



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

January 24, 2006

EA-06-013
NMED Nos. 050759, 050770, and 050780

Mr. Russell B. Starkey, Jr.
Vice President - Operations
United States Enrichment Corporation
Two Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: NRC INSPECTION REPORT NO. 70-7001/2005-009

Dear Mr. Starkey:

This refers to the inspection conducted from October 23 through December 27, 2005, at the Paducah Gaseous Diffusion Plant. The purpose of the inspection was to determine whether activities authorized by the certificate were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on January 19, 2006, the NRC inspectors discussed the findings with members of your staff.

This inspection consisted of an examination of activities conducted under your certificate as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your certificate. Areas examined during the routine inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that three Severity Level IV violations of NRC requirements occurred. These violations are being treated as Non-Cited Violations (NCVs), consistent with Section VI.A of the Enforcement Policy. These NCVs are described in the subject inspection report. If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region II and the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001 and the NRC Resident Inspector at the Paducah Gaseous Diffusion Plant.

An apparent violation was also identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at www.nrc.gov; select **What We Do, Enforcement**, then **Enforcement Policy**. This apparent violation involved the inoperability of the Criticality Accident Alarm System horns for a process building which went undetected for 24 days. The

circumstances surrounding this apparent violation, the significance of the issue, and the need for lasting and effective corrective action were discussed with members of your staff at the interim exit meeting on December 17, 2005, and are documented in the attached inspection report. As a result, it may not be necessary to conduct a predecisional enforcement conference in order to enable the NRC to make an enforcement decision.

In addition, since you identified the violation and your facility has not been the subject of escalated enforcement actions within the last 2 years, and based on our understanding of your corrective action, a civil penalty may not be warranted in accordance with Section VI.C.2 of the Enforcement Policy. The final decision will be based on your confirming on the license docket that the corrective actions previously described to the staff have been or are being taken.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond to the apparent violation addressed in this inspection report within 30 days of the date of this letter or (2) request a predecisional enforcement conference. If a conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. Please contact Jay Henson at 404-562-4731 within seven (7) days of the date of this letter to notify the NRC of your intended response.

If you choose to provide a written response, it should be clearly marked as a "Response to An Apparent Violation(s) in Inspection Report No. 70-7001/2005-009; EA-06-013" and should include for each apparent violation: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. In presenting your corrective action, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violation. The guidance in the enclosed excerpt from NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," may be helpful. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a predecisional enforcement conference.

In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

Your staff has recognized the recent adverse trend in human performance problems that have resulted in violations of Technical Safety Requirements and other operational issues. Plant management discussed the actions they intended to implement to address the issues with NRC Region II staff during a phone call on December 8, 2005, which included increased oversight of ongoing activities. We will be monitoring your staff's performance to assess the effectiveness of those actions taken.

R. B. Starkey, Jr.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response (if you choose to provide one) will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Douglas M. Collins, Director
Division of Fuel Facility Inspection

Docket No. 70-7001
Certificate No. GDP-1

- Enclosures: 1. Inspection Report No. 70-7001/2005-009
2. Excerpt from NRC Information Notice 96-28

cc w/encls:

- S. Penrod, Paducah General Manager
- S. R. Cowne, Paducah Regulatory Affairs Manager
- P. D. Musser, Portsmouth General Manager
- S. A. Toelle, Director, Nuclear Regulatory Affairs, USEC
- R. M. DeVault, Regulatory Oversight Manager, DOE
- G. A. Bazzell, Paducah Facility Representative, DOE
- Dewey Crawford, Department of Public Health, Commonwealth of Kentucky

Distribution w/encl 1:

- D. Martin, NMSS
- R. vonTill, NMSS
- D. Ayres, RII
- J. Henson, RII
- D. Hartland, RII
- M. L. Thomas, RII
- PUBLIC

