NRC FORM 591FF PART 1
(12-2007)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

INSPECTION REPORT

1. LICENSEE OR CERTIFICATE HOLDER/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE:
United States Enrichment Corporation 6903 Rockledge Road Bethesda, MD 20817 REPORT NO: 2009-002	U.S. Nuclear Regulatory Commission Region II 61 Forsyth Street, Suite 23T85 Atlanta, GA 30303-8931

3. DOCKET NUMBER:	4. LICENSE OR CERTIFICATE NUMBER:	5. DATE(S) OF INSPECTION:
70-7001	GDP-1	April 1 - June 30, 2009

LICENSEE OR CERTIFICATE HOLDER:

The inspection was an examination of the activities conducted under your license or certificate as they relate to safety and/or safeguards and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license or certificate. 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. Reported events reviewed

☑ 4. 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):

(See Part 3)

☐ 5. 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 OR CERTIFICATE HOLDER STATEMENT OF CORRECTIVE ACTIONS FOR ITEM 5, ABOVE

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violation(s) 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 the NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE/CERTIFICATE HOLDER REPRESENTATIVE			
NRC INSPECTOR	Michael O. Miller, Mark Chitty	JP for	8/11/09

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6. INSPECTOR(S): Michael O. Miller, Mark Chitty

7. INSPECTION PROCEDURES USED: 88101, 88102, 88103

EXECUTIVE SUMMARY

This report covers a three-month period of inspection by the resident inspectors. The inspectors performed a selective examination of licensee activities which was accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with Certificate Holder personnel, independent verification of safety system status and limiting conditions for operation, corrective actions, and a review of facility records. The NRC's program for overseeing the safe operation of uranium enrichment facilities is described in Manual Chapter 2600, “Fuel Cycle Facility Operational Safety and Safeguards Inspection Program,” dated March 21, 2008.

Two Severity Level IV violations were identified during this inspection period. These violations were non-repetitive, identified by the certificate holder, and were corrected or are being corrected; therefore, the NRC is treating these two violations as non-cited violations consistent with Section VI.A.8 of the NRC Enforcement Policy.

Summary of Plant Status

- The certificate holder or licensee performed routine operations throughout the inspection period.

Plant Operations (88100)

a. Inspection Scope and Observations

- 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 was alert and generally knowledgeable of the current status of equipment associated with their assigned facilities.

- Technical Safety Requirement (TSR) surveillance 2.3.4.23-2, “Scales,” requires functional testing (of test weights in accordance with Nuclear Materials Coantrol and Accountability (NMC&A) program requirements) at scale ID#12 prior to placing a cylinder in the withdrawal position when preparing to fill a cylinder. Contrary to this requirement, on March 16 at approximately 0230 hours, the Building C-310 operators initiated liquid UF_6 flow from the cascade to a cylinder on scale ID #12 without having completed verification of test data as required by the NMC&A program. At approximately 0515 hours, the operators found that they had not performed the data verification steps. Verification was immediately completed. Each test weight passed its surveillance.

The certificate holder determined that the cause of this violation was inadequate place-keeping. They then added verification steps to procedures for Buildings C-310, C-315, C-333A, and C-337A where the scale surveillances are required to be completed.

The certificate holder entered this event in their corrective action program as ATRC-09-0567.

This non-repetitive, certificate holder identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VI.A.8 of the NRC Enforcement Policy" (NCV 07001/2009-002-01).

- On May 12, the inspectors reviewed NS&Q Surveillance KP-SE-S08007, "Special Assessment at PGDP," in order to conduct an evaluation of the certificate holder's self-assessment capability. This surveillance was related to the issue in NRC Bulletin 2007-01, "Security Officer Inattentiveness," that was initiated following concerns identified with security guard inattentiveness at another nuclear facility. NRC Bulletin 2007-01 was provided as information to gaseous diffusion plants with no formal response required. The certificate holder's Quality Assurance organization conducted a surveillance to determine if adequate PGDP programs are in place for the bulletin topic. The assessment included a combination of document review, field observations, and personnel interviews.

- TSR 2.4.4.1, "UF_6 Release Detection System," requires a minimum number of UF_6 release detection heads to be operable when cascade equipment is above atmospheric pressure during steady state operations. Contrary to this requirement, on May 12 at approximately 1556 hours, the plant shift superintendent (PSS) failed to perform TSR 2.4.4.1 Action A to establish a continuous UF_6 smoke watch within the required completion time of one hour of his declaration of inoperability of the Process Gas Leak Detection system (PGLD) for Building C-331, Unit-2, Cell-1, for scheduled maintenance. On May 12, at approximately 1840 hours, the PSS determined that TSR 2.4.4.1 Action A was applicable. The PSS verified that the work was complete, the Building C-331, Unit-2, Cell-1 PGLD system was test fired, the PGLD system was declared operable, and the action statement was exited.

  The certificate holder entered this event in their corrective action program as ATRC-09-1150.

