

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-440
License No: NP-58

Report No. 50-440/98015(DRS)

Licensee: Centerior Service Company

Facility: Perry Nuclear Power Plant

Location: P.O. Box 97, A200
Perry, OH 44081

Dates: July 27 -31, 1998

Inspector: James L. Belanger, Senior Physical Security Inspector

Approved by: James R. Creed, Chief, Plant Support Branch 1
Division of Reactor Safety

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EXECUTIVE SUMMARY

Perry Nuclear Power Plant, Unit 1
NRC Inspection Report 50-440/98015

This announced inspection included an evaluation of the effectiveness of selected elements of the security program. Specifically, the inspection consisted of a review of the status of security facilities and equipment, security and safeguards procedures and documentation, and quality assurance in security and safeguards activities. In addition, the inspection included a review of an event in which a licensed operator tested positive for alcohol during a for-cause Fitness-For-Duty (FFD) test. This report covers a one-week inspection concluding on July 31, 1998.

- Two non-cited violations were identified concerning a reported FFD event involving a licensed operator who tested positive for alcohol on December 19, 1997: a supervisor failed to ask alcohol-related fitness-for-duty questions during an unscheduled tour call out; the Supervisor, Nuclear Security Operations failed to conduct a confirmatory test for alcohol. (Section S1.1)
- The inspector identified that the drug portion of a for cause test conducted based on the odor of alcohol was not timely. The for cause testing was required on December 19, 1998. The drug test was not conducted until December 23, 1998. This is a violation of Fitness For Duty Rule which requires a test "as soon as possible" after receiving credible information that an individual is abusing drugs or alcohol. FFD testing data showed four other instances during 1996 and 1997 involving for cause testing based on the odor of alcohol when the drug portion was conducted one to four days after the test was deemed necessary. (Section S1.1)
- The licensee performed a thorough investigation of an incident involving an employee's discovery of an alcoholic beverage in the protected area. (Section S1.2)
- The licensee tested and maintained security systems as required by the security plan. Test results showed consistent performance. Visual inspections did not identify any material condition problems. However, the inspector identified a problem with the monitoring of the offsite radio by the Local Law Enforcement Agency (LLEA). Specifically, the LLEA did not respond to the licensee's test radio transmission. This issue was resolved by the LLEA prior to the conclusion of the inspection. (S2.1)
- Based on performance tests, the inspector concluded that the explosive and metal detectors and x-ray machines were properly calibrated. However, the operability of selected models of the explosive detectors has been a challenge for the licensee, based on a review of the monthly out of service hours for search equipment. The licensee was pursuing resolution with the vendor. This did not significantly impact the search process because the licensee had ample machines in place to assure timely ingress. (Section S2.2)

- The licensee promptly implemented compensatory measures to compensate for damaged security equipment during a severe lightning storm, as required by station security procedures. The damage resulted in significant efforts in order to compensate for and repair failed components. Station management supported the repair effort. The components were repaired or replaced in a timely manner. (Section S2.3)
- Self-assessments of the security program were thorough and provided good findings and recommendations. The security staff properly evaluated and addressed identified findings. (Section S7.1)

Report Details

IV. Plant Support

S1 Conduct of Security and Safeguards Activities

S1.1 Fitness For Duty (FFD) For-Cause Test

a. Inspection Scope (81700)

The inspector reviewed the circumstances concerning the licensee's conduct of a for-cause test for alcohol on December 19, 1997, and reported to the NRC in accordance with 10 CFR Part 26. The inspector reviewed the Potential Issue Form (PIF) associated with the event (PIF No. 97-2467); reviewed the licensee's investigation report of the incident; and interviewed the investigator and the supervisor who initiated the for-cause test for alcohol.

