UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

September 7, 2006

NMED No. 42590

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. 70-7001/2006-004

Dear Mr. Starkey:

This refers to the inspection conducted from June 15, through August 9, 2006, 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 August 9, 2006, the NRC senior resident inspector discussed the findings with members of your staff.

As a result of the inspection, the enclosed NRC Forms 591FF, Safety Inspection Report, are being issued. The enclosed forms indicate that no violations were identified during the inspection period.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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.

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

Sincerely,

/RA/

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

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

Enclosure: (See page 2)

Enclosure: NRC Form 591FF Parts 1 and 3

cc w/encl:
S. Penrod, Paducah General Manager
S. R. Cowne, Paducah Regulatory Affairs Manager
W. Jordan, Portsmouth General Manager
S. A. Toelle, Director, Nuclear Regulatory Affairs, USEC
R. M. DeVault, Regulatory Oversight Manager, DOE
G. A. Newtown, Paducah Site Office, DOE
Dewey Crawford, Department of Public Health, Commonwealth of Kentucky

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

ADAMS: X Yes ACCESSION NUMBER:_____

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI				
SIGNATURE	via email 9/6/06	JJ 9/7/06	DH 9/6/06				
NAME	MThomas	JJimenez	DHartland				
DATE	9/ /2006	9/ /2006	9/ /2006	9/ /2006	9/ /2006	9/ /2006	9/ /2006
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: C:\MyFiles\Copies\corrected2006004 report.wpd

NRC FORM 591FF PART 1 **U.S. NUCLEAR REGULATORY COMMISSION**
(11-2005)
10 CFR 2.201

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE:
United States Enrichment Corporation 6903 Rockledge Drive Bethesda, MD 20817 REPORT NUMBER(S): 2006-004	**U.S. Nuclear Regulatory Commission** **Region II, Division of Fuel Facilities Inspection** **61 Forsyth Street, Suite 23T85** **Atlanta, GA 30303**

3. DOCKET NUMBER(S):	4. LICENSEE NUMBER(S):	5. DATE(S) OF INSPECTION:
70-7001	GDP-1	06/15-08/09/06

LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

X	1. Based on the inspection findings, no violations were identified.
	2. Previous violation(s) closed.
	3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy to exercise discretion were satisfied.

Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

	4. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations and Corrective Actions)

Licensee's Statement of Corrective Actions for Item 4, above.

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE'S REPRESENTATIVE	Not applicable		
NRC INSPECTOR	Mary L. Thomas		

Enclosure

NRC FORM 591FF PART 3 (11-2005)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE

United States Enrichment Corporation
6903 Rockledge Drive
Bethesda, MD 20817

2. NRC/REGIONAL OFFICE

U.S. Nuclear Regulatory Commission
Region II, Division of Fuel Facilities Inspection
61 Forsyth Street, Suite 23T85
Atlanta, GA 30303

REPORT NUMBER(S): **2006-004**

3. DOCKET NUMBER(S):	4. CERTIFICATE NUMBER(S):	5. DATE(S) OF INSPECTION:
70-7001	**GDP-1**	**06/14-08/09/06**

6. INSPECTOR(S):
M. L. Thomas, J. G. Jimenez, M. Chitty

7. INSPECTION PROCEDURES USED: 88005, 88050, 88100, 88102, 88103, 92700, TI2600/12, TI2600/13

SUPPLEMENTAL INSPECTION INFORMATION

Executive Summary

Summary of Plant Status

- The certificatee performed routine operations throughout the inspection period. Plant load was maintained between 700 and 900 megawatts, and product assay remained steady at 1.8 weight percent in accordance with the production schedule.

Plant Operations

- The inspectors observed routine operations in the cascade buildings and area control rooms, the feed vaporization facilities, product and tails 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.

Maintenance and Surveillance

- During the observation of maintenance and surveillance activities, the inspectors assessed 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; Technical Safety Requirement (TSR) Limiting Conditions for Operations were entered, when appropriate; removal and restoration of the affected components were properly accomplished; test and 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.

- During the inspection period, certificatee staff experienced four errors during preparation for and performance of maintenance activities that resulted in distraction to plant operators or unintended transients to plant equipment:

  1. On June 13, while performing testing on vibration monitoring instrumentation, an instrument mechanic inadvertently went to the wrong cascade unit. Operations personnel immediately notified the mechanic after alarms for the wrong unit were received in the control room. No impact to cascade equipment resulted.

