

October 26, 2012

EN48022, EN47310

Mr. Robert Van Namen
Sr. Vice President - Uranium Enrichment
United States Enrichment Corporation
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: INSPECTION REPORT NO. 70-7001/2012-203

Dear Mr. Namen:

The U.S. Nuclear Regulatory Commission (NRC) conducted a routine, scheduled, and announced criticality safety inspection from September 24 - 27, 2012, at the Paducah Gaseous Diffusion Plant in Paducah, Kentucky. The purpose of the inspection was to determine whether activities authorized by your certificate involving special nuclear material were conducted safely and in accordance with regulatory requirements. An exit meeting was held on September 27, 2012, during which inspection observations were discussed with your management and staff.

The inspection, which is described in the enclosure, focused on the most hazardous activities and plant conditions; the most important controls relied on for safety and their analytical basis; and the principal management measures for ensuring controls are available and reliable to perform their functions relied on for safety. The inspection consisted of an analytical basis review, selective review of related procedures and records, examinations of relevant nuclear criticality safety (NCS)-related equipment, interviews with NCS engineers and plant personnel, and facility walkdowns to observe plant conditions and activities related to safety basis assumptions and related NCS controls. Throughout this inspection, observations were discussed with your managers and staff.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390 of NRC's "Rules of Practice," a copy of this letter and the enclosure will be available in the public electronic reading room of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning this report, please contact Timothy Sippel of my staff at (301) 492-3164, or via e-mail to Timothy.Sippel@nrc.gov.

Sincerely,

/RA M. Bailey for/

Sheena Whaley, Acting Chief
Programmatic Oversight and
Regional Support Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No. 70-7001

Enclosure:
Inspection Report No. 70-7001/2012-203

cc w/enclosure: See next page

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cc w/ enclosure:

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U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Docket No.: 70-7001

Certificate No.: GDP-01

Report No.: 70-7001/2012-203

Certificate Holder: United States Enrichment Corporation

Location: Paducah, Kentucky

Inspection Dates: September 24-27, 2012

Inspectors: Timothy Sippel, Criticality Safety Inspector, HQ
Tamara Powell, Criticality Safety Inspector, HQ
Patricia Glenn, Fuel Facility Inspector, RII

Approved by: Sheena Whaley, Acting Chief
Programmatic Oversight and
Regional Support Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Enclosure

**UNITED STATES ENRICHMENT CORPORATION
PADUCAH GASEOUS DIFFUSION PLANT**

NRC INSPECTION REPORT 70-7001/2012-203

EXECUTIVE SUMMARY

INTRODUCTION

The staff of the U.S. Nuclear Regulatory Commission (NRC) performed a routine, scheduled, and announced criticality safety inspection of the Paducah Gaseous Diffusion Plant (PGDP) in Paducah, Kentucky, from September 24-27, 2012. The inspection included an onsite review of certificate programs dealing with plant operations, the nuclear criticality safety (NCS) program, audits and inspections, and NCS-related corrective actions. The inspection focused on risk-significant fissile material processing activities, including those in Buildings C-310, C-333, C-335, C-360, C-400, and C-409.

Results

- No safety concerns were identified regarding the United States Enrichment Corporation's (certificate holder's or USEC) NCS program.
- No safety concerns were identified regarding the certificate holder's NCS walkthroughs, self-assessments, surveillances and audits.
- No safety concerns were identified regarding the certificate holder's internal event reporting, investigation, and corrective actions.
- No safety concerns were identified during walkdowns of the facility and operations.
- No safety concerns were noted regarding the certificate holder's NCS analyses and evaluations.
- No concerns were identified regarding the certificate holder's criticality accident alarm system (CAAS) coverage of fissile material operations.

REPORT DETAILS

1.0 Summary of Plant Status

USEC enriches uranium for domestic and international customers at the PGDP. In conjunction with routine enrichment activities, the certificate holder performs laboratory operations, cleaning and decontamination services, and maintenance and support activities. During the inspection, the certificate holder was performing routine enrichment and support operations.

