

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FACILITIES AND SECURITY

Docket No: 70-7001

Report No: 70-7001/98004(DFS)

Facility Operator: United States Enrichment Corporation

Facility Name: Paducah Gaseous Diffusion Plant

Location: 5600 Hobbs Road
P.O. Box 1410
Paducah, Kentucky 42001

Inspection Dates: February 23-27, 1998

Inspectors: J. K. Everly, Senior Facilities Security Specialist, USNRC
L. M. Numkin, Senior Computer Security Specialist,
USNRC
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Approved by: Richard A. Dopp, Acting Director
Division of Facilities and Security
Office of Administration

EXECUTIVE SUMMARY

United States Enrichment Corporation Paducah Gaseous Diffusion Plant NRC Inspection Report 70-7001/98004(DFS)

NRC performed a "reactive" security inspection of the Paducah Gaseous Diffusion Plant located in Paducah, Kentucky on February 23-27, 1998. The main objective of this inspection was to follow-up on the May 5-9, 1997, security inspection findings at the Paducah plant that resulted in escalated enforcement and to perform a routine review of certificatee's implementation of its Physical Security Plan. The inspection team reviewed all of the findings that led to two previous violations. Specifically, these violations involved the United States Enrichment Corporation's (USEC's) failure to: (1) provide the Commission complete and accurate information, and (2) implement various aspects of the Classified Matter Security Plan. Based on the results of this inspection, it was determined that all findings from the May 5-9, 1997, security inspection have been properly addressed and closed, or are in the process of being closed via USEC's "Request for Application Change" procedure.

In addition, one minor violation involving a classified computer was identified (Section 6) which is not being cited consistent with Section IV of the NRC Enforcement Policy because the minor violation was corrected during the course of the inspection.

It should also be noted that a review of Paducah's "classified matter material review" was conducted during the inspection. This review was instituted by USEC as a response to the issues identified in Notice of Violation 97002-31. The inspectors concluded that the review was on course to meet its targeted completion date of June 30, 1998.

Report Details

01 Inspection Scope

Areas examined during the security inspection covered the findings identified during the May 5-9, 1997 security inspection of the Paducah Gaseous Diffusion Plant and the commitments contained in the Protection of Classified Matter Plan and the Physical Security Plan that were submitted by the United States Enrichment Corporation (USEC) and approved by the NRC in August 1996. The inspection centered on detailed reviews of six core areas of the security plans where multiple examples of the two violations cited in Notice of Violation 70-7001/97005(DFS) were found. Those core areas consisted of the following: Perimeter Security (e.g., protective personnel, physical barriers, and personnel identification and control; Storage and control of classified matter (e.g., security containers, monitoring of classified storage areas, and maintenance of classified combinations); Classification (e.g., proper marking of and accounting for classified material); Telecommunication of Classified Information (e.g., protection of classified information transmitted as facsimiles, accounting for secure telephone units (STU IIIs) and other equipment used to facilitate secure communications of classified information); Computer Security; and Physical Security. The inspection included discussions with cognizant personnel and examination of records to ensure that all findings from the May 5-9, 1997 security inspection of Paducah were adequately addressed and closed or are in the process of being closed via USEC's "Request for Application Change" procedure, and to ensure continued compliance with the commitments contained in the Protection of Classified Matter and Physical Security Plans.

02 Perimeter Security

a. Inspection Scope (81820)

In seventeen instances, USEC failed to implement the Classified Matter Plan in accordance with the certificate of compliance for the Paducah Gaseous Diffusion Plant. Of those seventeen instances, twelve dealt with protective personnel, physical barriers, and personnel identification and control. The inspectors examined Paducah's physical security and access control practices to ensure that these twelve instances had been addressed and resolved. The inspection included a review of the physical barriers, Police Operations staffing, and vehicle and personnel access controls and badges.

b. Observations and Findings

Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant stated that USEC shall conduct its operations in accordance with the statements and representations contained in the certification application dated September 15, 1995, and subsequent revisions thereto.

