



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

August 18, 2009

EA-08-344

Mr. Robert Van Namen  
Vice President, Operations  
United States Enrichment Corporation  
Two Democracy Center  
6903 Rockledge Drive  
Bethesda, MD 20817

SUBJECT: CONFIRMATORY ORDER (EFFECTIVE IMMEDIATELY)  
[NRC OFFICE OF INVESTIGATION REPORT NO. 2-2008-023]

Dear Mr. Van Namen:

The enclosed Confirmatory Order is being issued to the United States Enrichment Corporation (USEC), as a result of a successful alternative dispute resolution (ADR) session. The enclosed commitments were made by USEC's Paducah Gaseous Diffusion facility (Paducah) as part of a settlement agreement involving an incident in which operators deliberately concealed damaged equipment and falsified records of a procedural error while moving a uranium hexafluoride (UF<sub>6</sub>) cylinder.

In a letter dated February 25, 2009, the Nuclear Regulatory Commission (NRC) provided USEC with the results of an investigation completed by the NRC's Office of Investigations (OI). The NRC's letter documented an incident that occurred in late January 2008, while an operator was preparing a UF<sub>6</sub> cylinder for movement using the applicable procedure. The operator mistakenly failed to follow a procedural step while moving the cylinder, which resulted in damage to the pigtail and to the autoclave manifold connection. Although the cylinder was safety secured, the operator, together with a second operator who was involved in unrelated activities nearby, and a trainee, willfully took actions to conceal the incident, including the falsification of records and failure to disclose details of the incident to USEC management. All three individuals subsequently advised USEC management of the full details of the incident. Based on the NRC's review and investigation, four apparent violations were identified.

In addition, our letter of February 25, 2009, offered USEC a choice to: (1) attend a Predecisional Enforcement Conference; (2) provide a written response; or (3) request ADR with the NRC in an attempt to resolve any disagreement regarding whether violations occurred, the appropriate enforcement action, and the appropriate corrective actions.

In response, USEC requested ADR in an attempt to resolve the issue. An ADR mediation session was held on July 2, 2009, and a preliminary settlement was reached. The elements of the preliminary agreement were formulated and agreed upon at the mediation session and are documented in the enclosed Order.

As discussed in the enclosed Confirmatory Order, USEC agreed to a number of corrective actions and enhancements to preclude the incident from recurring, including actions to address the willful actions of USEC employees, procedural use, recurring training for Operations and Maintenance supervisors to reinforce "conduct of" principles and procedural compliance, and subsequent effectiveness reviews of corrective actions. In addition, USEC committed to conducting a review of this incident and a limited number of other significant events, to determine if weaknesses in any of the 13 safety culture components, as identified in NRC Regulatory Information Summary 2006-13, caused or significantly contributed to the event.

In consideration of the commitments discussed in the Confirmatory Order, the NRC agreed to refrain from proposing a civil penalty and issuing a Notice of Violation or other enforcement action for the matters discussed in the NRC's letter to USEC of February 25, 2009 (EA-08-344). We will evaluate the implementation of your commitments during future inspections.

We have enclosed a Confirmatory Order (Effective Immediately) to confirm the commitments made as part of the settlement agreement. As evidenced by your signed "Consent and Hearing Waiver Form" (copy enclosed) dated August 12, 2009, you agreed to issuance of this letter and Confirmatory Order.

Pursuant to Section 223 of the Atomic Energy Act of 1954, as amended, any person who willfully violates, attempts to violate, or conspires to violate, any provision of this Order shall be subject to criminal prosecution as set forth in that section. Violation of this Order may also subject the person to civil monetary penalties.

You are not required to respond to this letter. However, if you choose to provide a response, please provide it to me within 30 days at NRC Region II, ATTN: Regional Administrator, 61 Forsyth Street, SW Suite 23T85, Atlanta, Georgia 30303-8931.

A copy of this letter and its enclosures will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. The NRC will also include this letter, and the attached Confirmatory Order, on its website at [www.nrc.gov](http://www.nrc.gov); select Public Meetings and Involvement, then Enforcement. Your response, if you choose to provide one, will also be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS).

USEC

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If you have any questions or comments concerning this letter, please contact Mr. Joseph Shea, Director, Division of Fuel Facilities Inspection, at 404-562-4700.

Sincerely,

*/RA/*

Victor M. McCree  
Deputy Regional Administrator  
for Operations

Docket No.: 07007001

Certificate No. GDP-1

Enclosures:

1. Confirmatory Order
2. Consent and Hearing Waiver Form

cc w/encls: (See page 4)

USEC

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cc w/encls:

S. Penrod  
General Manager  
Paducah Gaseous Diffusion Plant  
United States Enrichment Corporation  
Electronic Mail Distribution

S. A. Toelle  
Director  
Nuclear Regulatory Affairs  
United States Enrichment Corporation  
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R. M. DeVault  
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 R. Hannah, RII  
 R. Trojanowski, RII  
 OEMAIL  
 OEWEB  
 PUBLIC

\* See previous concurrence

X PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE      X NON-SENSITIVE  
 ADAMS: X Yes      ACCESSION NUMBER: \_\_\_\_\_

OFFICE	RII:DFFI	RII:DFFI	RII:ORA	RII:ORA		
SIGNATURE	* JHenson	* JShea	* SSparks for			
NAME	JHENSON	JSHEA	CEVANS	VMCCREE		
DATE	07/27/09	07/24/09	07/24/09			
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	OGC	NSIR	OE			
SIGNATURE	Via email	Via email	Via email			
NAME	* BKlukan	* TLui	* JWray			
DATE	08/03/09	08/3/09	08/04/09			
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YESNO	YESNO