2.0 Nuclear Criticality Safety Program (IP 88015)

a. Inspection Scope

The inspectors reviewed the certificate holder's NCS program. The inspectors evaluated the adequacy of the program to assure the safety of fissile material operations. The inspectors interviewed the certificate holder's managers, NCS engineers, system engineers, and facility operators during document review and facility walkdowns. The inspectors reviewed NCS's administrative procedures and selected NCS controls to determine whether the procedures adequately implemented the NCS program described in the certificate. The inspectors reviewed selected aspects of the following documents:

- CP2-EG-NS1031, "Nuclear Criticality Safety," Revision 10, dated June 28, 2012
- CP2-EG-NS1032, "Software Configuration Control Program for Nuclear Criticality Safety Code Systems," Revision 1, dated July 31, 2012
- CP4-EG-NS1101, "Nuclear Criticality Safety Evaluations and Approvals," Revision 10, dated March 21, 2012
- KY/S-251, "Guidelines for Nuclear Criticality Safety Evaluations at the Paducah Gaseous Diffusion Plant," dated February 24, 2009

b. Observations and Findings

The inspectors observed that the certificate holder had an NCS program which was independent from production and was implemented through written procedures. The certificate holder provides its evaluation of criticality safety in Nuclear Criticality Safety Evaluations (NCSEs), which include administrative controls and Safety Related Items (SRIs), the basis for the controls, addresses the double contingency principle, and lists potential event sequences. The Nuclear Criticality Safety Approvals (NCSAs) list the administrative controls that apply to a particular area or process.

The inspectors determined that the NCS program was conducted in accordance with written administrative procedures that reflected the program described in the certificate. The inspectors reviewed selected operating procedures, NCSEs, and NCSAs, and determined that the procedures implemented NCS controls. For example, inspectors noted that SPC-CSE-19352-52, "C-310/315 Withdrawal Position Digital Pressure Indication," Revision 3, dated October 28, 2005, included consideration of uncertainties (i.e. instrument error) when setting operational set points that implement the set points established in the NCSEs. For those administrative controls sampled, the inspectors confirmed that the NCSAs contained the same controls and control description as the applicable NCSEs.

c. Conclusions

The NCS program, as observed, was adequate for maintaining acceptable levels of safety.

3.0 Nuclear Criticality Safety Inspections, Audits and Investigations (IP 88015)

a. Inspection Scope

The inspectors reviewed records of previously completed certificate holder internal NCS walkthroughs of fissile operations in Buildings C-331, C-333, C-335, C-337, C-709, and C-710. The inspectors reviewed selected aspects of the following documents:

- 12-WS-004, "NCS Walkthrough for C-333 and C-337," dated July 27, 2012
- 12-WS-005, "NCS Walkthrough for C-331 and C-335," Revision 1, dated August 27, 2012
- 12-WS-006, "NCS Walkthrough for C-709 and C-710," dated September 11, 2012
- ATRC-12-1631A, "Missing NCS Labels," dated June 28, 2012
- CP2-EG-NS1033, "Enrichment and Exempt Waste Verification," Revision 12, dated May 25, 2011
- CP4-EG-NS1107, "Nuclear Criticality Safety Oversight Program," Revision 3, dated November 14, 2011
- NCSA CAS-024, "Seal Exhaust/Wet Air Station," Revision 2, dated July 27, 2009

b. Observations and Findings

The inspectors determined that the certificate holder's NCS engineers observed plant operations to determine adequacy of implementation of NCS requirements and ensured that implementation weaknesses were identified and entered into the corrective action system. The inspectors determined that the walkthroughs were performed in accordance with Procedure CP4-EG-NS1107, which governs the walkthroughs. The inspectors observed that the required areas, listed in Appendix A of Procedure CP4-EG-NS1107, must be walked through by NCS engineers biennially; with no more than 2 years and 6 months between walkthroughs in a required area. The inspectors noted that the walkthroughs were performed by NCS engineers who: (1) reviewed NCS issues from previous audits; (2) reviewed the adequacy of control implementation; (3) reviewed plant operations for compliance with certificate holder's requirements, procedures, and postings; and (4) examined equipment and operations to determine that past evaluations remained adequate. In addition, the inspectors noted that one of the walkthrough objectives is to "observe SRIs to identify unanalyzed changes or alterations." For those cases sampled, the inspectors noted that when the NCS engineers identified an issue, it was appropriately tracked and resolved.