- b. On December 19, 1997, a supervisor called a licensed operator to work a non-scheduled work day in support of a forced plant outage. The supervisor performing the callout, through oversight, failed to ascertain the FFD status of the employee. 10 CFR Part 26.20(e) requires that the licensee have a procedure that will ensure that persons called in to perform an unscheduled working tour are fit to perform the task assigned, and as a minimum, requires a statement to be made by a called-in person as to whether he or she has consumed alcohol within the length of time stated in the pre-duty access policy. The licensee's FFD Perry Administrative Procedure (PAP) 0224, Section 6.13.1, required that a supervisor, when contacting an individual in situations that require being called in during non-scheduled working hours, to question the individual to ascertain if the individual has consumed alcoholic beverages within the previous five hours.

The licensee promptly corrected this performance issue. The supervisor who failed to ascertain the FFD status of the licensed operator was retrained by the Site Protection Manager. The latter reviewed the details of the incident with all Perry managers, reaffirming FFD procedural compliance. The Perry Vice President, through a site memorandum dated February 4, 1998, emphasized the importance of the FFD program to include the responsibility for establishing FFD suitability during call-in situations. The licensee's quality assurance department conducted a sampling of plant personnel through questionnaires and interviews to determine their understanding of FFD duties and responsibilities. The results of this sampling showed that employees and supervisors demonstrated a general understanding of the requirements. In June 1998, the licensee provided a wallet size laminated FFD requirements card with FFD Call-In instructions and FFD site contact telephone numbers.

The failure to ascertain the FFD status of the licensed operator called in to work a non-scheduled tour is a violation of 10 CFR Part 26.20(e) and the licensee's FFD procedure PAP-0224, Section 6.13.1. This non-repetitive, licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. (NCV 50-440/98015-01)

The licensee's investigation identified that a for-cause test based on the odor of alcohol was performed by a Lead Security Officer, acting as Supervisor, Nuclear Security Operations (SNSO). In accordance with PAP 0224, Section 6.8.2 (2), the security supervisor conducted initial tests for alcohol through two breath analyses (results: 0.085 and 0.08 Blood Alcohol Concentration (BAC)) using a breath alcohol device which met the standards of 10 CFR Part 26, Appendix A; however, he failed to confirm the positive breath analysis through the use of a second evidential grade breath measurement device as required by 10 CFR 26.24(g) and PAP-0224, Section 6.12.3. The licensee's investigation showed that the acting SNSO failed to review the FFD testing flow chart located in the testing area. Based on a survey of 1996 and 1997 for-cause testing data, the licensee determined that this was an isolated individual performance error. Of 39 for-cause tests conducted in this time period, only one lacked a confirmatory test, and the exception was the December 19, 1997 event.

The licensee counseled the acting SNSO and retrained all Nuclear Security Operations Supervisors and Lead Security Officers on FFD requirements to include breath alcohol testing. The acting SNSO also was disciplined. The failure to conduct a confirmatory test for alcohol on a second device is considered a violation of 10 CFR Part 26.24(g) and PAP-0224, Section 6.12.3. This non-repetitive, licensee identified, and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. (NCV 50-440/98015-02)

The inspector identified an additional issue concerning this event. 10 CFR Part 26, Appendix A (2.1)(a) and PAP-0224 at Sections 6.12.2, 6.12.3, and 6.12.4 require that in all testing situations, both alcohol and drug testing be performed. The drug test portion of the December 19, 1997 (Friday back shift) event was scheduled on Monday, December 20, 1997, and was performed on Tuesday, December 21, 1997, four days after the for-cause test was initially requested. The inspector concluded that a drug test four days after a for-cause test is determined to be required did not meet the intent of 10 CFR 26.24(a)(3), which requires testing for-cause "as soon as possible" following any observed behavior indicating possible substance abuse. PAP-0224, Section 6.12.4 stated: "if a for-cause BAC test is conducted on a back shift or weekend, the supervisor shall contact the Access Authorization Unit Supervisor the next scheduled working day to arrange for the drug test portion of the for-cause test". A review of the 39 for-cause tests performed during 1996 and 1997 showed that nine of these tests were conducted during the back shift or weekend time frame. Of these nine, five tests had the urine portion of the test completed at a later date (from one to four days later).

