

December 7, 2006

EA-05-236

Mr. Steven A. Toelle, Director  
Nuclear Regulatory Affairs  
United States Enrichment Corporation  
Two Democracy Center  
6903 Rockledge Drive  
Bethesda, MD 20817-1818

SUBJECT: NRC INSPECTION REPORT NO. 99902011/2001-201 (10/25/2001)  
AND NRC INVESTIGATION REPORT NOS. 3-2001-024 (09/30/2002) AND  
3-2001-024S (12/16/2005)

Dear Mr. Toelle:

This letter is in reference to the investigation completed on December 16, 2005, by the U.S. Nuclear Regulatory Commission (NRC) Office of Investigations (OI), at Hunt Valve Company's (Hunt) facility located in Salem, Ohio. The investigation was initiated, in part, to determine whether the U.S. Enrichment Corporation (USEC) willfully violated 10 CFR 76.93, "Quality Assurance," which required USEC to provide oversight to assure that Hunt's quality assurance (QA) program was in compliance with American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA)-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," as required by USEC Purchase Order No. 566948. This purchase order was for Hunt's manufacture of uranium hexafluoride (UF<sub>6</sub>) cylinder valves which Hunt provided to USEC.

Based on evidence developed in the OI investigation (factual summary enclosed), the NRC did not substantiate the allegation that USEC willfully violated NRC requirements. However, the NRC concluded that as a result of the deliberate actions of Hunt's former Quality Manager and Hunt's former Vice President and General Manager, Military Division, Hunt deliberately caused USEC to violate its NRC certificate and to violate 10 CFR 76.93, "Quality Assurance." In addition, as a result of the actions of Hunt's former Quality Manager and Hunt's former Vice President and General Manager, Military Division, Hunt deliberately provided materially inaccurate information to USEC regarding compliance of basic safety components with applicable QA requirements and USEC technical requirements imposed by USEC Purchase Order No. 566948. As a result of these violations, Hunt ultimately delivered UF<sub>6</sub> cylinder valves that were not properly QA tested to a USEC facility (Paducah). (The Notice of Violation to Hunt (EA-05-233) is enclosed.) After considering the information developed during the investigation, the NRC has concluded that enforcement action against USEC is not warranted in this case because USEC (1) did not willfully violate NRC procedures (i.e., the violations resulted from the deliberate actions of former vendor officials), (2) identified deficiencies in the implementation of

Hunt's QA program during July 2001 and implemented corrective actions, and (3) is no longer utilizing Hunt as a vendor. However, during future inspections at USEC, the NRC plans to (1) review USEC's QA program, (2) review USEC's oversight of vendor QA programs, (3) determine the effectiveness of USEC's corrective actions, and (4) determine whether USEC had prior opportunities to identify the deficiencies at Hunt.

You are not required to respond to this letter. However, should you choose to respond, your response should be sent to the U.S. Nuclear Regulatory Commission, Mail Stop T-8A23, Washington, DC 20555-0001, ATTN: Director, Office of Nuclear Material Safety and Safeguards, and marked "Open by Addressee Only," within 30 days of the date of this letter. A copy of any response should also be sent to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. You may contact Mr. Yawar Faraz of my staff if you have any questions. Mr. Faraz can be reached at (301)415-8113.

In accordance with 10 CFR 2.390 of the NRC's Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to submit one, will be made available for public inspection from the NRC Public Document Room or electronically from the Publicly Available Records component of NRC's Agencywide Document Access and Management System (ADAMS) accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. The NRC also includes significant enforcement actions on its Web site at [www.nrc.gov](http://www.nrc.gov); select **What We Do, Enforcement**, then **Significant Enforcement Actions**.

Sincerely,

**/RA/**

Jack R. Strosnider, Director  
Office of Nuclear Material Safety  
and Safeguards

Enclosures:

1. Factual Summary of Investigation
2. Notice of Violation to Hunt Vale Company (EA-05-233)

Hunt's QA program during July 2001 and implemented corrective actions, and (3) is no longer utilizing Hunt as a vendor. However, during future inspections at USEC, the NRC plans to (1) review USEC's QA program, (2) review USEC's oversight of vendor QA programs, (3) determine the effectiveness of USEC's corrective actions, and (4) determine whether USEC had prior opportunities to identify the deficiencies at Hunt.

