER ACTIVITIES

4CC1 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed a sample of licensee self-assessments, audits, security loggable events, security drills, and maintenance work requests regarding the licensee's access authorization and access control programs. In addition, the inspectors interviewed security managers to evaluate their knowledge and use of the licensee's corrective action system.

2. Observations and Findings

There were no findings identified and documented during this inspection.

4CC2 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed the licensee's program for the gathering and submittal of data for the three Physical Protection Performance Indicators (PI). Specifically, a sample of plant reports related to security events, maintenance logs and other applicable security records were reviewed.

2. Observations and Findings

There were no findings identified and documented during this inspection relating to the submitted data for the Fitness-for-Duty Personnel Reliability PI or the Personnel Screening Program PI. One unresolved item was identified relating to the accuracy of the Protected Area Security Equipment Performance Index, and the performance of the equipment measure by that PI was in the white response band.

On May 14, 1999, the licensee submitted historical data, based on their best efforts, for the Protected Area Security Equipment Performance Index for the last four quarters which showed equipment performance in the white response band during each of the last two quarters of 1998; and in the green response band for the first two quarters in 1999. However, on July 22, 1999, the licensee's Station Security Administrator (SSA) notified the inspectors that they just discovered an error in gathering the data for the most recent PIs.

The computer query that had been used to extract the information needed for the PI, contained in a large data base, did not capture all the applicable data. Entries in the data base, used to calculate the index, were categorized with multiple definition codes. The system operator and the categorization of the entries changed just prior to gathering the PI data for the first quarter of 1999. The new operator did not realize that some of the needed information was not being captured by the query that was used.

While independently reviewing the detailed information that was used to establish the index values, the operator identified anomalies between the results of the various

quarters' queries. This problem was identified while this inspection was being conducted.

This performance indicator was calculated using several values and data inputs. The first was the IDS (intrusion detection system) Unavailability Index which uses compensatory hours in the previous four quarters divided by the IDS Normalization Factor multiplied by 8760 hours. The second step of the calculation was the Closed Circuit Television (CCTV) Unavailability index, which used the same formula and the CCTV Compensatory hours instead of the IDS Compensatory hours. The last part of the PI calculation added the IDS Index and the CCTV Index and divided the summary by two. The resulting number was reported as Protected Area Security Equipment Performance Index values.

The licensee's security staff determined that the Protected Area Security Equipment Performance Index values for the 1<sup>st</sup> and 2<sup>nd</sup> quarters of 1999, which were reported as .04 and .05, respectively, and placed the licensee's performance in the green response band, were actually .067 and .063, respectively. This placed the licensee's performance in the white response band for those two reporting periods. The corrected data for the last two quarters of 1998 also changed the index values. They changed from .07 and .06 to .102 and .102 respectively, which represented a lower performance index, but still within the white response band. This matter is categorized and will be processed as an unresolved item.

The newly developed PI information relating to the performance of the protected area security equipment was reduced from that previously reported. The revised performance index showed the equipment performing in the "Increased Regulatory Response Band."

The inspectors verified that this finding was entered into the licensee's corrective action program (Reference No. PIF Q1999-02416). The finding involved a problem with PI accuracy and completeness and resulted in a PI threshold being lowered. The inspectors determined that regulatory requirements were met because compensatory measures for the equipment outages were apparently implemented in accordance with security plan requirements. To ensure consistency in NRC actions, the matter relating to the PI information error, would be categorized and processed as an Unresolved Item. (50-254/99016-01; 50-265/99016-01)

#### 4CC4 Other

- .1 (Closed) Violation, 50-254; 50-265/98018-04: Failure to maintain an adequate security barrier. This issue was evaluated using the Significance Determination Process (SDP) for the Physical Protection cornerstone and was green. The inspectors verified that the finding was entered into the licensee's corrective action program (Reference No. AR0013843). This item is closed.
- .2 (Closed) Inspection Follow up Item, 50-254; 50-265/98024-01: Lack of documentation for security equipment deficiencies. This issue would not have raised to the level of SDP evaluation. This Inspection Follow up Item was a minor issue and is closed.

#### 4CC5 Management Meetings

- .1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the on site inspection on July 22, 1999. The meeting attendees were informed that our evaluation of the performance indicator issue would continue. The licensee representatives acknowledged the findings presented and did not identify any information discussed as proprietary or safeguards information.

.2 Supplemental Phone Call

On August 16, 1999, a follow-up call was made to the Station Security Administrator, and representatives of the site and corporate regulatory assurance and licensing organizations. They were informed that the evaluation of the performance indicator issue had continued and resulted in the assessment that supplemental inspection would be required, as indicated in the cover letter. Those inspection plans would be discussed with the security staff when the plans are established. They were also informed that, to ensure consistency in NRC actions, the matter relating to the PI information error, would be categorized and processed as an unresolved Item while the NRC evaluates this issue.