*see previous concurrence

X PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE X NON-SENSITIVE

ADAMS: X Yes ACCESSION NUMBER: _____

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:EICS		
SIGNATURE	DH 1/23/06	DH 1/23/06	DH 1/23/06	JH 1/23/06	CFE 1/23/06		
NAME	MLThomas*	CTaylor*	DHartland*	JHenson*	CEvans*		
DATE	1/ /2006	1/ /2006	1/ /2006	1/ /2006	1/ /2006	1/ /2006	1/ /2006
E-MAIL COPY?	YES NO	YES NO	YES NO				

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 070-07001

Certificate No.: GDP-1

Report No.: 070-07001/2005-009

Facility Operator: United States Enrichment Corporation

Facility Name: Paducah Gaseous Diffusion Plant

Location: Paducah, KY

Dates: October 23, through December 27, 2005

Inspectors: Mary L. Thomas, Senior Resident Inspector
Bruce L. Bartlett, Senior Resident Inspector
Cynthia D. Taylor, Fuel Facility Inspector

Approved by: Jay L. Henson, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

United States Enrichment Corporation
Paducah Gaseous Diffusion Plant
NRC Inspection Report No. 70-7001/2005-009

This inspection included aspects of certificatee safety operations, facility support, and radiological controls. The report covered resident and region-based inspection activities, including follow-up to issues identified during previous inspections.

Plant Operations

- Two certificatee-identified, non-cited Technical Safety Requirement (TSR) violations were identified. One involved an operator that mistakenly crossed a boundary without the required personal equipment during a planned Criticality Accident Alarm System outage. The other involved the failure to obtain an acceptable leak prior to disconnecting a pigtail. The certificatee initiated the appropriate corrective actions to prevent recurrence. (Paragraph 2)

Maintenance and Surveillance

- A non-cited violation (NCV) and apparent TSR violation were identified regarding the disabling of safety system equipment. The NCV involved a jumper that was discovered installed in an instrument cabinet that disabled a channel of an autoclave Steam Pressure Isolation System. The apparent violation involved the disabling of the C-337 Criticality Accident Alarm System horns due to failure to properly engage the control switch in "AUTO" following a maintenance activity. The certificatee initiated the appropriate corrective actions to address the issues. (Paragraph 3)

Radiological Controls

- The certificatee's performance was in accordance with regulatory requirements related to radiation protection. The External and Internal Exposure Monitoring Program, Respiratory Protection Program, radiological safety postings and radiation work permits, and Radiation and Contamination Survey Programs were adequate. (Paragraph 4.a)
- The certificatee was maintaining an effective management-controlled transportation program. The certificatee's transportation activities were in compliance with the applicable Nuclear Regulatory Commission (10 CFR Parts 20 and 71) and Department of Transportation (49 CFR Parts 171-178) transport regulations. (Paragraph 4.b)
- The certificatee had an established sealed source inventory system that included applicable procedures. (Paragraph 5.a)

Attachment

Persons Contacted

Inspection Procedures

Items Opened, Closed, and Discussed

List of Acronyms

REPORT DETAILS

1. Summary of Plant Status

The certificatee performed routine operations throughout the inspection period. Plant load was increased to 1549 megawatts and product assay was increased to 4.4 percent in accordance with the production schedule.

2. Plant Operations

a. Boundary Crossed During a CAAS Outage

(1) Scope and Observations (88100)

The inspectors observed routine operational activities and discussed routine operations with staff and management. In addition, the inspectors reviewed the applicable area control room (ACR) log books and routine surveillance forms. The inspectors observed operators respond to various alarms.

The inspectors observed routine operations in the cascade buildings and ACRs, the feed vaporization facilities, product and tails withdrawal facilities, and the central control facility. The operations staff were alert and generally knowledgeable of the current status of equipment associated with their assigned facilities.

However, on October 28, 2005, a chemical operator crossed the Criticality Accident Alarm System (CAAS) boundary west of the C-410K building during the C-335 CAAS outage. The CAAS boundary consisted of orange traffic cones. The chemical operator was not wearing the appropriate personnel protective equipment required by Action A of Technical Safety Requirement (TSR) 2.4.4.2.