For example, ATRC-12-1631A was identified during NCS walkthrough 12-WS-005. The certificate holder's NCS engineer identified that a component did not have an NCS label, and had not been exempted from NCS control. The NCS engineer exempted the component as per Procedure CP2-EG-NS1033, which the NRC inspectors reviewed to confirm that the exemption was conducted according to procedure. The corrective actions associated with that issue also included conducting a search of the area for other

such unlabeled components. According to ATRC-12-1631A, no further unlabeled components were found. The inspectors determined that this issue, which was identified during an NCS walkthrough, was entered into the certificate holder's corrective action program, tracked, and appropriately resolved.

c. Conclusions

The certificate holder's NCS walkthroughs, assessments, and surveillance were adequate for maintaining acceptable levels of safety.

4.0 Nuclear Criticality Safety Event Review and Follow-up (IP 88015)

a. Inspection Scope

The inspectors reviewed recent internally reported NCS-related events that had occurred since the last NCS inspection. The inspectors walked down the relevant areas and operations with the certificate holder's NCS engineers and plant personnel, and reviewed selected aspects of the following documents:

- ATRC-12-1447, "C-337A Surge Drum Pressure Instrumentation Isolated," dated June 6, 2012
- ATRC-12-1581, "Cold Pressure Testing," dated June 22, 2012
- ATRC-12-1950, "Continuing Training Actions," dated August 2, 2012
- ATRC-12-2173A, "Digital Pressure Indication As Found Pressure OOT," dated August 23, 2012
- ATRC-12-2221, "C-310 East and West Normetex Pump Trips," dated August 29, 2012
- ATRC-12-2275, "Missed Time Limit on NAM Shutdown," dated September 7, 2012
- ATRC-12-2356, "Procedure Issued Prior to NCSA Implementation," dated September 18, 2012
- CP2-GP-MS2033, "Operation of 1000 and 2000 CFM Negative Air Machines," Revision 14, dated May 7, 2012
- CP3-EG-EG1077, "Equivalency/Substitution Evaluation Process," Revision 0, dated July 24, 2102
- CP4-EG-NS1104, "NCS Engineer Response to Emergency, Off-Normal, and Process Upset Conditions," Revision 2, dated February 22, 2012
- CP4-CO-CN2010A, "Filling Cylinders at the C-310 Facility," Revision 13, dated May 3, 2012
- CP4-GP-BG2107, "Negative Air Machine and Fixed HEPA System Inspection, Filter Replacement, and Testing, Revision 10, dated March 2, 2011
- NCS Anomalous Condition Incident Report 12-006, Revision 0
- NCS Anomalous Condition Incident Report 12-007, Revision 0
- NCSA 310-004, "Product and Side Withdrawal in the C-310 Building," Revision 12, dated September 1, 2011
- NCSA-GEN-009, "Operation and Maintenance of Negative Air Machines," Revision 4, dated January 6, 2010
- NCSA-GEN-009, "Operation and Maintenance of Negative Air Machines," Revision 5, dated June 28, 2012

- NCSE-100, "Use and Handling of 1000 and 2000-CFM Nuclear Power Outfitters Negative Air Machines at the Paducah Gaseous Diffusion Plant, Revision 4, dated September 18, 2009
- KY/S-222, "Subcritical Dimensions for Water-Reflected UO₂F₂ and Water Systems at 5.5 Weight Percent Enrichment," dated October 25, 1993
- SPC-CSE-19352-52, "C-310/315 Withdrawal Position Digital Pressure Indication," Revision 3, dated October 28, 2005
- NCS Violation Trend Report for June 2012, dated July 6, 2012
- NCS Violation Trend Report for July 2012, dated August 16, 2012
- NCS Violation Trend Report for August 2012, dated September 11, 2012

b. Observations and Findings

Since the previous NCS inspection, the certificate holder had identified two internal events that were considered NCS incidents. NCS incidents are NCS-related events that are of greater safety significance than typical internal events and receive additional attention from the certificate holder's NCS staff. In addition, the inspectors reviewed other NCS-related internal events. For those internal events sampled, the inspectors determined that events were investigated in accordance with written procedures, tracked, and appropriate corrective actions were assigned in a timely manner.

In NCS-INC-12-006, a pressure indicator (PI-78) that NCSE 032 listed as an SRI and relied on for criticality safety was inoperable. NCSE 032 and NCSA 310-004 require a cold pressure check to be performed on cylinders before filling them. This is to detect the presence of any moderator intrusion into the cylinder. The pressure indicator was out of tolerance, such that it reported lower pressure than was actually present, and even negative values when the actual pressure was low. Due to instrument error, properly operating pressure indicators would occasionally report negative values when the reading was close to zero. Therefore, the operators were accustomed to seeing negative values and did not initially recognize that the pressure indicator (PI) was not operating correctly. In addition to fixing the PI, the certificate holder is revising the operating procedure to direct operators to cease operation and notify NCS if the PI reports negative pressures.