You are not required to respond to this letter. However, should you choose to respond, your response should be sent to the U.S. Nuclear Regulatory Commission, Mail Stop T-8A23, Washington, DC 20555-0001, ATTN: Director, Office of Nuclear Material Safety and Safeguards, and marked "Open by Addressee Only," within 30 days of the date of this letter. You may contact Mr. Yawar Faraz of my staff if you have any questions. Mr. Faraz can be reached at (301)415-8113.

In accordance with 10 CFR 2.390 of the NRC's Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to submit one, will be made available for public inspection from the NRC Public Document Room or electronically from the Publicly Available Records component of NRC's Agencywide Document Access and Management System (ADAMS) accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. The NRC also includes significant enforcement actions on its Web site at [www.nrc.gov](http://www.nrc.gov); select **What We Do, Enforcement**, then **Significant Enforcement Actions**.

Sincerely,

/RA/

Jack R. Strosnider, Director  
Office of Nuclear Material Safety  
and Safeguards

Enclosures:

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2. Factual Summary of Investigation

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## NOTICE OF VIOLATION

Hunt Valve Company, Inc.  
Salem, Ohio

EA-05-233

During a U.S. Nuclear Regulatory Commission (NRC) investigation conducted from June 22, 2001, through December 16, 2006, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," the violations are listed below:

- A. 10 CFR 76.60(e) provides, in part, that the Corporation shall comply with the applicable provisions of 10 CFR Part 21, "Reporting of Defects and Noncompliance," with the following modifications: (1) the Corporation shall comply with the requirements in § 21.21 and (2) under § 21.31, procurement documents issued by the Corporation must specify that the provisions of 10 CFR Part 21 apply.

U.S. Enrichment Corporation (USEC) Purchase Order No. 566948, dated December 13, 1999, to Hunt Valve Company for UF<sub>6</sub> cylinder valves provides that 10 CFR Part 21 applies to the purchase order.

10 CFR 21.21(b) provides that if the deviation or failure to comply is discovered by a supplier of basic components, or services associated with basic components, and the supplier determines that it does not have the capability to perform the evaluation to determine if a defect exists, then the supplier must inform the purchaser or affected licensees within 5 working days of this determination so that the purchaser or affected licensees may evaluate the deviation or failure to comply pursuant to 10 CFR 21.21(a).

USEC Purchase Order No. 566948, dated December 13, 1999, provides that the Contractor [Hunt Valve Company] shall comply with 10 CFR Part 21.

1. Contrary to the above, on September 3, 2001, Hunt Valve Company, after discovering a deviation or failure to comply and determining that it did not have the capability to perform an evaluation to determine if a defect exists, did not inform the purchaser or affected licensee within 5 working days of this determination. Specifically, the Vice President and General Manager, Military Division, received information on August 27, 2001, that Hunt Valve Company did not have the capability to evaluate 29 reworked UF<sub>6</sub> valve stems to determine if the stems were cracked and constituted a substantial safety hazard. The 29 reworked stems were made from the same bar stock which was used to machine 18 cracked valve stems, as documented in IRR 13061, and were shipped to USEC. Hunt Valve Company never notified USEC of the potential defect.
2. Contrary to the above, on July 16, 2001, Hunt Valve Company, after discovering a deviation or failure to comply and determining that it did not have the capability to perform an evaluation to determine if a defect exists, did not inform the purchaser or affected licensee within 5 working days of this determination. Specifically, the Vice President and General Manager, Military Division, received information on July 9, 2001, that Hunt Valve Company had delivered UF<sub>6</sub> valves to USEC with cracked packing nuts

Enclosure 1

and knew that Hunt did not have the capability to evaluate whether the cracked packing nuts constituted a substantial safety hazard. The Vice President and General Manager, Military Division, did not inform USEC of the potential defect until October 3, 2001.

- B. 10 CFR 76.60(e) provides, in part, that the Corporation shall comply with the applicable provisions of 10 CFR Part 21, "Reporting of Defects and Noncompliance," with the following modifications: (1) the Corporation shall comply with the requirements in § 21.21 and (2) under § 21.31, procurement documents issued by the Corporation must specify that the provisions of 10 CFR Part 21 apply.

USEC Purchase Order No. 566948, dated December 13, 1999, to Hunt Valve Company for UF<sub>6</sub> cylinder valves provides that 10 CFR Part 21 applies to the purchase order.

