

December 7, 2006

EA-05-233

Mr. Gerald Bogner, President and CEO  
Hunt Valve Company, Inc.  
1913 E. State Street  
Salem, OH 44460

SUBJECT: NOTICE OF VIOLATION (NRC Investigation Report Number Nos. 3-2001-024  
and 3-2001-024S)

Dear Mr. Bogner:

This letter is in reference to an investigation completed on December 16, 2005, by the U.S. Nuclear Regulatory Commission (NRC) Office of Investigations (OI) at the Hunt Valve Company (Hunt) facility in Salem, Ohio. The investigation was intended to determine whether Hunt engaged in deliberate misconduct with respect to applicable quality assurance (QA) requirements and whether Hunt deliberately failed to provide notifications required by 10 CFR 21.21, "Notification of the Failure to Comply or Existence of a Defect and its Evaluation," with regard to the manufacture and distribution of uranium hexafluoride (UF<sub>6</sub>) cylinder valves and components procured by U.S. Enrichment Corporation (USEC). OI substantiated that Hunt deliberately violated 10 CFR 21.21 and applicable QA requirements. (A factual summary of the OI investigation is enclosed.) 10 CFR 76.10, "Deliberate Misconduct," prohibits employees of contractors to USEC from deliberately causing the contractor or USEC to violate NRC requirements or the procedures, instructions, contracts, purchase orders, and policies of USEC or the contractor. 10 CFR 76.10 also prohibits employees of contractors to USEC from deliberately submitting materially inaccurate information to NRC, USEC, or the contractor.

As a result of actions in this regard, the Assistant U.S. Attorney, Northern District of Ohio, requested (on June 7, 2002) that any NRC enforcement action be held in abeyance until a determination was made concerning criminal prosecution. Your former Quality Manager was subsequently charged on June 21, 2004, with one count of conspiracy to defraud the U.S. government and wrongfully obtaining money by providing the government with materially false documents and nonconforming valves intended for numerous uses by the U.S. Navy on submarines and surface ships and by the U.S. Department of Energy<sup>1</sup> on containers that transport and store radioactive materials. On July 15, 2004, the individual pled guilty; and on June 2, 2005, the individual was sentenced to incarceration for 33 months followed by 3 years of supervised release. The individual was also ordered to pay over \$4,000,000 in restitution. Your former Vice President and General Manager, Military Division, was charged with the same

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<sup>1</sup> The nonconforming valves intended for use by the U.S. Department of Energy were provided to USEC for use on UF<sub>6</sub> cylinders.

conspiracy count on February 16, 2005, and the individual pled guilty on April 6, 2005. On January 17, 2006, your former Vice President and General Manager, Military Division, was sentenced to incarceration for 24 months followed by 3 years of supervised release. This individual was also ordered to pay, jointly and severally, over \$4,000,000 in restitution. In addition, on February 22, 2006, the Department of Justice (DOJ) settled a civil suit against Hunt (based on the same misconduct underlying the criminal actions against the former Quality Manager and former Vice President and General Manager, Military Division) by negotiating a monetary penalty of over \$600,000.

Based on information developed during the OI investigation, the NRC has determined that six violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding them are described in the enclosed factual summary of the OI investigation. Specifically, there were two deliberate violations by Hunt's former Vice President and General Manager, Military Division, in failing to make notifications required by 10 CFR Part 21 to USEC and to the NRC regarding reworked valve stems and cracked packing nuts for UF<sub>6</sub> valves which were supplied to USEC (violations A and B). Through the deliberate actions of the former Quality Manager and in violation of 10 CFR 76.10, "Deliberate Misconduct," Hunt also (1) failed to perform hardness testing of all UF<sub>6</sub> valve stems (violation C), (2) directed and allowed personnel who had not been trained and instructed to test or inspect UF<sub>6</sub> products and component to do so (violation E), and (3) failed to perform or complete annual internal audits and annual external vendor audits and represented to USEC that internal and/or external vendor audits had been performed (violation F). Additionally, through the conduct of the former Quality Manager and the former Vice President and General Manager, Military Division, Hunt engaged in deliberate misconduct by cold-working more than 2,000 over-sized packing nuts without stress relieving them afterward and representing to USEC that Hunt had complied with all contract specifications and requirements (violation D).

The actions of the former Vice President and General Manager, Military Division, constitute deliberate violations by Hunt of 10 CFR 21.21, "Notification of the Failure to Comply or Existence of a Defect and its Evaluation." Additionally, as a result of the Quality Manager's actions and the Vice President and General Manager's actions, Hunt engaged in deliberate misconduct by causing USEC to violate its NRC certificate and to violate 10 CFR 76.93, "Quality Assurance," which required USEC to establish, maintain, and execute a QA program that satisfied each of the applicable requirements of American Society of Mechanical Engineers Nuclear Quality Assurance-1, 1989, "Quality Assurance Program Requirements for Nuclear Facilities." Finally, as a result of the actions of the former Quality Manager and the former Vice President and General Manager, Military Division, Hunt engaged in deliberate misconduct by providing 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).

In determining the significance of violations involving willfulness, Section IV.A.4 of the NRC Enforcement Policy (which is included on the NRC's Web site at [www.nrc.gov](http://www.nrc.gov); select **What We Do, Enforcement**, then **Enforcement Policy**) states in part that consideration is given to such factors as the position and responsibilities of the individuals involved in the violations (i.e., licensee official or non-supervisory employee), the significance of any underlying violation,

the intent of the violation (i.e., careless disregard or deliberateness), and economic gain or other advantage gained as a result of the violations. In this case, there were no actual or potential safety consequences. However, it was fortuitous that there were no safety consequences because both individuals involved took deliberate actions to defeat your QA program. In addition, both individuals were vendor officials and had economic gain or other advantage gained as a result of the violations. Therefore, these violations have been categorized collectively in accordance with the NRC Enforcement Policy as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$30,000 would be considered for a Severity Level III problem. Because the violation was willful, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. *Identification* credit is not warranted, but credit for corrective actions is warranted because you are no longer engaged in nuclear vendor activities. In order to discourage willful violations and encourage the prompt identification and comprehensive correction of violations, this would normally result in a base civil penalty of \$30,000. However, DOJ settled a civil suit against you by negotiating a sizeable monetary penalty of over \$600,000, and this DOJ sanction significantly exceeds the range of civil penalties the NRC would consider for this specific case. Therefore, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, if you opt to re-engage in nuclear vendor activities, significant violations in the future could result in a civil penalty. In addition, issuance of a Severity Level III problem constitutes escalated enforcement action that may subject you to increased inspection effort if you opt to re-engage in nuclear vendor activities.

The NRC has concluded that information regarding the reason for these 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 in this letter and its enclosures. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice. In addition, you are requested to notify the NRC prior to conducting any nuclear vendor activities.

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 provide one) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agency-wide Documents 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

Hunt Valve Company, Inc.

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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. Notice of Violation
2. Factual Summary of Investigation

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Sincerely,

**/RA/**

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

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2. Factual Summary of Investigation

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<b>OFFICE</b>	SPB	FCSS	NMSS	OI	OGC
<b>NAME</b>	JGiitter	RPierson	JStrosnider (for concurrence)	MFahey	GLongo
<b>DATE</b>	11/30/06	12/01/06	12/04/06	12 / 06 /06	12 / 07 /06
<b>OFFICE</b>	OE	OE	OE	OE	NMSS
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<b>DATE</b>	12 / 06 /06	12 / 07 /06	12 / 07 /06	12 / 07 /06	12 / 07 /06

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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 and knew that Hunt did not have the capability to evaluate whether the cracked packing

Enclosure 1

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).