The TSR required either an alarming dosimeter or a radio in constant communication with the Central Control Facility. Certificatee Procedure CP2-CO-CA2030, "Operation of the Criticality Accident Alarm System," required personnel entering the area to have an alarming dosimeter. Procedure CP2-CO-CA2030 implemented the TSR 2.4.4.2 personnel protective equipment requirements. The operator's failure to comply with the TSR requirements was entered into the certificatee's corrective action program as a significant condition adverse to quality (Assessment and Tracking Report (ATR) 05-4265).

The certificatee's root cause analysis determined that the operator failed to recognize and comply with the CAAS boundary cones due to a cognitive personnel error. The certificatee counseled the operator to be more observant while transiting the site. In addition, the certificatee determined that the use of orange cones was not conducive to positive boundary control. As a result, the certificatee intended to replace the orange cones with flagging and/or orange chains during CAAS outages by the end of February 2006. Also, the certificatee intended to revise public address announcements to include adjacent areas that would be affected when a building CAAS system was removed from service.

The safety significance of this issue was minimal and effective corrective actions were implemented in a timely manner. Therefore, this non-repetitive, certificatee-identified and corrected violation of TSR 2.4.4.2 is being treated as a non-cited violation (NCV) consistent with Section VI.A.8 of the NRC Enforcement Policy. (NCV 70-7001/2005-009-01)

(2) Conclusions

One certificatee-identified NCV was identified after an operator mistakenly crossed a boundary without the required personal equipment during a planned CAAS outage. The certificatee initiated the appropriate corrective actions to prevent recurrence.

b. Certificatee Event Reports (92700)

The certificatee staff made the following operations-related event reports during the inspection period. The inspectors evaluated any immediate safety issues indicated at the time of the initial verbal notifications. The inspectors will review the associated written reports for the events following submittal, as applicable.

<u>Event No.</u>	<u>NMED No.</u>	<u>Date</u>	<u>Status</u>	<u>Title</u>
42144	050759	11/16/05	Closed	Implementation of TSR 1.6.4 during tornado activity.
42165	050770	11/22/05	Open	Improper criticality spacing for waste drum.
42176	050780	11/29/05	Closed	Faulty switch rendered Criticality Accident Alarm System inoperable.

c. Miscellaneous Open Item Closures (92701)

(Closed) Unresolved Item (URI) 2005-007-001: Certificatee root cause assessment and corrective actions for C-360 TSR violation. On October 4, 2005, after a 30B cylinder had been filled and the cylinder valve was closed, a leak check performed prior to disconnecting the pigtail disclosed that the valve was not fully closed. Due to the failed leak test, TSR 2.1.4.14, Action A.1, required that the cylinder be allowed to cool prior to disconnecting the pigtail. Instead, certificatee personnel determined that the leak rate was small enough that a HEPA vacuum cleaner could be used to contain the small release that was expected. The operators then disconnected the pigtail. The resultant release was contained by the HEPA vacuum cleaner.

The failure to follow the TSR was discovered by plant personnel during shift turnover activities the next morning. Prompt corrective actions were implemented including an operator crew briefing to remind the operators of the need to follow procedures, as well as the need to thoroughly review procedures and the TSRs when unexpected situations were identified.

The certificatee screened the TSR violation as a significant condition adverse to quality and performed a team investigation. The team determined that the primary root cause was the failure to follow Procedure CP4-CO-CN2051t, "C-360 UF₆ Transfer," that required the operators to attempt to locate the cause of leak and take actions with concurrence of front line manager, as required, to obtain an acceptable leak rate. Contrary to this requirement, certificatee personnel disconnected the pigtail without first obtaining an acceptable leak rate.

Long term corrective actions included improving the quality of the procedure to ensure the TSR requirement was clearly stated, evaluating whether additional TSR training for front line managers was required, and briefing all uranium hexafluoride (UF₆) handling facility front line managers on detailed lessons learned from the event.