10 CFR 21.21(d)(1) provides, in part, that a director or responsible officer subject to the regulations of this part must notify the Commission when he or she obtains information reasonably indicating a failure to comply or a defect affecting a basic component subject to the licensing requirement of Part 50 of this chapter.

10 CFR 21.21(d)(3) provides, in part, that initial notification must be made to NRC Operations Center within 2 days following receipt of information by the director or responsible corporate officer on the identification of a defect or failure to comply, and that written notification must be made to NRC within 30 days following receipt of information by the director or responsible corporate officer on the identification of a defect or failure to comply.

USEC Purchase Order No. 566948, dated December 13, 1999, provides that the Contractor [Hunt Valve Company] shall comply with 10 CFR Part 21.

1. Contrary to the above, on August 29, 2001, and September 26, 2001, after obtaining information reasonably indicating a failure to comply or a defect, Hunt Valve Company failed to notify the NRC Operations Center and the Commission. Specifically the Vice President and General Manager, Military Division, received information on August 27, 2001, that Hunt Valve Company did not have the capability to evaluate 29 reworked UF<sub>6</sub> valve stems to determine if the stems were also cracked and constituted a substantial safety hazard. The 29 reworked stems were made from the same bar stock which was used to machine 18 cracked valve stems, as documented in IRR 13061, and were shipped to USEC. Hunt Valve Company did not notify the NRC Operations Center and did not submit a written notification to NRC.
2. Contrary to the above, on July 11, 2001, and August 8, 2001, after obtaining information reasonably indicating a failure to comply or a defect, Hunt Valve Company failed to notify the NRC Operations Center and the Commission. Specifically the Vice President and General Manager, Military Division, received information on July 9, 2001, that Hunt Valve Company had installed cracked packing nuts on UF<sub>6</sub> valves and delivered the valves to USEC. At least 4,700 cracked packing nuts were installed on UF<sub>6</sub> valves which were then delivered to USEC. Hunt Valve Company did not notify the NRC Operations Center or submit a written notification to NRC.

- C. 10 CFR 76.93 provides, in part, that the Corporation shall establish, maintain, and execute a quality assurance program satisfying each applicable requirement of American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA)-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," or satisfying acceptable alternatives to the applicable requirements.

USEC Quality Assurance Program-Gaseous Diffusion Plants, Section 2.4.1, provides that the USEC procurement document control system is in accord with ASME NQA-1, and ensures that applicable technical requirements are included or referenced in procurement documents for the procurement of items and services.

USEC Purchase Order No. 566948, dated December 13, 1999, requires the Contractor [Hunt Valve Company] to maintain a quality program in compliance with ASME NQA-1, 1989, and imposes USEC Technical Specification No. JSP-532 on the Contractor.

USEC Technical Specification No. JSP-532, Revision 18, Appendix, requires documentation for the performance of Hardness Tests, HT-1.

10 CFR 76.10, states in part:

- (a) The Corporation or any employee of the Corporation and any contractor (including a supplier or consultant), subcontractor, or any employee of a contractor or subcontractor, who knowingly provides to the Corporation, or any contractor or subcontractor, components, equipment, materials, or other goods or services, that relate to the Corporation's activities subject to this part; may not:
  - (1) Engage in deliberate misconduct that causes or, but for detection, would have caused, the Corporation to be in violation of any rule, regulation, or order, or any term, condition, or limitation of a certificate or approval issued by the Commission; or
  - (2) Deliberately submit to the NRC, the Corporation, or its contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC ...
- (c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows: ... (2) constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of the Corporation, contractor, or subcontractor.

Contrary to the above, between July 25, 2000, and April 25, 2001, Hunt Valve Company engaged in deliberate misconduct by causing the Corporation [USEC] to violate 10 CFR 76.93. Specifically, the former Quality Manager knowingly permitted the failure to perform hardness testing of all UF<sub>6</sub> valve stems. Hunt Valve Company Forms 232, dated July 25, 2000, and April 18, 2001, state that all stems were hardness tested, but hardness testing machine printouts demonstrate that only some stems were tested. In addition, eight Hunt Valve Company Forms 232, dated March 5, 6, 7, and 22, 2001, and April 25, 2001, state that all UF<sub>6</sub> valve stems were hardness tested, but no hardness testing machine printouts indicate that any of the stems were in fact tested.

- D. USEC Safety Analysis Report, Appendix A, Section 1.0, adopts ANSI N-14.1, 1990 Edition, as a requirement.