  This non-repetitive, certificate holder identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VI.A.8 of the NRC Enforcement Policy" (NCV 07001/2009-002-02).

- On June 9, inspectors observed operators in the C-331 building recover from the inadvertent trip of a cell.

b. Conclusions

The certificate holder identified two non-cited violations.

Configuration Control (88101)

a. Inspection Scope and Observations

- The inspectors reviewed the adequacy and implementation of the facility's configuration-control program. The inspectors determined that proposed changes did not involve un-reviewed safety questions and that changes to approved design-change documents were controlled. The inspectors reviewed plant operations review committee packages, attended plant operation review committee meetings, interviewed the parties responsible for proposed changes, and walked down the implementation of the changes.

b. Conclusions

No violations of significance were identified.

Surveillance Observations (88102)

a. Inspection Scope and Observations

- The inspectors reviewed the adequacy of the facility's surveillance testing, calibration, and inspection required by the TSRs, nuclear criticality safety evaluations/approvals (NCSE/As), and the material control and accountability program. The inspectors evaluated the effectiveness of the facility's controls in identifying, resolving, and preventing problems by reviewing corrective actions taken, interviewing the parties responsible for surveillances, observing surveillances as they were conducted, reviewing data results, and comparing the results with TSR requirements.

b. Conclusions

No violations of significance were identified.

Maintenance Observations (88103)

a. Inspection Scope and Observations

- During the inspection of maintenance activities, the inspectors witnessed maintenance and post-maintenance testing as they were performed, reviewed the test data to verify that the systems, structures, and components involved in these tests satisfied the requirements described in the TSRs, the Safety Analysis Report (SAR), and applicable certificate holder procedures, and that the tests demonstrated that the Safety Systems and Components (SSCs) were capable of performing their intended safety functions. The inspectors also attended pre-job meetings and safety meetings related to maintenance in order to evaluate the effectiveness of the certificate holder's ability in identifying, resolving, and preventing problems

b. Conclusions

No violations of significance were identified

Exit Meeting Summary

- The inspection scope and results were summarized on July 10 with Steve Penrod and members of his staff in attendance. The inspectors asked the certificate holder or certificate holder staff whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

Key Points of Contact

Name	Title
Keith Ahern	Production Support Manager
David Clayton	Training Manager
Sherrill Gunn	Operations Manager
Robert Helme	Engineering Manager
Jim Lewis	Plant Manager
Steve Penrod	General Manager
Vernon Shanks	Regulatory Affairs Manager
Diane Snow	Environmental, Safety and Health Manager
April Tilford	Emergency Management
Craig Willett	Maintenance Manager

List of Items Opened, Closed, and Discussed

Opened

07007001/2009-001-01	NOV	Routinely Exceeding TSR Hours of Work Limits TSR 3.2.2.b, "Facility Staff," states, in part, that "Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have personnel work an 8 hour or 12 hour workday [i.e., a nominal 40 hour (can be as much as 48 hours) work week]. . . . Any deviation from the above guidelines shall be authorized in advance by the General Manager or his designee. Routine deviation from the above guidelines is not authorized." The inspectors determined that the PSS routinely deviated from TSR 3.2.2.b when he authorized operators, security guards, and maintenance personnel to exceed the overtime limits of TSR 3.2.2.b each and every week in 2008. Specifically, the PSS approved operators to exceed the OT limits approximately 682 times in 2008. The PSS approved security to exceed the OT limits approximately 273 times in 2008. The PSS approved maintenance to exceed the OT limits approximately 650 times in 2008. This approval resulted in routine deviation from TSR 3.2.2.b. This NRC-identified finding was cited as NOV 07007001/2009-001-01 in Inspection Report 2009-001, but was not listed as a new open item in that report and is being listed as "Open" in this report.
07007001/2009-002-03	CER	CER 45042: 24 Hour 91-01 Bulletin Report on Loss of One of Two Criticality Control Contingencies On May 4 plant personnel identified that a fissile sample buggy in C-331 Process Building was in violation of the 2-foot spacing requirement from a fissile HEPA vacuum. The buggy was pushed up against the HEPA vacuum spacing pan which resulted in approximately 21 inches of separation between the fissile material items. Plant personnel remediated the situation according to Nuclear Criticality Safety guidelines. USEC entered this condition into their corrective action program as ATRC-09-1034

Opened & Closed

07007001/2009-002-01	NCV	Failure to Verify Scale Test Data Required by the NMC&A Program Resulted in a Violation of TSR 2.3.4.23, "Scales." On March 16 USEC identified a violation (VIO) of TSR surveillance 2.3.4.23-2, "Scales," when USEC failed to verify surveillance test data prior to placing a cylinder in the withdrawal position and initiating liquid UF_6 flow (natural enrichment) from the cascade to a cylinder as required by the NMC&A program. Verification was performed and the test data met the acceptance criteria. USEC entered this condition into their corrective action program as ATRC-09-0567. The inspectors had no further questions. This item is closed.
07007001/2009-002-02	NCV	Failure to Implement a Smoke Watch when Process Gas Leak Detection System Was Declared Inoperable Resulted in a Violation of TSR 2.4.4.1, "UF_6 Release Detection System." On May 12 USEC identified a violation (VIO) of TSR 2.4.4.1, "UF_6 Release Detection System" created when USEC failed to check system pressures in the cell bypass and unit bypass lines, which were above atmospheric pressure. This failure to check system pressures led the plant shift superintendent and front line manager to incorrectly conclude that TSR 2.4.4.1 action statements did not apply because the applicability statement includes only equipment operating above atmospheric pressure. USEC entered this condition into their corrective action program as ATRC-09-1150. The inspectors had no further questions. This item is closed.