The safety significance of this issue was minimal and effective corrective actions were implemented in a timely manner. Therefore, this non-repetitive, certificatee-identified and corrected violation of TSR 2.1.4.14 is being treated as a NCV consistent with Section VI.A.8 of the NRC Enforcement Policy. (NCV 70-7001/2005-009-02)

(Closed) Event Report 42144 (NMED Item 050759): Implementation of TSR 1.6.4 during tornado activity. The inspectors reviewed the certificatee's actions following the observation of a tornado near the site. The inspectors have no further questions. This event is closed.

3. Maintenance and Surveillance

a. Maintenance and Surveillance Activity Reviews

(1) Scope and Observations (88102 and 88103)

For the maintenance and surveillance activities listed below, the inspectors verified one or more of the following: activities observed were performed in a safe manner; testing was performed in accordance with procedures; measuring and test equipment was within calibration; TSR Limiting Conditions for Operations were entered, when appropriate; removal and restoration of the affected components were properly accomplished; test acceptance criteria were clear and conformed with the TSR and the Safety Analysis Report; and any deficiencies or out-of-tolerance values identified during the testing were documented, reviewed, and resolved by appropriate management personnel.

- Work Order (WO) 0504278, Replace Valve BXL at the C-337A jet station
- WO 0514844, Plug unused cord grip box connectors on H CAAS cluster radiation alarm horn control box
- WO 0514845, Plug unused cord grip box connectors on G CAAS cluster radiation alarm horn control box
- WO 0511570, Perform hands-on inspection of bridge rail in accordance with Section 8.4 of Procedure CP4-QA-QI6085, "Inspection and Load Test of UF₆ Cylinder Handling Cranes"

- WO 0519444, Repair leaking Valve PL-019 in C-360
- WO 0415939, Remove and replace compressor in C-331, U1, C4, S5
- WO 9812940, Repair R-114 leak in C-337
- WO 0517788, Disconnect and reconnect Number 2 diesel generator air compressor in C-331

Disabled CAAS Horns

On November 29, 2005, during a surveillance of the C337/C337A CAAS, the horns did not sound when the system was actuated. During followup, an operator discovered that the CAAS horn switch for C-337, located in C-100, was slightly misaligned and was not in the "AUTO" position. Upon discovery, the C-300 cascade operator "clicked" the switch into position and completed the testing. When in the "AUTO" position, power was applied to the horn relay contacts to sound the horn upon receipt of a signal from the CAAS detector. With no power to relay contacts, there would be no sounding of the horns in the event of an inadvertent criticality.

Upon further review, the certificatee determined that the switch had not been clicked back into "AUTO" on November 5, 2005, following CAAS maintenance activities. As a result, the certificatee made a 24-hour notification to the NRC to report the disabled safety-related equipment in accordance with 10 CFR 76.120 and entered the event into its corrective action program as a significant condition adverse to quality (ATR-05-4670).

The certificatee's preliminary investigation determined that the cause was a missing locking ring that would have provided a mechanism for ensuring that the switch was properly engaged. A contributing cause was a lack of attention to detail by the operator who left the switch in the intermediate position. In the short term, the certificatee took the following corrective actions:

- voltage checks were performed on all of the CAAS horn relays to verify that the switches were in the "AUTO" position. All voltages were 48 volts direct current, as required.
- all of the CAAS horn switches on the C-300 panel were tightened and aligned.
- detailed instructions about how the CAAS horn switches were operated and a requirement to verify system function after final positioning of the horn switches was provided to all C-300 personnel.
- required reading was issued to inform personnel of the event and to ensure that functional testing was verified as the last step prior to exiting testing or a maintenance evolution.
- a long term order was issued requiring the Plant Shift Superintendent to ensure that voltage checks were performed each time the CAAS horn control switch was operated.