The licensee acknowledged at the exit meeting that conducting the drug portion of the for-cause test did not meet the intent of the FFD Rule and agreed to fix the problem. On August 4, 1998, the Manager, Site Protection Section advised the inspector that the procedure was revised to provide for on-call medical personnel to report to the site within 24 hours to conduct the test. A copy of the procedure was faxed to the inspector, who reviewed it and found it to be acceptable. The failure to conduct the drug portion for the five instances noted above is a violation of 10 CFR Part 26.24(a)(3). (VIO 50-440/98015-03)

The safety significance of this violation is that the concentration of a drug or drug metabolite in urine is influenced by the time lapse from drug use to urine collection. Different drugs are metabolized and excreted from the body at different rates. Water-soluble and lipid-soluble substances differ in how long after use they will appear in the urine. Water-soluble drugs appear in the urine shortly after use and are completely excreted within a few days. Barbiturates, stimulants and opiates are water soluble.

c. Conclusions

The for-cause testing of a Senior Reactor Operator on December 19, 1997 resulted in two non-cited violations and one cited violation of NRC FFD requirements. Corrective actions were prompt and comprehensive.

S1.2 Discovery of Alcoholic Beverage in the Protected Area

a. Inspection Scope (81502)

The inspector reviewed the licensee's investigation of a July 2, 1998 incident involving the discovery of an alcoholic beverage in the protected area, and discussed the event with the Manager, Site Protection Section.

b. Observations and Conclusions

On July 2, 1998, at approximately 11:30 p.m., an employee reported to the on duty security supervisor that he and two other employees discovered an alcoholic beverage on a bench in the locker room, on the 599 foot level of the Control Complex building. The alcoholic beverage was a can of beer that was cold to the touch, moist, open, and appeared full. Security personnel reported the incident to the Unit Supervisor in the Control Room and conducted an immediate sweep of the area with negative results. The Control Room Shift Supervisor and Operations Manager responded to the scene and were briefed by security personnel. At 11:52 p.m., security personnel initiated a search of all offices and break areas of the Control Complex, Service Building, Service Building Annex, and Maintenance Building.

The Central Alarm Station operator generated a protected area accountability report. Supervisors attested to the FFD status of their employees. Security personnel observed, while they were making written statements, the three employees who discovered the beer. No FFD concerns were identified. At 11:58 p.m., security personnel initiated a hands-on search of all packages entering and exiting the protected area. At 12:35 a.m., security personnel completed their search of the protected area with negative results. The Manager, Site Protection Section stated that the discovery was an isolated occurrence. He indicated that they did not take finger prints from the can because of the moisture on the can.

c. Conclusions

The licensee performed a thorough and prompt investigation of the incident. The incident was an isolated occurrence.

S2 Status of Security Facilities and Equipment

S2.1 Local Law Enforcement (LLEA) Radio Test

a. Inspection Scope (81700)

During the inspection, the inspector requested that the licensee demonstrate the operability of its security systems by conducting tests that were detailed in the security plan and procedures. Specific tests conducted included ingress search equipment, turnstiles, duress alarms, protected area perimeter alarm system, communications equipment, and Central and Secondary Alarm Station equipment.

b. Observations and Findings

On July 28, 1998, the inspector requested that the licensee conduct a test of the on-site radio communications with the Lake County Radio Communication System. The test was conducted at a time other than the normal routine daily test. The Central Alarm Station (CAS) operator initiated the test from his location in the CAS. The inspector noted that Lake County did not acknowledge the radio check. The CAS operator then telephoned the Lake County dispatcher who indicated that the Perry Plant radio band on her console was on mute.

The inspector discussed this information with the Manager, Site Protection Section. The licensee followed up the issue with the LLEA. By memo dated July 29, 1998, the Lake County Administrator/Central Dispatch indicated they had determined that a new dispatcher-in-training received the initial telephone call advising of the test. Being new, she was not totally familiar with the test process that normally occurs during the early morning hours. The radio broadcasts, although somewhat broken, should have been acknowledged considering three dispatchers were available to hear the transmissions. Other radio traffic, coupled with the Perry Nuclear Power Plant (PNPP) band being muted may have been to blame for the deficiency.