Closed

07007001/2008-004-01	CER	CER 44558: 24-Hours Bulletin 91-01 Report Involving Failure to Visually Inspect Storage Cylinders On October 9 inspectors determined that procedure CP4-CU-CH6430, "In Storage Fissile Cylinder Inspection," does not fully meet the periodic inspection requirements of Nuclear Criticality Safety Assessment Procedure GEN-003. GEN-003 requires inspection every four years of all thick-wall cylinders that have contained fissile material since they were last washed on the inside of the cylinder. Inspectors discovered that only cylinders that were filled with fissile material on their last fill were identified for inspection. However, cylinders that had once been filled with fissile material, emptied, and subsequently re-filled with non-fissile material and emptied had not been inspected as required by GEN-003. The certificate holder discovered approximately 73 cylinders to have contained fissile material since their last washing but not to have been inspected in violation of the requirement of NCSA GEN-003. These cylinders could potentially contain residual fissile "heel" material. For these cylinders, double contingency is maintained by implementing two independent controls on one parameter (moderation). The first leg of double contingency relies on the design of the cylinder to ensure moderation control.

Cylinders are designed to the requirements of ANSI N14.1 to ensure that the cylinder wall is unlikely to breach and to allow water intrusion. This control on moderation was not violated. The second leg of double contingency relies on inspections of the cylinder wall, valves, and plugs every 4 years. This inspection consists of an external visual inspection for abnormal corrosion. This control ensures that in the event of a cylinder breach, sufficient moderation to cause a criticality is unlikely to enter the cylinder before it is identified and mitigated. Since the cylinders were not inspected within the 4-year time frame as required, this control on moderation was violated. USEC entered this condition into their corrective action program as ATRC-08-2918, ATRC-08-2933, and PAD-2008-31.

The certificate holder initially determined that there were 73 cylinders which were not inspected as required. While performing an extent of condition, an additional 8 cylinders were discovered which had not been properly inspected. The additional cylinders were of a different size than those initially found but fell under the same requirement. These cylinders had also held fissile material in the past. All of the cylinders were determined to be empty except for residual "heeling." Cylinder heels are typically less than 50 pounds with assay less than 5.5% enrichment. The certificate holder inspected the affected cylinders per CP4-CU-CH6430, and all cylinders were found to comply with NCSA GEN-003. The certificate holder determined that double contingency had been re-established by performing this inspection.

Criticality safety inspectors reviewed the certificate holder's response to Reportable Event EN 44558 which concerned the failure to perform required vessel integrity inspections of 73 UF_6 cylinders. The certificate holder requires inspection every four years of cylinder wall, valve, and plug for stored cylinders that have contained enriched uranium. Initially, 73 cylinders were identified which had not been inspected as procedurally required. The inspectors reviewed corrective actions for the event. Certificate holder corrective actions consisted of: (1) lessons-learned crew briefings; (2) changes to the stored cylinder inspection procedure; and (3) changes to the intra-plant cylinder movement procedure. The inspectors noted that all corrective actions were complete. The inspectors did not identify any further concerns. This event report was closed under Inspection Report 70-7001/2009-201.

07007001/2009-001-04 CER CER 44820: Loss of Power to Criticality Accident Alarm System Horn

On January 31 power was lost to the C-409 (Stabilization Building) CAAS horns. This event occurred while activities were underway to determine the cause of a C-409 CAAS trouble alarm that had been received about two hours earlier. Plant personnel discovered that a circuit breaker had tripped causing a loss of power to the CAAS horn uninterruptible power supply (UPS). An instrument and control mechanic investigating the cause for the trouble alarm pushed the "on/standby" switch on the UPS which caused the loss of CAAS

audibility. The circuit breaker that tripped was closed, and the UPS was turned back on. This is a repeat event (see PGDP ER-02-03).

USEC entered this condition into their corrective action program as ATRC-09-0203 and ER-09-02.

The certificate holder installed warning labels next to the CAAS UPS "ON/Standby" switches, revised CAAS maintenance procedures to include a warning not to push the UPS "On/Standby" switch unless the building is under a limiting condition for operation, and trained maintenance personnel who troubleshoot the CAAS system to stay within the scope of approved work. The inspectors noted that all corrective actions were complete. The inspectors did not identify any further concerns. This item is closed.

Discussed

None