The certificatee also intended to implement the following corrective actions:

- installation of alignment locking rings on the C-300 CAAS horn switches.
- modification of the C-300 CAAS panel to inform the operator that the switch was in "AUTO."
- review of surveillance procedures that tested equipment covered by TSR specifications to validate that, when TSR systems were returned to service following testing or maintenance, the ability of the systems to perform their safety function was verified, if possible.

The inspectors noted that in the event of an inadvertent criticality during the time the switch was misaligned, the C-100 operator would have been alerted by a distinct alarm and would have referred to the applicable emergency response procedure. The procedure required that the operator verify that affected building horns had sounded and manually actuate the horns as needed.

However, TSR 3.11.1 required that a criticality safety program shall be established, implemented, and maintained as described in the Safety Analysis Report (SAR) and shall address, in part, adherence with ANSI/ANS standards. SAR Section 3.12.6 stated that the PGDP Nuclear Criticality Safety section (SAR Section 5.2) established criteria for the CAAS that satisfied the requirements of the ANSI/ANS 8.3, "Criticality Accident Alarm System, 1986 edition. Section 4.4.6 of ANSI/ANS 8.3 required that the signal-generating system(s) shall be automatically actuated by an initiating event without requiring human action. Contrary to the above, from November 5 - 29, 2005, the signal-generating system for the C-337 Criticality Accident Alarm System was not capable of being automatically actuated by an initiating event without requiring human action. This is an apparent violation (EEI-70-7001/2005-009-03).

Jumper Discovered On Autoclave Steam Pressure Isolation System

On November 13, 2005, an operator was preparing to perform a surveillance on the No. 2 South Autoclave in C-333A. While doing so, the operator inadvertently opened the No. 3 South instrument cabinet instead of the No. 2 South cabinet. While catching his mistake, the operator also observed a jumper in what he thought was an inappropriate location and immediately notified his management.

During followup, the certificatee determined that the jumper was installed on the circuit for a Steam Pressure Control System switch. This system was required to be operable by TSR 2.2.3.3 when heating a cylinder in the autoclave. The certificatee determined that the jumper caused one channel of the Steam Pressure Control System to be inoperable. The action statement for TSR 2.2.3.3 required that when one detection/initiation channel was inoperable, the operators must restore operability prior to initiating a new operating/heat cycle. The certificatee completed the heat cycle that was in progress and the jumper was removed.

The discovery of the jumper was entered into the certificatee's corrective action program as a significant condition adverse to quality (ATR-05-4496). The certificatee's investigation determined that the jumper was inadvertently left installed during the previous surveillance and preventive maintenance activity performed on September 19-26, 2005.

The certificatee took the following immediate actions with respect to the discovery:

- an extent of condition review was conducted for the balance of the autoclaves in C-333A, C-337A, and C-360. No other unauthorized jumpers were discovered.
- the work package for the maintenance and surveillance activities performed on September 19-26, 2005, was reviewed. The datasheet for the functional test of the Steam Pressure Isolation System was marked as having the jumper removed. Interviews were conducted with the responsible instrument front line manager and mechanics. All personnel interviewed stated that the jumper had been removed upon completion of the surveillance and preventive maintenance.
- documentation was reviewed to determine if any minor maintenance or operational activity could have been performed since September 26, 2005. None had been performed. In addition, interviews were conducted with operations and instrument personnel to determine if any minor maintenance or operational activity could have been performed since September 26, 2005. The personnel interviewed did not know of any other activities since September 26, 2005, that may have installed a jumper on the Steam Pressure Control System.
- use of jumpers in other safety-related systems was reviewed to confirm that independent verification was not the only means to confirm jumper removal.
- instrument front line managers implemented documented job observations.