To preclude similar situations, the LLEA indicated that operational policy now required PNPP radio frequencies not to be muted for any reason on their six dispatch consoles. This order would ensure that any radio communication received from the plant would be heard by all dispatchers working in the center. The inspector found this corrective action to be appropriate.

c. Conclusions

LLEA response to a radio test initiated by the licensee was inadequate. The LLEA took prompt corrective action.

S2.2 Monthly Out of Service Hours For Search Equipment

a. Inspection Scope (81700)

The inspector reviewed the licensee's performance indicators of security equipment including false alarm rates, and out of service hours for security systems.

b. Observations and Findings

The inspector determined that the licensee established performance objectives with specific performance indicators to ensure that Closed Circuit Television (CCTV), Perimeter Intrusion Detection, Interior Intrusion Detection, and Primary Access Control Portal search equipment were performing reliably and effectively. The data for 1998 showed that the established goals for these systems were met, except for search equipment. The licensee established a goal of less than 180 hours a month out of service for search equipment. Licensee records indicated that the goal was not met in January 1998 (302 hours), March 1998 (672 hours), April 1998 (628 hours), May 1998 (744 hours) and June 1998 (817 hours), primarily because of performance issues related to three explosive detectors.

The licensee's performance trending data for these three machines indicated that the unavailable hours for the three detectors was 2055 hours for the period from September 1, 1997 through May 14, 1998. These unavailable hours resulted from component failures and long lead times for replacement parts (six to eight weeks). The licensee replaced chemical assemblies, circuit boards, various push-button switches and a preconcentrator since the initial installation. The licensee was also concerned about the quality of replacement parts. Discussions with the security staff indicated that they were working with the vendor to resolve these issues.

The inspector discussed with the security staff the effect of the nonavailability of three detectors on the plant's ability to process people through the Primary Access Control Portal (PACP). The licensee indicated that they had enough of the older functioning detectors to ensure adequate processing through the search lanes.

c. Conclusions

The performance of several explosive detectors was unacceptable because of component failures and parts replacement lead times. The licensee was working with their vendor to resolve the issues. The availability of other detectors minimized the impact on security operations.

S2.3 Damage to Security System Caused by Lightning Storm

a. Inspection Scope (81700)

At 10:31 p.m. on July 21, 1998, a severe electrical storm caused damage to the security system. The inspector reviewed the compensatory measures implemented for this event and discussed the restoration of the security system with the security staff.

b. Observations and Findings

The licensee indicated that apparent multiple lightning strikes resulted in the failure of perimeter high mast lighting, all PACP entrance and exit turnstiles, and sixteen protected area alarm zones. Additionally, a CCTV surveillance camera and some related components were severely damaged.

The inspector's review of Site Protection Section Incident Report No. C98-0115 indicated that security measures to compensate for the failed systems were promptly implemented and no uncompensated degradation of the security system occurred.

The security staff indicated that significant effort was required to compensate for and repair the failed components. Multiple plant organizations were involved in the effort, including, the Fix It Now team, Instrumentation and Control (I&C), I&C Engineering, Operations, Material Management, and Purchasing. Most systems were restored within two days. Nine technicians and six supervisors worked on the project which was given high support by station management. The repairs were accomplished in a timely and professional manner. Security management indicated that the positive results were due to the team effort displayed by all of those involved.

c. Conclusions

The inspector concluded that the licensee was very effective in repair and restoration of important security systems following the damage caused by a severe storm. Plant personnel responded promptly and effectively to a major repair effort.