Operators noticed the failed indicator after two cylinders had been filled. Other pressure indication was available and being monitored as part of other safety systems; and at no time did the pressure exceed the safety limits in NCSE 032. Therefore, the certificate holder considered that double contingency had been maintained. The inspectors determined that although a control to determine the presence of moderator had been lost, the certificate holder maintained double contingency due to the presence of additional controls not credited in the criticality safety analysis.

In NCS-INC-12-007, one of the Negative Air Machines (NAMs) used for waste drum sampling exceeded the maximum allowed time between differential pressure checks for continuously running NAMs. NSCA GEN-009 requires a differential pressure check daily, not to exceed 30 hours, for continuously running NAMs; however, the shutdown differential pressure check was performed at 30 hours and 40 minutes. The purpose of the control is to detect the accumulation of uranium material in the NAM. The missed pressure check was discovered by a mechanic while reviewing daily activities. The certificate holder took immediate action by notifying NCS and tagging the equipment out

of service for investigation. Upon investigation, it was determined that the shutdown differential pressure was unchanged from the start up differential pressure and that although the control was violated, the mass parameter was maintained. The inspectors determined that although the control to conduct a daily differential pressure check was violated, mass control was maintained. The inspectors determined that this was a very low safety significant event because even if maximum loading on the filters was achieved, the physical design of the NAM would prevent material from accumulating in an unfavorable geometry, as credited by the NCSE. Therefore, the double contingency principle was maintained.

c. Conclusions

No safety concerns were identified regarding the certificate holder's internal event reporting, investigation, and correction actions.

5.0 Plant Activities (IP 88015)

a. Inspection Scope

The inspectors performed plant walkdowns to review activities in progress and to determine whether risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements. The inspectors verified the adequacy of management measures for assuring the continued availability, reliability, and capability of safety-significant controls relied upon by the certificate holder for controlling criticality risks to acceptable levels. The inspectors performed walkdowns of Buildings C-310, C-333, C-335, C-360, C-400 and C-409; including the C-310 Scales, the C-333 Surge Drum Room, and the C-360 Autoclaves.

b. Observations and Findings

The inspectors verified that controls identified in the NCS evaluations reviewed were adequate to assure safety. The inspectors questioned the certificate holder's NCS engineers and staff about selected systems, operations, and controls in the areas the inspectors walked down. The cognizant NCS engineers were knowledgeable and able to explain the controls and safety basis for operations. For those systems that had recently been changed, the NCS engineers were able to explain the basis for the change. For systems where internal events had recently occurred, the NCS engineers were able to adequately describe the operation and controls on the systems. The inspectors did not identify any safety significant differences in the description of the operations and controls provided by NCS engineers and operations personnel.

c. Conclusions

No safety concerns were identified during walkdowns of the facility and operations.

6.0 Nuclear Criticality Safety Evaluations and Analyses (IP 88016)

a. Inspection Scope

The inspectors reviewed NCS analyses to determine that criticality safety of risk-significant operations were ensured through engineered and administrative controls with

adequate safety margin, including preparation and review by qualified staff. The inspectors accompanied NCS and other technical staff on walkdowns of NCS controls in selected plant areas. The inspectors reviewed selected aspects of the following documents:

- NCSA CAS-001, "Cascade Freezer Sublimers," Revision 2, dated September 26, 2003
- NCSA CHM 001, "C-400 and C-409 Floor Drains and Containment Pans," Revision 5, dated August 23, 2012
- NCSA GEN-008, "Transport, Handling, and Storage of Fissile/Potentially Fissile Material Sample," Revision 7, dated May 22, 2012
- NCSA-GEN-013, "Operation of the Fixed High Efficiency Filter Systems in C-310 and C-360," Revision 3, dated June 28, 2012
- NCSA GEN-019, "Handling, Transport, and Storage of UF₆ Sample Tubes," Revision 3, dated April 5, 2012
- NCSA GEN-038, "Operation and Maintenance of the C-360, C-333A, and C-337A Autoclaves," Revision 9, dated July 26, 2012
- NCSE 10, "Transport, Handling, and Storage of Fissile/Potentially Fissile Material Sample," Revision 5, dated May 22, 2012
- NCSE 041, "Normetex Pumps Used for UF₆ Product Withdrawal," Revision 11, dated August 22, 2009
- NCSE 042, "Operation and Maintenance of the C-360, C-333A, and C-337A Autoclaves," Revision 11, dated July 26, 2012
- NCSE 045, "Seal Exhaust/Wet Air Stations at the Paducah GDP," Revision 8, dated July 31, 2009
- NCSE 082, "Operation and Maintenance of the Favorable Geometry Uf6/R-114 Separation System in C-335," Revision 3, dated June 27, 2008
- NCSE 085, "Operation of the C-400 Cylinder Washing, Hydrostatic Testing and Drying Facility," Revision 7, dated July 29, 2012
- NCSE 087, "Cascade Freezer Sublimers," Revision 1, dated November 11, 2004
- NCSE 100, "Use and Handling of 1000 and 2000-CFM nuclear Power Outfitters Negative Air Machines at the PGDP," Revision 5, dated June 28, 2012
- NCSE 103, "C-400 and C-409 Floor Drains and Containment Pans," Revision 4, dated August 23, 2012
- NCSE 108, "Operation of the Fixed High Efficiency Filter Systems in C-310 and C-360," Revision 3, dated June 28, 2012

b. Observations and Findings

The inspectors reviewed NCS Approvals, NCS Evaluations, and supporting calculations for selected operations; including those where the NCSE or NCSA had been changed since the last NCS inspection. Within the selected aspects reviewed, the inspectors determined that the analyses were performed by qualified NCS engineers, that independent reviews of the evaluations were completed by qualified NCS engineers, that subcriticality of the systems and operations was assured through appropriate limits on controlled parameters, and that double contingency was assured for each credible accident sequence leading to inadvertent criticality. The inspectors determined that NCS controls for equipment and processes assured the safety of the operations. The inspectors determined that NCS analyses and supporting calculations demonstrated adequate identification and control of NCS hazards to assure operations within

subcritical limits. The inspectors sampled administrative controls to confirm that the NCSAs contained the same controls and control description as the applicable NCSEs.

c. Conclusions

No safety concerns were noted regarding the certificate holder's NCS evaluations.

7.0 Criticality Alarm System (IP 88017)

a. Inspection Scope

The inspectors interviewed engineering and maintenance staff, and performed facility walkdowns to determine the adequacy of the certificate holder's criticality alarm system. The inspectors reviewed selected aspects of the following documents:

- ATRC-12-1496, "C-335 Annual CAAS Surveillance," dated June 12, 2012
- CP2-EG-EG6056, "Audibility Testing of the C-331, C-333, C-33A, C-335, C-337, and C-337A Criticality Accident Alarm System, Revision 1, Change D, dated February 8, 2010

b. Observations and Findings

The inspectors determined that the certificate holder had installed and maintained a system of criticality detectors that were capable of monitoring fissile material operations at the facility and reliably detecting the minimum accident of concern.

On June 13, 2012, the certificate holder had reported an event to the NRC (EN 48022), which was related to CAAS inoperability due to defective air regulators. This event was retracted on July 17, 2012. The inspectors reviewed the certificate holder's corrective actions and basis for retracting the event notification.

The inspectors determined that the CAAS operability had been verified by measuring the audibility in the area covered by horns with defective air regulators. The certificate holder's staff stated that these measurements were performed at the same locations as the initial measurements that had been used to demonstrate the air horn's operability when the CAAS was installed.

c. Conclusions

No safety concerns were identified regarding the certificate holder's CAAS coverage of fissile material operations.

8.0 Open Item Follow-up

VIO 70-7001/2012-202-01

Inspectors discussed the corrective actions with NCS engineers and operation personnel, walked down the system, the area control room (ACR), and reviewed aspects of the following documents:

- ATRC-11-2610, "C-310 Scale Pit for Position 5," dated September 30, 2011

- CP4-GP-IM6120, "C-310/C-315 Scale Cart Interlock System and Digital Pressure Indication Calibration," Revision 7, dated September 25, 2012