In addition, the certificatee intended to implement the following corrective actions:

- changing the color of the electrical jumpers used by the instrument mechanics and the electricians for any maintenance activity to a bright contrasting color easily distinguishable from the background in which the jumper is used.
- revising Procedure CP4-GP-IM6258, "C-333A and C-337A Calibration and Functional Testing of Autoclave High and Low Cylinder Pressure Systems," to include a functional test of the loop following any jumper installation/removal.
- systematically review maintenance activities involving safety-related systems which use jumpers during the activity to ensure a functional test was performed after the completion of the maintenance activity.

The safety significance of this issue was low as the redundant loop was operational, and there were no indications of steam pressure excursions that would have challenged the TSR setpoint during the period the jumper was installed. Therefore, this non-repetitive and certificatee-identified and corrected violation of TSR 2.2.3.3 is being treated as a NCV consistent with Section VI.A.8 of the NRC Enforcement Policy. (NCV 70-7001/2005-009-04)

(2) Conclusions

An NCV and apparent violation were identified regarding the disabling of safety system equipment. The NCV involved a jumper that was discovered installed in an instrument cabinet that disabled a channel of an autoclave Steam Pressure Isolation System. The apparent violation involved the disabling of the C-337 CAAS horns due to failure to properly engage the control switch in "AUTO" following a maintenance activity. The certificatee took appropriate corrective actions to address the issues.

4. Radiological Controls

(a) Radiation Protection

(1) Scope and Observations (83822)

The inspectors reviewed the certificatee's radiation protection program to determine whether the certificatee's performance was in accordance with regulatory requirements related to radiation protection, and to evaluate the adequacy of certain aspects of the certificatee's program. The inspectors reviewed the following aspects:

- External and Internal Exposure Monitoring Program - the inspectors determined that this program was implemented in a manner to maintain doses As Low As Reasonably Achievable. Exposures were less than the occupational limits in 10 CFR 20.1201.
- Respiratory Protection Program - the inspectors determined that equipment issuance and training ensured that equipment was obtained by certified users only and met regulatory requirements.
- Radiological safety postings and radiation work permits - the inspectors determined that radiological safety postings and radiation work permits were utilized to communicate potential hazards and protective equipment requirements to workers.
- Radiation and Contamination Survey Programs - the inspectors determined that the radiation and contamination survey programs were implemented to protect workers, and to identify potential work areas posing an internal or external radiation hazard to workers.

(2) Conclusions

The certificatee's performance was in accordance with regulatory requirements related to radiation protection. The External and Internal Exposure Monitoring Program, Respiratory Protection Program, Radiological Safety Postings and Radiation Work Permits, and Radiation and Contamination Survey Programs were adequate.

b. Transportation

(1) Scope and Observations (86740)

The inspectors reviewed the certificatee's transportation program to determine whether the certificatee was maintaining an effective management-controlled program to ensure radiological and nuclear safety in the receipt, packaging, delivery to a carrier and, as applicable, the private carriage of licensed radioactive. The inspectors reviewed the certificatee's transportation activities to determine whether they were in compliance with the applicable Nuclear Regulatory Commission (10 CFR Parts 20 and 71) and Department of Transportation (49 CFR Parts 171-178) transport regulations.

The inspectors determined that designation of transportation authorities and responsibilities was adequate. Recent changes to the transportation organization involved a new packaging and transportation manager for both the Paducah and Portsmouth facilities. The certificatee was using procedures approved by management to carry out transportation activities at the facility.

The inspectors observed package preparation activities at the C-746 cylinder yard for the shipment of uranium hexafluoride cylinders to the USEC/Portsmouth plant. Minor inconsistencies documented on shipping papers were noted and adequately addressed. The certificatee maintained current certificates of training in hazardous materials handling and regulations for selected staff.

The inspectors determined that employee knowledge of the regulations and procedures for the receipt of radioactive material packages was adequate. No problem areas were noted with the radiation and contamination survey records of incoming radioactive material shipments that were reviewed.

The maintenance of NRC Certificates of Compliance for packages used to ship fissile material was current and adequate.