A review of the site security protective force consisted of interviews with supervisors and individual guards, observations of activities, tests, and reviews of procedures. The inspectors were able to confirm that all Police Operations personnel have completed a minimum of 24 hours of training in nine security-related areas and that the security plan had been amended to accurately reflect this commitment. The inspectors were also able to confirm the following:

- security response exercises are being conducted quarterly as of May 28, 1997;
- records are now being maintained electronically that indicate each security police officer has completed his/her required training;
- Police Operations personnel are conducting random patrols at a minimum of every two hours of the controlled access area (CAA) and those areas in which special nuclear material of low strategic significance is stored;
- additional gas masks were purchased bringing the plant total to 50 which will be issued to the 47 Police Operations personnel as necessary;
- the plant locksmith and the alternate were provided a copy of Paducah's new "Master Key System" procedure on May 8, 1997;
- the forms used regarding vehicle entrance and exit were approved and are now documented in the security plan;
- both security plans have been revised to authorize a knowledgeable "Q" or "L" cleared person to serve as an escort for mutual aid responders;
- the classified matter plan has been revised to state that classified visits to other facilities are coordinated through the Paducah Security Section if the facility being visited does not utilize the Department of Energy's (DOE) Automated Visitor Access Control System or if the outgoing visit involves weapons or special access programs;
- unused badge stock is stored in a four-drawer security container as of May 8, 1997; and,
- both security plans were revised on August 18, 1997, to accurately describe the boundaries of the CAA.

c. Conclusions

The inspectors' verification that the findings from the May 5-9, 1997 security inspection in the area of perimeter security have been closed or are in the process of being closed via USEC's "Request for Application Change" procedure indicates a good faith effort on the part of USEC to comply with the requirements of Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant.

03 Storage and Control of Classified Matter

a. Inspection Scope (81820)

In seventeen instances, USEC failed to implement the Classified Matter Plan in accordance with the certificate of compliance for the Paducah Gaseous Diffusion Plant. Of those seventeen instances, five dealt with storage and control of classified matter practices. The inspectors examined Paducah's classified matter practices to ensure that these five instances had been addressed and resolved, and to ensure that adequate protection was provided for classified matter being used, processed, stored, reproduced, transmitted, or handled in connection with the gaseous diffusion process.

The inspection included a review of the current classified mailing address for Paducah; various security organizational charts; physical checks of classified containers/vaults/cages; and reports to the NRC (e.g., 1 hour notifications).

b. Observations and Findings

Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant stated that USEC shall conduct its operations in accordance with the statements and representations contained in the certification application dated September 15, 1995, and subsequent revisions thereto.

A review of the process by which classified material was used, processed, stored, reproduced, transmitted, and handled consisted of interviews with plant staff and Police Operations personnel, observations of activities, and reviews of procedures and USEC's "Request for Application Change" process that amends the Paducah classified matter plan. After visiting "seal cages" in the C-310, C-333, C-337, C-710, C-720 buildings and the "receiving booth" in the C-400 building, the inspectors were able to confirm that Standard Form 702's, "Security Container Check Sheets," were now being utilized on all seal cages and the receiving booth as committed to in the approved classified matter plan. The inspectors were also able to confirm the following:

- the classified mailing and shipping address for Paducah has been corrected and is now consistent with the address listed in the approved classified matter plan,
- the Police Operations organization chart for Paducah has been revised/updated due to reorganization,
- the classified matter plan has been revised to allow Data Acquisition Strips (bar codes) to be used for physical checks of security containers by Police Operations personnel rather than the SF-702 form, and
- Procedure UE2-MC-RE1030, "Nuclear Regulatory Event Reporting," was revised to include the requirement to report to the Division of Facilities and Security any infractions/violations of regulations, losses, compromises, or possible compromises of classified matter.

Additionally, there were two instances where USEC failed to provide the Commission complete and accurate information in accordance with 10 CFR 76.9. In both instances the inspectors were able to confirm 1) that the reference to the Department of Energy (DOE) security representative for the Regulatory Oversight Agreement was removed from the classified matter plan and 2) the description of the barrier lab in the C-720 vault has been revised from a "true vault" to a classified storage area.

c. Conclusions

The inspectors' verification that the findings from the May 5-9, 1997 security inspection in the area of storage and control of classified matter have been closed or are in the process of being closed via USEC's "Request for Application Change" procedure indicates a good faith effort on the part of USEC to comply with the requirements of Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant and 10 CFR 76.9.