USEC Purchase Order No. 566948, dated December 13, 1999, requires the Contractor [Hunt Valve Company] to manufacture in accordance with and to comply with Specification Data Sheet No. DS-CMS-16289-114, Revision 5, Q ITEM. Specification Data Sheet No. DS-CMS-16289-114, Revision 5, Q ITEM, specifies the design requirements for 1-inch UF<sub>6</sub> cylinder valves per ANSI N-14.1, 1990 Edition.

ANSI N-14.1, 1990 Edition, Section 6.15.2, specifies that packing nuts shall be stress relieved after finish machining.

10 CFR 76.10, provides in part:

- (a) The Corporation or any employee of the Corporation and any contractor (including a supplier or consultant), subcontractor, or any employee of a contractor or subcontractor, who knowingly provides to the Corporation, or any contractor or subcontractor, components, equipment, materials, or other goods or services, that relate to the Corporation's activities subject to this part, may not:
- (1) Engage in deliberate misconduct that causes or, but for detection, would have caused, the Corporation to be in violation of any rule, regulation, or order, or any term, condition, or limitation of a certificate or approval issued by the Commission; or
  - (2) Deliberately submit to the NRC, the Corporation, or its contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC ...
- (c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows: ... (2) constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of the Corporation, contractor, or subcontractor.
1. Contrary to the above, between February 7, 2000, and July 20, 2000, Hunt Valve Company engaged in deliberate misconduct by causing the Corporation [USEC] to violate its NRC Certificate. Specifically, the former Quality Manager and former Vice President and General Manager, Military Division, Hunt Valve Company, knowingly authorized and directed Hunt Valve Company employees to cold-work more than 2,000 oversized packing nuts without stress relieving them afterwards as required by ANSI N-14.1, and knowingly supplied cold-worked packing nuts in UF<sub>6</sub> valves to USEC contrary to the specifications of USEC Purchase Order No. 566948.
  2. Contrary to the above, on February 7, 2000, Hunt Valve Company engaged in deliberate misconduct by submitting information that it knew to be materially inaccurate to the Corporation [USEC]. Specifically, the former Quality Manager submitted Certificates of Conformance to USEC representing that the UF<sub>6</sub> valves fully complied with all contract specifications and requirements. In fact, Hunt Valve Company had cold-worked more than 2,000 oversized packing nuts without stress relieving them afterwards as required

by ANSI N-14.1. This information is material to NRC because it indicates whether a basic safety component complied with applicable USEC technical requirements.

- E. 10 CFR 76.93 states in part that the Corporation shall establish, maintain, and execute a quality assurance program satisfying each of the applicable requirements of ASME NQA-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," or satisfying acceptable alternatives to the applicable requirements.

ASME NQA-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," Supplement 2S-2, Section 2.1, provides that SNT-TC-1A shall apply as a requirement to NDE personnel.

USEC Purchase Order No. 566948, dated December 13, 1999, states in part that:

The Contractor [Hunt Valve Company] shall maintain a quality program acceptable to the Corporation [USEC] in accordance with the quality requirements set forth in this Contract, that the quality program shall comply with, or be equivalent to, NQA-1, 1989 ... Component Description/design requirements specify USEC Specification No. JSP-532, Revision 17, "ONE-INCH ANGLE DRUM VALVE FOR URANIUM HEXAFLUORIDE SERVICE" ... Dye penetrant and ultrasonic inspections shall be performed by inspectors certified to SNT-TC-1A, 1980 Edition, and only personnel certified to Level II or Level III SNT-TC-1A, 1980 Edition, shall interpret test results to determine acceptability.

USEC Technical Specification No. JSP-532 states in part that the seller shall prepare and utilize written quality control procedures for manufacturing, cleaning, assembly, testing, and inspection to assure that the finished product meets the requirements of this specification and NQA-1, 1989 Edition; that both the dye penetrant and ultrasonic inspections shall be performed by inspectors certified to SNT-TC-1A, 1980 Edition; and that only personnel certified to Level II or Level III SNT-TC-1A, 1980 Edition, shall interpret test results to determine acceptability.