  2. On July 14, an instrument mechanic went to the wrong relay when performing vibration testing which resulted in the inadvertent shutdown of a cascade booster pump. Operators responded appropriately to minimize the impact on plant operations.

Executive Summary (continued)

3. On July 26, while performing calibration of temperature instrumentation in Building C-360, an instrument mechanic inadvertently disconnected the wrong sensing line resulting in the interruption of the heat cycle on an operating autoclave. Operators responded appropriately to ensure that the autoclave was in a safe condition.

4. On July 29, an operator intended to isolate lube oil to a shutdown cascade cell to perform maintenance when he inadvertently closed the isolation valve to an operating cell. The cell tripped on high vibration, and operators took appropriate action to minimize the impact of the transient on the cascade.

While the safety significance of each incident was minor, they indicated a recurrence of a potential adverse trend in human performance problems that had previously been identified and documented in Inspection Report 70-7001/2005-007. In response, certificatee management assembled a committee to perform a significant condition adverse to quality investigation. The inspectors' review of the results of the investigation is an inspector followup item. (IFI 7007001/2006004-01)

Emergency Preparedness

- No significant changes were made to the Emergency Preparedness Program in the last 12 months. Minor changes that were made received the appropriate level of review and were communicated to affected personnel.
- The certificatee's implementing procedures incorporated the requirements described in the safety analysis report and emergency plan.
- Training provided to emergency responders met the requirements described in the certificatee's safety analysis report.
- The certificatee regularly met with the off-site organizations that provided assistance to the facility in case of an emergency to ensure they were updated on the conditions of the facility as detailed in the emergency plan.
- No issues were identified with respect to the certificatee's drill conducted on July 7, 2006.
- The emergency preparedness audit results demonstrated that the certificatee effectively assessed its emergency management program. Some of the recommendations presented were a good example of the adequate depth of auditing demonstrated by the team.
- Equipment relied on for emergency management was inspected, maintained, and tested in accordance with the certificate requirements.

Management Organization and Controls

- Personnel changes did not appear to adversely impact the responsibilities and functions specified in the certificatee. The certificatee's system to review and issue procedures adequately ensured that safety procedures were properly controlled and approved.
- The internal safety audits covered a wide range of safety programs. The inspectors concluded that the internal reviews and audits were adequate for detecting potential safety concerns. Management meetings adequately reviewed facility information in order to address actual or potential safety issues and the addition of new processes.
- The certificatee adequately assessed issues presented at Plant Operations Review Committee meetings. Required actions from the meetings were implemented accordingly.

Inspector Follow-up Items (IFI):

- ***IFI 70-7001/2006002-01***

  The inspectors received from the certificatee an operability evaluation (ATRC-06-1123) discussing in detail the sludge discovered in the HPFW pipe identified on April 5, 2006. Review of this document demonstrated the certificatee had adequately assessed the condition that most likely resulted in the accumulation of the material in the pipe. A similar situation had happened in the past due to corrosion induced by microorganisms present in the water being used. This had been addressed by cleaning the piping system and adjusting the water chemistry to correct this type of corrosion.

  Testing performed on the sludge confirmed it was highly mobile in water and, given that the system sprinklers were upside down, the potential for blockage was minimal. In addition, flushing of the affected pipe section did not reveal more of this substance to be present. Given the nature of the corrosion, the certificatee determined that it would be able to detect it during routine inspections should it reoccur. In the mean time, water chemistry has been controlled to minimize any microbial growth.

  Current pipe system tests have been conducted in accordance with the NFPA code and have not indicated any recurrence of the problem. Based on a review of the information provided in the evaluation, the interviews conducted, the tour of the affected area, and review of surveillance activities, the inspectors determined that the certificate has adequately addressed the issue. **IFI 70-7001/2006002-01 is considered closed.**

- ***Temporary Instruction 2600/012*** : *Institutionalizing Concern Regarding Safety Issues Identified in selected Past Generic Communications*

  1. ***IN-89-003, "Potential Electrical Equipment Problems":*** The certificatee provided evidence of their acquisition program. The program verified that any equipment or parts purchased for the facility met the manufacturers' and safety standards established in the procedure. Examples reviewed and interviews conducted confirmed the adequacy of the program. This notice is considered closed.