(2) Conclusions

The certificatee was maintaining an effective management-controlled transportation program. The certificatee's transportation activities were in compliance with the applicable Nuclear Regulatory Commission (10 CFR Parts 20 and 71) and Department of Transportation (49 CFR Parts 171-178) transport regulations.

5. Past Generic Communication Issues (Sealed Source Accountability)

(1) Scope and Observations (TI 2600/012, IN 95-51)

The inspectors reviewed the certificatee's procedures and procedure implementation for maintaining control and accountability of licensed material (sealed sources) and determined that they had been established and were adequate. In addition, the inspectors determined that security at the facility adequately addressed maintaining control of sealed sources.

The inspectors reviewed the certificatee's established inventory system to track the numerous sources located at the facility. The inspectors determined that the system was proceduralized and had been implemented. Sealed sources examined by the inspector were accounted for in the system, and the sources had been assigned a custodian who was responsible for control and use of the sources. From a review of documentation and interviews with the staff, the inspector determined that physical inventories were carried out on an annual basis.

(2) Conclusions

The certificatee had an established sealed source inventory system that included applicable procedures.

6. Exit Meeting Summary

The inspection scope and results were summarized on January 19, 2006, with members of the plant staff. The inspectors asked the certificatee staff whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

1. PARTIAL LIST OF PERSONS CONTACTED

Certificatee

S. Penrod, General Manager
M. Keef, Plant Manager
S. Cowne, Nuclear Regulatory Affairs Manager
K. Ahern, Production Support Manager
M. Boren, Nuclear Regulatory Affairs
R. Helme, Engineering Manager
C. Hicks, Scheduling Manager
L. Jackson, Operations Manager
P. Jenny, Security Manager
J. Labarraque, Nuclear Safety and Quality Manager
J. Lewis, Maintenance Manager
M. Mack, Operations
D. Page, Plant Shift Superintendent Manager
D. Snow, Health and Safety Manager
K. Stratemeyer, UF₆ Handling

Other certificatee employees contacted included engineers, technicians, and office personnel.

2. INSPECTION PROCEDURES USED

IN 95-51	Recent Incidents Involving Potential Loss of Control of Licensed Material
IP 83822	Radiation Protection
IP 86740	Transportation
IP 88100	Operations
IP 88102	Surveillance Observations
IP 88103	Maintenance Observations
IP 92700	Onsite Followup of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92701	Follow-up
TI 2600/012	Institutionalizing Concern Regarding Safety Issues Identified in Selected Past Generic Communications

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
2005-007-01	Closed	URI	Certificatee root cause assessment and corrective actions for C-360 TSR violation.
42144	Closed	CER	Implementation of TSR 1.6.4 during tornado activity.

42165	Open	CER	Improper criticality spacing for waste drum.
42176	Closed	CER	Faulty switch rendered criticality accident alarm system inoperable.
2005-009-01	Open/Closed	NCV	Violation of TSR for crossing C-410K boundary during a CAAS outage
2005-009-02	Open/Closed	NCV	Violation of TSR due to disconnecting a pigtail without obtaining acceptable leak rate.
2005-009-03	Open	EEL	Disabling of the C-337 Criticality Accident Alarm System horns due to failure to properly engage the control switch in "AUTO".
2005-009-04	Open/Closed	NCV	Violation of TSR for C-333A Jumper on Autoclave Steam Pressure Isolation System
2600/012	Closed	TI	Past generic communication issues

4. LIST OF ACRONYMS USED

ACR	Area Control Room
ADAMS	Agencywide Documents Access and Management System
ANS	American National Standard
ATR	Assessment and Tracking Report
CAAS	Criticality Accident Alarm System
CFR	Code of Federal Regulations
GDP	Gaseous Diffusion Plant
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PDR	Public Document Room
PGDP	Paducah Gaseous Diffusion Plant
TSR	Technical Safety Requirement
UF ₆	Uranium Hexafluoride
URI	Unresolved Item
USEC	United States Enrichment Corporation
WO	Work Order