S7 **Quality Assurance in Security and Safeguards Activities**

S7.1 Licensee Self-Assessment Activities (81700)

The inspector discussed the results of two recently conducted audits of the security, access authorization, and FFD programs. The written report was not yet issued. The inspector's interview with one of the two auditors indicated that the audits identified nine corrective action documents related to minor issues. The inspector found that the quality assurance review was self-critical and objective. The inspector also reviewed four security organization self-assessments in 1998 that resulted in numerous recommendations for improvement which resulted in timely and appropriate corrective actions. The self-assessments were conducted utilizing a cross section of officers,

supervisors, and clerical staff. The inspector concluded that the self-assessments were effective in identifying and correcting weaknesses in the security program.

S8 Miscellaneous Security and Safeguards Issues

- S8.1 (Closed) Inspection Follow Up Item (IFI) 50-440-97020-01: The licensee's contraband detection drill program was weak in that the program did not evaluate the effectiveness of warehouse package searches conducted by security personnel.

The inspector discussed this item with the training supervisor, who provided documentation that the licensee revised its drill procedure to include warehouse searches in the contraband detection drill program. Ten drills were conducted to date in 1998. A review of the drill documentation indicated that the drills were resourceful and challenging.

V. Management Meeting

X1 Exit Meeting Summary

On July 30, 1998, the inspector presented the inspection results to licensee management. The licensee acknowledged the findings presented. The inspector asked the licensee whether any materials examined during this inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

L. Myers, Site Vice President
J. Bahleda, Supervisor, Audit Unit
T. Coan, Supervisor, Site Protection Section (SPS)
M. Gilday-Gulliford, FFD Administrator
J. Gorman, Supervisor, Security Training
T. Henderson, Compliance Supervisor
L. Lindrose Jr., Administrator Coordinator
T. Mahon, Manager, SPS
B. O'Rourke, Compliance Engineer
R. Rose, General Supervisor, Nuclear Security Operations

INSPECTION PROCEDURES USED

IP 81700: Physical Security Program For Power Reactors
IP 81502 Fitness For Duty

ITEMS OPENED AND CLOSED

OPENED

50-440/98015-01	NCV	Failure to ask FFD questions during call out (Section S1.1)
50-440/98015-02	NCV	Failure to conduct confirmatory test for alcohol during for-cause test (Section S1.1).
50-440/98015-03	VIO	Drug test portion of "for-cause" test not timely (Section S1.1).

CLOSED

50-440/97020-01	IFI	Contraband drill program did not include warehouse searches (Section S8.1)
50-440/98015-01	NCV	Failure to ask FFD questions during call out (Section S1.1)
50-440/98015-02	NCV	Failure to conduct confirmatory test for alcohol during for-cause test (Section S1.1).
50-440/98015-03	ViO	Drug test portion of "for-cause" test not timely (Section S1.1).

LIST OF ACRONYMS USED

BAC	Blood Alcohol Concentration
CAS	Central Alarm Station
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
FFD	Fitness For Duty
IFI	Inspection Follow Up Item
IP	Inspection Procedure
IR	Inspection Report
LLEA	Local Law Enforcement Agency
NCV	Non-Cited Violation
PACP	Primary Access Control Portal
PAP	Perry Administrative Procedure
PIF	Potential Issue Form
PNPP	Perry Nuclear Power Plant
SNSO	Supervisor, Nuclear Security Operations
SPS	Site Protection Section

PARTIAL LIST OF DOCUMENTS REVIEWED

Site Protection Section Incident Report No. C98-0115, dated July 22, 1998

Site Protection Section Incident Report No. C98-0104, dated July 2, 1998

Memo dated July 29, 1998, from Lt. L. Greene, Administrator/Central Dispatch to R. Rose,
SUBJECT: Radio Test on 7-28-98

PNPP Potential Issue Form No. 97-2467

Plant Administrative Procedure (PAP) 0224, Fitness For Duty

Security Administrative Instruction (SAI) 0010, Revision 1, dated July 3, 1996

Self-Assessment #068SPS98

Self-Assessment #075SPS98

Self-Assessment #062SPS98

Self-Assessment #072SPS98