

## INSPECTION REPORT

|   |  |  |  |
|---|--|--|--|
| 1. LICENSEE OR CERTIFICATE HOLDER/LOCATION INSPECTED:<br><b>USEC Inc.</b><br><b>6903 Rockledge Drive</b><br><b>Bethesda, MD 20817</b> |  | 2. NRC/REGIONAL OFFICE:<br><b>U.S. Nuclear Regulatory Commission</b><br><b>Region II</b><br><b>61 Forsyth Street, Suite 23T85</b><br><b>Atlanta, GA 30303-8931</b> |  |
| REPORT NO:<br><b>2009-001</b>   |  |  |  |
| 3. DOCKET NUMBER:<br><b>70-7003</b>   | 4. LICENSE OR CERTIFICATE NUMBER:<br><b>SNM-7003</b> | 5. DATE(S) OF INSPECTION:<br><b>February 23– 26, 2009</b>  |  |

### 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):

- 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                              | David Hartland | /RA/      | 3/17/09 |

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| 3. DOCKET NUMBER:<br>70-7003  | 4. LICENSE OR CERTIFICATE HOLDER NUMBER:<br>SNM-7003 | 5. DATE(S) OF INSPECTION:<br>February 23-26, 2009  |  |
| 6. INSPECTOR(S): D. Hartland and D. Morey   |  |  |  |
| 7. INSPECTION PROCEDURES USED: 88015, 88016, and 88020  |  |  |  |

### EXECUTIVE SUMMARY

#### Summary of Plant Status

The United States Enrichment Corporation (USEC) Inc., Lead Cascade is a gas centrifuge test and demonstration facility that is located in existing buildings on the site of the Portsmouth Gaseous Diffusion Plant (GDP) in Piketon, Ohio. The Portsmouth GDP is operated by USEC, who leases the property from the Department of Energy. The area within Portsmouth that houses the Lead Cascade is subleased from USEC to USEC Inc. During the period of the inspection, centrifuge demonstration operations were in progress.

This was a routine, announced inspection that included observations and evaluations of the operational and nuclear criticality safety programs. The inspection involved interviews with plant personnel, review of selected records, and observation of work activities. The inspection identified the following aspects of licensee's program as outlined below:

#### Plant Operations (IP 88020)

- The inspectors reviewed several of the applicable safety-related controls from the integrated safety analysis. The inspectors noted no deficiencies in their implementation.
- Licensee personnel demonstrated adequate knowledge of process operations, safety controls, and applicable operations procedures for their areas.

#### Nuclear Criticality Safety (NCS) Program (IP 88015)

- The licensee had an NCS program which was independent from production and was implemented through written procedures. The licensee's NCS program was conducted in accordance with written administrative procedures that reflected requirements described in the license.
- The licensee relied primarily on limiting available mass for assurance of adequate subcritical margin in the Lead Cascade facility. No safety concerns were identified regarding the adequacy of the NCS program for maintaining adequate subcritical margin.

#### Plant Activities (88015)

- The licensee's NCS analyses reviewed by the inspector were adequate to assure safety. NCS engineers responsible for specific facilities or operations were knowledgeable and able to explain the basis for changes in operations and controls.

## **EXECUTIVE SUMMARY (Continued)**

- The form and quantity of available fissile material in the Lead Cascade provided adequate assurance of criticality safety. No safety concerns were identified during walkthroughs of the Lead Cascade facility and operations.

### **Nuclear Criticality Safety Evaluations and Analyses (IP 88016)**

- Within the selected aspects of documents reviewed, licensee NCS analyses were performed by qualified NCS engineers, independent reviews of the evaluations were completed by qualified NCS engineers, subcriticality of the systems and operations was assured through appropriate limits on controlled parameters, and double contingency was assured for each credible accident sequence leading to inadvertent criticality.
- NCS controls for equipment and processes assured the safety of the operations. Nuclear criticality safety analyses and supporting calculations demonstrated adequate identification and control of NCS hazards to assure operations within subcritical limits. No safety concerns were noted regarding licensee NCS evaluations.

### **Exit Meeting Summary**

- The inspection scope and results were summarized on Thursday, February 26, 2009, with members of the licensee staff. No proprietary information was identified.

### **Key Points of Contact**

| <u>Name</u> | <u>Title</u>               |
|-------------|----------------------------|
| J. Oppy     | Operations Manager         |
| C. Ladd     | Regulatory Affairs Manager |

### **List of Items Opened, Closed, Discussed**

| <u>Item Number</u> | <u>Status</u> | <u>Description</u> |
|--------------------|---------------|--------------------|
| None.              |               |                    |