04 Classification

a. Inspection Scope

During the May 5-9, 1997 security inspection of Paducah, there were no reportable findings in the area of classification. This was due to the fact that new classification requirements for 10 CFR Part 95, stemming from Executive Order 12958, became effective for USEC on May 12, 1997. Therefore, the May 1997 security inspection report could not address the fact that there was insufficient implementation of Executive Order 12958. However, since the new requirements are now in effect, the inspectors examined Paducah's policies and procedures for the classification of information to ensure that Executive Order 12958 was being properly implemented. The inspection included a review of the procedures for classifying information, preparation of classified documents for transmittal, document accountability, and classified destruction and reproduction.

b. Observations and Findings

A review of the Paducah classification procedures consisted of interviews with Authorized Derivative Classifiers (ADCs) and the site Classification Officer, and reviews of procedures. The inspectors were able to confirm that all ADCs had been briefed on the requirements of Executive Order 12958. Specifically, the inspectors were able to confirm that 1) all Paducah ADCs were now equipped with the proper stamps for marking classified information in accordance with Executive Order 12958 and 2) that all ADCs were applying portion markings to National Security Information in accordance with 10 CFR Part 95.37(f) and as committed to in the approved security plan.

c. Conclusions

The inspectors' verification that the unreportable findings from the May 5-9, 1997 security inspection in the area of classification had been addressed even though the requirements they were based on did not apply at the time of the inspection, indicates a good faith effort on the part of USEC to comply with the requirements of Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant.

05 Telecommunication of Classified Information

a. Inspection Scope

In four instances, USEC failed to provide the Commission complete and accurate information in accordance with 10 CFR 76.9, in the area of telecommunication of classified information. The inspectors examined Paducah's telecommunication of classified information practices to ensure that these four instances had been addressed and resolved, and to ensure that classified matter was adequately protected while it was being communicated. The inspection included a review of Paducah's telecommunications requirements and equipment, physical sighting of COMSEC holdings, and physical security controls.

b. Observations and Findings

10 CFR Part 76.9 required that information provided to the Commission be complete and accurate in all material aspects.

A review of the process by which classified information is telecommunicated consisted of interviews with the Central Office of Record for COMSEC and reviews of pages from the amended classified matter security plan. The inspectors were able to confirm that the classified matter plan had been amended by removing the reference to a Paducah Telecommunications Operations Plan. The inspectors were also able to confirm that 1) the classified matter plan no longer erroneously stated that the Paducah COMSEC account was closed, 2) that the classified matter plan no longer contained an incomplete and inaccurate listing of Paducah's secure telecommunications equipment holdings, and 3) the inaccurate description of Paducah's communication program holdings had been removed from the classified matter plan.

c. Conclusions

The inspectors' verification that the findings from the May 5-9, 1997 security inspection in the area of Telecommunication of Classified information have been closed indicates a good faith effort on the part of USEC to comply with the requirements of 10 CFR 76.9.

06 Computer Security

a. Inspection Scope

In four instances, USEC failed to implement Paducah's computer security plans in accordance with the certificate of compliance for the Paducah Gaseous Diffusion Plant. The inspectors reviewed Paducah's methods for processing classified data on personal computers (PCs) to ensure that these four instances had been addressed and resolved. The inspection included a review of Paducah's Master ADP Security Plan for Microcomputer Resources Processing Classified Information and the DOE approved security plans for each classified PC which formally document the measures used to control access and protect the classified PCs and its information.

b. Observations and Findings

Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant stated that USEC shall conduct its operations in accordance with the statements and representations contained in the certification application dated September 15, 1995, and subsequent revisions thereto.

A review of computer security for the Paducah site consisted of interviews with the Computer System Security Officers (CSSO) responsible for the classified computers on site, observations of activities, and reviews of each classified computer's security plan. The inspectors were able to confirm that building C-302's classified computer was no longer located within 1 foot of an unclassified data link jack, as required in the Master ADP Security Plan. Since the May 1997 security inspection, the classified computer and owner had moved to a new office within building C-302. Examination of the new office revealed the existence of a similar problem as noted in the last inspection. Specifically, the inspectors observed an unclassified telephone resting on a chair within 1 foot of the classified computer's central processing unit (CPU) while in an unclassified mode. The inspectors informed the CSSO and the Paducah Computer Security Program Manager that this was a potential violation and the telephone should be permanently secured away from the CPU so that a 1 foot distance is maintained. Prior to the conclusion of the inspection, the telephone was affixed to the CSSO's desk (more than 3 feet from the CPU) and the telephone's wires were tacked to the wall, thus precluding its movement.

This minor violation is being treated as a **Non-Cited Violation consistent with Section IV of the NRC Enforcement Policy (NCV 70-7001/98004-01)**.

The inspectors were also able to confirm that 1) the CSSO of the classified PC located in trailer C-102-T02 has completed the required security training by viewing the video entitled, "Classified Microcomputer Systems and 2) the classified PC located in trailer C-102-T02 was relocated so that it maintained at least a 3 foot distance from an unclassified PC located in an adjacent office.