  2. ***IN-87-033, "Applicability of 10CFR Part 21 to Nonlicensees":*** The inspectors interviewed certificatee personnel in charge of contracting services and/or products from vendors. The inspectors also reviewed the certificatee's policy for contractors. The information gathered from the certificatee validated the fact that they are in compliance with requirements of 10CFR Part 21. This IN is considered closed.

  3. ***IN-87-026, "Cracks in Stiffening Rings on 48-inch-diameter UF6 Cylinders":*** The inspectors reviewed the records of cylinders owned and stored by the certificatee and interviewed personnel in charge of tracking cylinders located at the facility. Information obtained demonstrated that the few cylinders present were manufactured after the time period specified in the IN. While not applicable, the certificatee had inspected their cylinders as part of the QA program. No issues had been found in regards to cracks in stiffening rings. In addition, the NRC had officially rescinded this IN. This IN is considered closed.

  4. ***IN-86-077,* "Computer Program Error Report Handling":** As with IN 89-003, the certificatee's procurement of Quality, Augmented Quality-Nuclear Criticality Safety and Augmented Quality Services demonstrated that this program adequately captured and notified them of any errors reported with the software in use at the facility. Procedures UE2-BM-PC1035, Rev2, and UE2-QA-QS1071 gave an overview of the requirements of the program that covered different aspects of acquisition of products or services which covered computer program problems. This IN is considered closed.

  5. **IN-89-047, "Potential Problems with Worn or Distorted Hose Clamps on Self-Contained Breathing Apparatus"**: The concerns addressed in this IN have been covered in the certificatee Procedures CP4-SS-FS2230 "Self Contained Breathing Apparatus," Rev 2, and CP2-SH-IH1036 "Respiratory Protection Program," Rev 3. Requirements in these procedures met the recommendations expressed in the notice. This IN is considered closed.

6. **IN-86-024, "**Respirators Users Notice: Increase Inspection Frequency for Certain Self-Contained Breathing Apparatus Air Cylinders" : The certificatee inspected the SCBA daily in accordance with Procedure CP4-SS-FS2230 "Self Contained Breathing Apparatus," Rev 2 . Steps in this procedure ensured certificatee adequately inspected the cylinders available for use. This IN is considered closed.

- ***Temporary Instruction 2600/013*: *Safety Of Uranium Hexafluoride Cylinders at Fuel Cycle Facilities***

The inspector reviewed the certificatee's program for handling of cylinders at the site. The procedures reviewed provide the operators with information to adequately inspect, document and ensure UF6 cylinders entering, leaving and being stored at the facility are in compliance with the license requirements. The inspector reviewed a sample of documents containing the inspections made to the cylinders for the different stages they go through in the facility. Documentation demonstrated the certificatee was complying with recommended surveillance, tests and QA verification in accordance with ANSI 14.1-2001. Observed operations were conducted as specified in the procedures. Interviews with operators demonstrated they were knowledgeable in handling UF6 cylinders at the facility. Random inspection of stored cylinders did not show any of them to be in a deteriorated condition. The certifactee also provided all the certification documentation for the cylinder samples selected by the inspector. No issues were found with the certificatee's handling of UF6 cylinders at the site. **TI 2006/013 is considered closed.**

Items Opened, Closed, and Discussed

Item Number	Status	Description
EEI 70-7001/2005009-03	Closed	Disabling of the C-337 Criticality Accident Alarm System horns due to failure to properly engage the control switch in "AUTO." The inspectors reviewed the corrective actions taken and had no additional issues.
Event Report 42590	Closed	Failure of the C-333A Autoclave 2 North High Cylinder Pressure System. The inspectors reviewed the corrective actions taken and had no additional issues.
IFI 70-7001/2006002-02	Closed	Corrosion buildup in the sprinkler system.
IFI 70-7001/2006004-01	Open	Potential adverse trend in human performance problems.
URI 70-7001/2006003-01	Closed	Operation of a high assay boundary valve in C-331. No violation of regulatory requirements resulted item because the assay level in the affected building did not exceed 1 wt%. The inspectors reviewed the corrective actions taken and had no additional issues.