Hunt AIT-1, "Assembly, Inspection, and Testing [1-Inch] Angle Drum Valve (UF<sub>6</sub>) with Personnel Training Supplement," provides in part that the purpose of the procedure is to establish the minimum requirements for inspection of component parts prior to assembly, testing of valves, and final inspection of valves in accordance with the customer's Technical Specification No. JSP-532. Section 1.2 provides that all personnel involved with the testing and inspection of UF<sub>6</sub> product shall receive the training detailed in the supplement to the procedure. The supplement provides in Sections 5.2 (1997) and 6.2 (2001) that personnel shall not inspect or test UF<sub>6</sub> product until they have been instructed in the requirements of this supplement, and provides in Sections 5.5 (1997) and 6.5 (2001) that a listing of personnel who have received this training shall be posted in the inspection and testing area.

10 CFR 76.10 states in part:

- (a) The Corporation or any employee of the Corporation and any contractor (including a supplier or consultant), subcontractor, or any employee of a contractor or subcontractor, who knowingly provides to the Corporation, or any contractor or

subcontractor, components, equipment, materials, or other goods or services, that relate to the Corporation's activities subject to this part, may not:

(1) Engage in deliberate misconduct that causes or, but for detection, would have caused, the Corporation to be in violation of any rule, regulation, or order, or any term, condition, or limitation of a certificate or approval issued by the Commission; or

(2) Deliberately submit to the NRC, the Corporation, or its contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC ...

(c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows: ... (2) constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of the Corporation, contractor, or subcontractor.

1. Contrary to the above, from 1999 to October 2001, Hunt Valve Company engaged in deliberate misconduct by causing the Corporation [USEC] to violate 10 CFR 76.93 and by violating USEC Purchase Order No. 566948. Specifically, the former Quality Manager and several foremen knowingly directed and allowed personnel who had not been trained and instructed to test or inspect UF<sub>6</sub> products and components, and who were not listed as qualified to test or inspect UF<sub>6</sub> products and components, to test and inspect UF<sub>6</sub> products and components.
  2. Contrary to the above, between 1999 and February 2000, Hunt Valve Company engaged in deliberate misconduct by submitting information it knew to be materially inaccurate to the Corporation [USEC]. Specifically, the former Quality Manager submitted Certificates of Conformance to USEC, stating that all items complied with all requirements of USEC Purchase Order No. 566948. In fact, UF<sub>6</sub> valves had been tested and inspected by personnel who were not trained or instructed to test or inspect UF<sub>6</sub> products and components, and who were not listed as qualified to test or inspect UF<sub>6</sub> valves and components. This information is material to NRC because it indicates whether a basic safety component complied with applicable quality assurance requirements.
- F. 10 CFR 76.93 states in part that the Corporation shall establish, maintain, and execute a quality assurance program satisfying each of the applicable requirements of ASME NQA-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," or satisfying acceptable alternatives to the applicable requirements.

USEC Purchase Order No. 566948, dated December 13, 1999, states in part:

The Contractor [Hunt Valve Company] shall maintain a quality program acceptable to the Corporation [USEC] in accordance with the quality requirements set forth in this Contract ... The quality program shall comply with, or be equivalent to NQA-1, 1989, to the extent specified elsewhere in this Contract. The Contractor shall extend the quality program requirements to all subcontractors ... Component Description/design requirements include: CYLINDER VALVE, UF/6, 1-INCH SIZE, PER ANSI N-14.1, 1990

Edition, "Uranium Hexafluoride Packaging for Transport," Drawing #E-J-11246, and USEC Specification No. JSP-532, Revision 17, "ONE-INCH ANGLE DRUM VALVE FOR URANIUM HEXAFLUORIDE SERVICE."

ASME NQA-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," states that management of those organizations implementing the quality assurance program, or portions thereof, shall regularly assess the adequacy of that part of the program for which they are responsible and shall assure its effective implementation.

Hunt "Procedure for Internal and Vendor Auditing with Requirements of Auditing Personnel," QC-21, Revision R ( April 1998), states:

Section A3.1.1.A: An Internal Audit Schedule shall be prepared each year by the Quality Department. The audit schedule shall have each area listed below scheduled for a quality systems audit at least once in that year.

Section A4.1.1: The Quality Manager or his designee will conduct audits/surveys of vendor facilities ...

Section A4.1.4: Suppliers shall be subject to a performance review annually ...

10 CFR 76.10 states in part:

(a) The Corporation or any employee of the Corporation and any contractor (including a supplier or consultant), subcontractor, or any employee of a contractor or subcontractor, who knowingly provides to the Corporation, or any contractor or subcontractor, components, equipment, materials, or other goods or services, that relate to the Corporation's activities subject to this part, may not:

(1) Engage in deliberate misconduct that causes or, but for detection, would have caused, the Corporation to be in violation of any rule, regulation, or order, or any term, condition, or limitation of a certificate or approval issued by the Commission; or

(2) Deliberately submit to the NRC, the Corporation, or its contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC ...