## PARTIAL LIST OF PERSONS CONTACTED

### Licensee

W. Beck, Regulatory Assurance  
B. Brady, Director of Corporate Licensing  
R. Chrzanowski, Nuclear Oversight Assessment Manager  
B. Finley, Corporate Security  
T. Fuhs, Regulatory Assurance  
K. Giadrosich, Nuclear Oversight  
R. Gideon, Work Control Manager  
K. Hungerford, Burns Security Force Manager  
J. Kudalis, Director, Support Services  
K. Leech, Station Security Administrator  
P. Loftus, Director of Regulatory Projects  
M. McDowell, Operations Manager  
J. Ottens, In-Processing Supervisor  
C. Peterson, Regulatory Assurance Manager  
G. Powell, Radiation Protection  
T. Richmond, Training Group Leader  
B. Rittmer, Assistant Station Security Administrator  
B. Saunders, Corporate Nuclear Generation Group Security Supervisor  
J. Sirovy, Nuclear Oversight  
C. Tzomes, Acting Support Services Manager  
D. Wozniak, Engineering Manager

### NRC

J. Belanger, Senior Security Inspector  
J. Creed, Safeguards Team Leader, Region III  
C. Miller, Senior Resident Inspector, Region III

## ITEMS OPENED, CLOSED AND DISCUSSED

### Opened

50-254/99016-01	White	Perimeter Alarm System Performance Index Change
50-265/99016-01	White	Perimeter Alarm System Performance Index Change
50-254/99016-02	URI	Protected Area Security Equipment Performance Index Values
50-265/99016-02	URI	Protected Area Security Equipment Performance Index Values

### Closed

50-254/98018-08	VIO	Failure to Maintain an Adequate Security Barrier
50-265/98018-08	VIO	Failure to Maintain an Adequate Security Barrier
50-254/98024-01	IFI	Documentation of Security Equipment Deficiencies
50-265/98024-01	IFI	Documentation of Security Equipment Deficiencies

### Discussed

None

## LIST OF BASELINE INSPECTIONS PERFORMED

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

Access Authorization	IP 71130.01
Access Control	IP 71130.02
Performance Indicator Verification	IP 71151
Changes To License Conditions and Safety Analysis Reports	IP 71111.02

## LIST OF DOCUMENTS REVIEWED

Security System Testing and Maintenance (QCSP 800-14, Revision 13, dated July 1998)  
Explosive Detector Test (QCSP 800-16, Revision 4, dated December 1998)  
Firearms Detector Test (QCSP 800-17, Revision 4, dated July 1998)  
X-Ray System Test (QCSP 800-19, Revision 6, dated December 1998)  
Alarmed Security Door Test (QCSP 800-18, Revision 8, dated July 1998)  
Lock and Key Control (QCSP 810-05, Revision 12, dated April 1999)  
Security Maintenance Action Requests Between January and July 1999)  
Security Badge Guidelines, Supervisor Instruction No. 7, Revision 4, dated July 1999  
Out processing of Personnel (SY-A-A-103-518, Revision 0)  
Self Assessment Report (January through June 1999) for Access Control  
Self Assessment Report (January through June 1999) for Fitness-For-Duty and Access Control  
Quad Cities Station Assessment Report NOA-04-99-030, April 30, 1999  
Security Event Logs for Period Between January through June 1999  
Security Drill Logs for Period Between January through June 1999  
ComEd Nuclear General Employee Training Study Guide, Revision 21, dated March 1, 1999  
Procedure QCAP 0810-01, "Station Access Control," Revision 8, dated April 6, 1999  
ComEd Procedure SY-AA-102-220, "Reporting of Significant Fitness For Duty Events," Revision 0  
ComEd Procedure SY-AA-103-516, "Evaluation and Processing of Individuals Reporting Arrests," Revision 0  
ComEd Procedure SY-AA-103-513, "Policy For Reporting An Arrest," Revision 0  
ComEd Procedure SY-AA-103-512, "Continual Behavior Observation Program," Revision 0  
ComEd Procedure SY-AA-102-201, "Call-outs For Unscheduled Work," Revision 0  
ComEd Procedure SY-AA-102-202, "Testing For Cause," Revision 0  
Corporate Nuclear Security Guideline No. 1, "Reporting and Recording of Security Events," Revision 13, dated October 1998  
Problem Identification Form No. Q1998-03905, dated September 17, 1998  
Summary of Security Event Logs Between July 1, 1998 and June 30, 1999  
Nuclear Oversight Assessment No. NOA-04-99-001, dated February 8, 1999  
Nuclear Oversight Assessment No. NOA-04-99-030, dated April 30, 1999  
Nuclear Oversight Assessment No. NOA-04-99-029, dated May 7, 1999  
Field Observation Report No. 04-99-06, "Interviews with Supervisors about Behavior Observations, dated June 25, 1999  
Field Observation Report No. 04-99-06, "For Cause Testing vs. Random Testing," dated June 24, 1999  
Field Observation Form No. 13106-03, "Behavior Observation Interview with Operations Supervisor," dated July 6, 1999  
Field Observation Form No. 13106-02, "Security Self-Assessments and NRC Security Inspection," dated July 8, 1999  
Field Observation Form No. 13106-01, "Interviews with Personnel Regarding Escort Duties," dated July 8, 1999  
Field Observation Form (not numbered), "Review of 2Q1999 Security Event and Incident Reports," dated July 12, 1999  
Field Observation Form (not numbered), "Corrective Actions Taken For Selected Security PIF's," dated July 15, 1999  
Semi Annual Fitness For Duty Performance Data Reports Between July 1997 and December 31, 1998