



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

October 10, 2007

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. 70-7001/2007-003

Dear Mr. Starkey:

This refers to the inspection conducted from May 1 through June 30, 2007, at the Paducah Gaseous Diffusion Plant. It was noted that NRC Form 591 Part 3 of the Inspection Report dated July 27, 2007, contained proprietary information. We apologize for any inconvenience that may have resulted from this error.

The enclosed form indicates that no violations were identified during the inspection of your licensed activities. Please retain the corrected Form 591FF Part 3 for your files. No further response or acknowledgment is required.

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

R. Starkey, Jr.

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Enclosure: NRC Form 591FF Parts 1 and 3

cc w/encl:

S. Penrod, Paducah General Manager  
P. O. Box 1410  
Paducah, KY 42001

V. Shanks, Paducah Regulatory Affairs Manager  
P. O. Box 1410  
Paducah, KY 42001

W. Jordan, Portsmouth General Manager  
Portsmouth Gaseous Diffusion Plant  
United States Enrichment Corporation  
P. O. Box 628  
Piketon, OH 45661

S. A. Toelle, Director, Nuclear Regulatory Affairs  
United States Enrichment Corporation  
Two Democracy Center  
6903 Rockledge Drive  
Bethesda, MD 20817

R. M. DeVault, Regulatory Oversight Manager  
Department of Energy  
P. O. Box 2001  
Oak Ridge, TN 37831

G. A. Newtown, Paducah Site Office  
Department of Energy  
P. O. Box 1410  
Paducah, KY 42001

Dewey Crawford, Department of Public Health  
Commonwealth of Kentucky  
200 Fair Oaks Lane  
Frankfort, KY 40601

Distribution w/encl: (See page 3)

R. Starkey, Jr.

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Distribution w/encl:

M. Raddatz, NMSS

B. Smith, NMSS

J. Henson, RII

J. Pelchat, RII

M. Thomas, RII

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:DFFI		
SIGNATURE	MT 10/10/07	MC 10/10/07	OL 10/10/07	DH 10/10/07	JLH for 10/10/07		
NAME	MThomas	MChitty	OLopez	DHartland	JPelchat		
DATE	07/27/2007	07/27/2003	07/27/2003	07/27/2003	07/27/2003		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: C:\FileNet\ML072840014.wpd

SAFETY INSPECTION REPORT  
AND COMPLIANCE INSPECTION

## 1. LICENSEE/LOCATION INSPECTED:

United States Enrichment Corporation  
6903 Rockledge Road  
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):

## 3. DOCKET NUMBER(S):

70-7001

## 4. LICENSEE NUMBER(S):

GDP-1

## 5. DATE(S) OF INSPECTION:

May 1 - June 30, 2007

## 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:

- ☒ 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			
NRC INSPECTOR	Mary L. Thomas	/RA/.	10/10/07

**SAFETY INSPECTION REPORT  
AND COMPLIANCE INSPECTION**

1. LICENSEE

**United States Enrichment Corporation  
6903 Rockledge Road  
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):

3. DOCKET NUMBER(S):

**70-7001**

4. LICENSE NUMBER(S):

**GDP-1**

5. DATE(S) OF INSPECTION:

**May 1 - June 30, 2007**

6. INSPECTOR(S): Mary L. Thomas, Mark Chitty, Omar Lopez, David Hartland

7. INSPECTION PROCEDURES USED: 88055, 88100, 88101, 88102, 88103, 88105

**SUPPLEMENTAL INSPECTION INFORMATION****Executive Summary**Summary of Plant Status

- The certificatee performed routine operations throughout the inspection period. Plant load was reduced and product assay was decreased in accordance with the plant's production schedule.

Plant Operations

- The inspectors observed routine operations in the cascade buildings and area control rooms, 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.
- On June 12, 2007, a power operations operator caused a shutdown of 29 cells in the C-337 building when he opened a breaker on the north side of the west end of the C-537 switchyard and removed the fuses on the south side of the west end of the C-537 switchyard. The operator was to have removed power to the south side of the switchyard to allow movement of a portable crane under a 161 kv line.

Maintenance and Surveillance

- During the observation of maintenance and surveillance activities, the inspectors verified that: 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.

**Executive Summary (continued)**Management Organization and Controls

- The inspectors observed improved communications between operators, and between operators and personnel performing plant testing/surveillances. However, during this inspection period, the certificatee experienced over 20 production related human performance errors. The most significant of these human errors resulted in the loss of 29 out of 156 operating cells. Human performance was a weakness as identified in the last two Licensee Performance Reviews and was also identified as an Inspector Followup Item (IFI), IFI 70-7001/2006004-01. These most recent human performance errors have not been directly related to regulatory requirements, but they do demonstrate that the certificatee's corrective actions it has implemented to address previous human performance errors have not been fully effective.

Fire Protection

- Combustible materials and ignition sources were controlled in accordance with procedures and fire safety requirements.
- Self-assessments and quality assurance audits were being performed in accordance with safety analysis report (SAR) requirements.
- No safety problems were identified with respect to the implementation of the impairment permit program.
- A review of documented building surveys for process buildings C-333 and C-337 indicated the surveys were conducted in accordance with SAR requirements.
- Inspectors reviewed maintenance records and walked down sections of the high pressure fire water (HPFW) sprinkler systems. Sprinklers were not obstructed and the water supply to the system was readily available with correct valve positioning and pumping capability. There was no visual evidence of system degradation.
- Inspectors observed the annual flow test of the HPFW hydrants. The inspectors also reviewed records for last year's flow tests of the pumper trucks. No safety problems were identified.
- Inspectors walked down passive fire protection systems in the file storage room. No safety problems were identified.

**Executive Summary (continued)**

- Inspectors observed the replacement of a victaulic coupling in C-333 HPFW sprinkler system and post maintenance functional tests of the system. The coupling was installed in accordance with manufacturer installation instructions and functional tests were performed in accordance with applicable procedures.

List of Items Opened, Closed, Discussed

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
Event Report 43305	Closed	High Pressure Fire Water (HPFW) Sprinkler System C-12 in Process Building C-337 failed on April 16. The certificatee determined the root cause as improper installation during original HPFW construction (1958) resulting in leakage that compromised carbon steel restraining rods. The certificatee identified other HPFW systems with severed restraint rods. All affected systems were repaired and returned to service. The inspectors had no further questions. This item is closed.
Event Report 43268	Closed	Process Gas Leak Detection (PGLD) detector head YE-613-21 located in the C-333A Feed Facility failed to alarm as required when smoke was applied as required per TSR 2.2.4.1. The certificatee was unable to determine a root cause beyond atypical equipment failure and has implemented preventative maintenance task to replace all this and similarly installed PGLD heads every six months and to replace the detector head bases every five years. The inspectors had no further questions. This item is closed.