(c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows: ... (2) constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of the Corporation, contractor, or subcontractor.

1. Contrary to the above, between 1997 and December 31, 2001, Hunt Valve Company engaged in deliberate misconduct by causing the Corporation [USEC] to violate 10 CFR 76.93. Specifically, the former Quality Manager knowingly did not perform or complete annual internal audits and annual external vendor audits.

2. Contrary to the above, in December 2000, Hunt Valve Company engaged in deliberate misconduct by submitting information that it knew to be materially inaccurate to the Corporation [USEC]. Specifically, the former Quality Manager signed internal and/or external vendor audits as having been completed, when in fact they had not been performed or completed, and provided those documents to USEC for inspection during an audit of Hunt Valve Company. This information is material to NRC because it documented whether a basic safety component complied with applicable quality assurance requirements.

These violations are a Severity Level III problem (Supplements VI and VII).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 and 10 CFR 76.70(d) if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-05-233" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Director, Fuel Cycle Safety and Safeguards Division, a copy to the Director, Office of Enforcement, and a copy to the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from NRC's Agency-wide Documents Access Management System (ADAMS) accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within 2 working days.

Dated this 7th day of December 2006



## FACTUAL SUMMARY OF INVESTIGATION NOS. 3-2001-024 AND 3-2001-024S

This investigation was initiated on June 22, 2001, by the U.S. Nuclear Regulatory Commission, Office of Investigations (OI), Region III, to determine whether the management at the Hunt Valve Company, Inc. (Hunt), a nuclear materials vendor, deliberately violated quality assurance (QA) requirements for the manufacture of uranium hexafluoride (UF<sub>6</sub>) cylinder valves and the NRC regulations requiring Hunt to notify the NRC and U.S. Enrichment Corporation's (USEC) of deviations and failures to comply. The UF<sub>6</sub> valves were manufactured by Hunt to specifications for USEC's gaseous diffusion plants located in Portsmouth, Ohio, and Paducah, Kentucky.

OI Case No. 3-2001-024 substantiated three of ten allegations. OI substantiated that Hunt's former Quality Manager deliberately violated Hunt's QA requirements by (1) authorizing and allowing unqualified personnel to perform non-destructive testing (NDT) on UF<sub>6</sub> packing nuts and allowing untrained and uncertified personnel to perform work on UF<sub>6</sub> products and components (Allegation 6), (2) directing employees to violate Hunt and Military Standard-271 procedures by shortening penetration dwell times from the minimum required 25 minutes to 5 minutes when performing NDT on UF<sub>6</sub> packing nuts (Allegation 7), and (3) falsifying and/or failing to conduct both internal and external vendor audits as required (Allegation 9).

OI Case No. 3-2001-024S substantiated five of the remaining seven allegations not addressed in OI Case No. 3-2001-024. OI substantiated that (1) Hunt's former Quality Manager deliberately falsified UF<sub>6</sub> certification packages relative to the loss of traceability for UF<sub>6</sub> valve stems (Allegation 1); (2) Hunt's former Quality Manager and former Vice President, Military Division, deliberately failed to submit 10 CFR Part 21 notification concerning cracked UF<sub>6</sub> valve stems (Allegation 2); (3) Hunt's former Vice President, Military Division, deliberately failed to submit a 10 CFR Part 21 notification on six additional cracked UF<sub>6</sub> packing nut heat codes (Allegation 8); (4) Hunt's former Quality Manager deliberately failed to submit complete and accurate information to USEC by failing to properly certify hardness testing (Allegation 3), and (5) Hunt's former Quality Manager and former Vice President, Military Division, deliberately failed to provide UF<sub>6</sub> packing nuts to contract specifications (Allegation 5).

OI did not substantiate that (1) Hunt willfully failed to repair and/or calibrate the hardness tester used in manufacturing UF<sub>6</sub> valves (Allegation 4) or that (2) USEC willfully failed to provide oversight to assure that Hunt's QA program was in compliance with American Society of Mechanical Engineers Nuclear Quality Assurance-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities," as required by USEC Purchase Order No. 566948 and 10 CFR 76.93 (Allegation 10).