This violation was previously issued for the failure to establish double contingency in the C-310 #5 scale pit. During the initial event (EN47310 reported to the NRC on September 30, 2011), a few inches of water had been found in the #5 scale pit. The C-310 building contains three scale pits that house the instrumentation and mechanisms for weighing cylinders. The scale pit is an unfavorable geometry location where fissile material may accumulate after a release of UF₆. One leg of the certificate holder's double contingency argument is the prevention of excess water (>3.68 inches) in the scales pits. NCSE 032 credits the water detection system and alarm as an SRI to prevent the accumulation of water. In addition, a sump pump is located in the pits to remove water from the pit; but is not credited in the NCSE and is not an SRI. The sump pump in the #5 scale was wired in such a way that it posed an electrocution hazard due to the potential to expose its power supply to water. To guard against this hazard it had a Ground Fault Circuit Interrupter that would shutdown the pump in moist environments. This failure mode had previously been identified and fixed for the other two scale pits, but not for scale pit #5, because that scale pit was not in operation at the time of the fix. Prior to the discovery of water in the #5 scale pit, the sump pump had tripped and was not able to remove water from the pit.

On September 30, 2011, the local alarm indication (a warning light) was found activated, but the local audible alarm was silent. There was no alarm indication in the ACR. There were a number of problems with the way the alarm had been wired. It was difficult to distinguish between the safety-related water alarm and the non-safety weight alarm because they would both light up the same indicator in the ACR. It was possible to clear the alarm from the ACR panel by pressing the wrong button on the local alarm station; which was also used to acknowledge/mute the weight alarm. In addition, if the water alarm activated while the weight alarm was active, it would not 'lock in' in the ACR panel. So there would be no way for the ACR operators to tell that the safety-related alarm had activated.

The certificate holder has completed a number of corrective actions:

- The scale #5 sump pump was rewired to power the pump without the need for a Ground Fault Circuit Interrupter; thus, removing that failure mode and increasing the overall reliability of the system.
- The alarms were modified to separate the safety-related alarm from the non-safety alarm; and to prevent one alarm from blocking the other.
- This alarm system was fixed so that the ACR alarm board could not be cleared by the pressing the wrong button on the local alarm panel.
- Revised procedures and training were developed; and will be implemented.

Therefore, **VIO 70-7001/2012-202-01** is closed.

9.0 Exit Meeting

The inspectors communicated the inspection scope and results to members of PDGP's management and staff throughout the inspection and during an exit meeting on September 27, 2012. PGDP's management and staff acknowledged and understood the findings as presented.

SUPPLEMENTARY INFORMATION

1.0 Items Opened, Closed, and Discussed

Items Opened

None

Items Closed

VIO 70-7001/2012-202-01 Failure to demonstrate that the double contingency principle was maintained for the C-310 scale pit.

2.0 Event Notices Reviewed

EN 48022 **Closed** Criticality Air Horns not tested for audibility

EN 47310 **Closed** C-310 Scale Pit Water Detection Alarm.

3.0 Inspection Procedures Used

IP 88015 Nuclear Criticality Safety Program
IP 88016 Nuclear Criticality Safety Evaluations and Analyses
IP 88017 Criticality Alarm Systems

4.0 Partial List of Persons Contacted

USEC

M. Boren	Nuclear Regulatory Affairs
M. Buckner	Plant Manager
B. Chenier	Engineer, NCS
S. Gunn	Manager, Operations
T. Henson	Manager, Nuclear Criticality Safety
J. Lewis	General Manager
J. Nelson	Engineer, NCS
V. Shanks	Manager, Nuclear Regulatory Affairs
D. Stadler	Lead Regulatory Engineer, Regulatory Affairs

NRC

Timothy Sippel	Criticality Safety Inspector, Headquarters
Tamara Powell	Criticality Safety Inspector, Headquarters
Patricia Glenn	Fuel Facility Inspector, Region II
Regina Russell	Resident Inspector, Region II

All attended the exit meeting on September 27, 2012.

5.0 List of Acronyms and Abbreviations

ACR	area control room
ADAMS	Agencywide Documents Access and Management System
CAAS	criticality accident alarm system
CFR	<i>Code of Federal Regulations</i>
EN	Event Notice
IP	inspection procedure
NAM	Negative Air Machine
NCS	nuclear criticality safety
NCSA	nuclear criticality safety approval
NCSE	nuclear criticality safety evaluation
OOT	out of tolerance
PGDP	Paducah Gaseous Diffusion Plant
PI	pressure indicator
SRI	Safety Related Item
UF ₆	uranium hexafluoride
USEC	U. S. Enrichment Corporation (certificate holder)
VIO	violation