The finding regarding the inaccurate classification labels affixed to the classified PC located in trailer C-102-T02 was retracted from the May 1997 security inspection report because it was determined that at the time of the inspection the labels were in compliance with NRC's current regulations. However, during this inspection it was noted that the labels were revised to the satisfaction of the inspectors.

c. Conclusions

The inspectors' verification that the findings from the May 5-9, 1997 security inspection in the area of computer security have been closed indicates a good faith effort on the part of USEC to comply with the requirements of Condition 8 of the certificate of compliance for the Paducah Gaseous Diffusion Plant.

07 Safeguards Program Implementation

a. Inspection Scope (81431, 81401, 81402)

The inspectors reviewed the Paducah Safeguards Program to determine whether physical security requirements were implemented in accordance with the requirements of the Physical Security Plan.

The inspectors also reviewed implementation of the site security procedures.

b. Observations and Findings

To determine if adequate protection was being afforded the low enriched uranium (LEU), the inspectors toured the CAA and observed the integrity of the fence and gates. The fences and gates were adequately maintained. Personnel at the access portals were adequately identified, registered, badged, and escorted. Packages and vehicles were adequately inspected by security officers at the entrances to the CAA.

All officers observed were properly equipped and had appropriate communication capability within the CAA. The inspectors also interviewed officers posted and on patrol and found them to be knowledgeable of their duties and responsibilities. Security procedures were located at the appropriate locations. The security procedures reviewed provided adequate guidance regarding security officer duties and were reviewed at the required frequency.

The inspectors toured the CAA for the purpose of observing the storage of LEU and determined that the LEU is stored or used only within the CAA.

c. Conclusions

Through observations, interviews, and independent verification the inspectors verified that the protection being afforded the LEU at Paducah is in compliance with Physical Security Plan commitments.

08 Exit Meeting Summary

The inspectors presented the preliminary inspection results to members of the plant's management at the conclusion of the inspection on February 27, 1998.

PARTIAL LIST OF PERSONS CONTACTED

Licensee/Contractor

*S. Bell, Security Section Manager, LMUS
M. Boren, Nuclear Regulatory Affairs, LMUS
*J. Calhoun, Computing and Telecommunications Manager, LMUS
S. Elkins, Classification Officer
*J. Feezor, Computer Security Program Manager, LMUS
*A. Grace, Manager, Security Department, LMUS
*C. Hall, Physical Security Specialist, LMUS
*C. Hicks, Site and Facility Support Manager, LMUS
*M. Hicks, COR for COMSEC, LMUS
*D. Holt, Nuclear Regulatory Affairs, LMUS
*L. Jackson, Nuclear Regulatory Affairs Manager, LMUS
*J. Labarraque, Safety, Safeguards and Quality Manager, USEC
*J. Morris, Information Security Analyst, LMUS
B. Nicol, Badge & Pass/Visitor Control, LMUS
S. Spencer, Chemical and Diffusion Technology Section Head, LMUS
*D. Stadler, Nuclear Regulatory Affairs, LMUS
*D. Sullivan, Manager, Police Operations, LMUS

NRC

*C. Blanchard, NRC Region III
*J. Jacobson, NRC Resident Inspector

Department of Energy

*G. Bazzell, DOE Site Safety Representative

*Denotes Exit Meeting Attendance

INSPECTION PROCEDURES USED

IP 81820: Physical Protection Facility Approval and Safeguarding of National Security
Information and Restricted Data
IP 81401: Plans and Procedures
IP 81402: Reports of Safeguards Events
IP 81431: Fixed Site Physical Protection of SNM of Low Significance

ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

70-7001/97005-01	VIO	Failure to provide the Commission complete and accurate information in all material aspects concerning the Security Plan for the Protection of Classified Matter.
70-7001/97005-02	VIO	Numerous aspects of the approved Security Plan for the Protection of Classified Matter were not implemented.
70-7001/98004-01	NCV	Minor violation involving classified computer which was corrected during inspection.

LIST OF ACRONYMS

ADC	Authorized Derivative Classifier
CAA	Controlled Access Area
CPU	Central Processing Unit
CSSO	Computer System Security Officer
DFS	Division of Facilities and Security
DOE	Department of Energy
LEU	Low Enriched Uranium
NRC	Nuclear Regulatory Commission
PC	Personal Computer
PSP	Physical Security Plan
STU III	Secure Telephone Unit
VIO	Violation