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	Docket No.: 07007001
United States Enrichment Corporation	)	Certificate No. GDP-1
Paducah Gaseous Enrichment Plant	)	
	)	EA-08-344

CONFIRMATORY ORDER  
(EFFECTIVE IMMEDIATELY)

I

The United States Enrichment Corporation (USEC), a subsidiary of USEC Inc., is the holder of NRC Certificates of Compliance (COC) No. GDP-1 issued by the NRC pursuant to 10 CFR Part 76 on November 26, 1996, and renewed on December 22, 2008. The COC is set to expire on December 31, 2013. The certificate authorizes USEC to operate the Paducah Gaseous Diffusion Plant (Paducah), located near Paducah, Kentucky. The certificate also authorizes USEC to receive, and other NRC licensees to transfer to USEC, byproduct material, source material, or special nuclear material to the extent permitted under the COC.

This Confirmatory Order is the result of an agreement reached during an alternative dispute resolution (ADR) mediation session conducted on July 2, 2009.

II

On December 5, 2008, the NRC's Office of Investigations (OI) completed an investigation (OI Case No. 2-2008-023) regarding activities at the Paducah Gaseous Diffusion Plant located in Paducah, Kentucky. The purpose of the investigation was to determine whether one or more operators deliberately concealed damaged equipment, falsified records, and made false statements to conceal a procedural error while moving a uranium hexafluoride (UF<sub>6</sub>) cylinder.

Based on the evidence developed during the investigation, the NRC staff identified four apparent violations.

### III

On July 2, 2009, the NRC and USEC met in an ADR session mediated by a professional mediator, which was arranged through Cornell University's Institute on Conflict Resolution. ADR is a process in which a neutral mediator with no decision-making authority assists the parties in reaching an agreement or resolving any differences regarding their dispute. This confirmatory order is issued pursuant to the agreement reached during the ADR process. The elements of the agreement consist of the following:

1. The NRC and USEC agreed that four violations occurred during and subsequent to an incident that occurred in late January 2008, while an operator was preparing a UF<sub>6</sub> cylinder for movement using the applicable procedure. The violations involved the following:
  - a. On January 29, 2008, an Operator in building C-337A failed to follow Step 8.7.37 of checklist "Cylinder Burping and Cold Pressure Procedure" incorporated into procedure USEC CP4-CO-CN2045a that required that the pigtail be disconnected from the cylinder and the autoclave manifold prior to cylinder movement. As a result, the pigtail and the autoclave manifold were damaged when the cylinder was lifted. In addition, the same Operator subsequently willfully placed a waste pigtail in a radioactive waste storage bag and hid it in an unrelated control panel, instead of storing the waste pigtail in a drum and completing the required documentation in accordance with the

requirements of USEC Procedure CP4-CO-CN2045a, Step 5.27.3. USEC Procedure CP4-CO-CN2045a is required by Technical Safety Requirements 3.1.1, "Procedures Scope," which requires, in part, that written procedures shall be implemented to cover activities listed in Appendix A to Safety Analysis Report (SAR) section 6.11. Appendix A to SAR 6.11, "Organization and Operating Programs," lists UF6 cylinder handling as an activity that requires implementation of written procedures.

- b. On January 29, 2008, an Operator in the C-337A building willfully did not take any action to secure the damaged autoclave manifold, contact the appropriate supervisor or manager, or log the damage in a work package, narrative logbook, or other quality record. The Operator also willfully attempted to repair the autoclave manifold so as to conceal the initial failure to disconnect the pigtail from the autoclave manifold and the cylinder. In addition, a second Operator failed to contact the appropriate supervisor or manager upon learning of an incident that resulted in damage to both the pigtail and the autoclave manifold, and an Operator-Trainee in the C-337A building also failed to contact the appropriate supervisor or manager upon witnessing the incident. The actions of the two Operators and Operator-Trainee are contrary to USEC procedures CP2-PS-PS1044, "Use of Procedures", and CP2-CO-CO1032, "Shift Routines and Operating Practices."
- c. On January 29, 2008, an Operator in the C-337A building willfully prepared and signed his name (i.e., falsified) on a document, indicating that the pigtail had been properly disconnected from the autoclave manifold, when in fact the Operator knew that the pigtail had not been properly disconnected and was damaged. A second Operator in the C-337A building also willfully signed his name (i.e., falsified) on a document, with knowledge that the pigtail had not



been properly disconnected from the autoclave. The falsification of documents is prohibited by USEC Procedure UE2-OP-OP1030, "Conduct of Operation."

- d. On January 30, 2008, two Operators and an Operator-Trainee, individuals who were familiar with the circumstances that resulted in damage to an autoclave manifold, willfully denied any knowledge of these circumstances when questioned by Corporation management. These actions are contrary to USEC Procedure UE2-OP-OP1030, "Conduct of Operation."
2. At the ADR session, USEC-Paducah representatives agreed that the circumstances described in Item 1 above represent violations of requirements, and were due, in part, to the willful actions of the two Operators and an Operator-Trainee.
  3. Based on USEC-Paducah's review of the incident and NRC concerns with respect to precluding recurrence of the violations, USEC took the following actions:
    - a. In January 2008, cylinders potentially affected by the incident were inspected.
    - b. In February 2008, the Nuclear Safety & Quality organization began conducting surveillances of in-hand procedure use at the General Manager's request.
    - c. On February 1, 2008, the USEC Section Manager issued a memorandum to all UF<sub>6</sub> handling personnel describing the discovery of the damaged manifold and the need for anyone with knowledge to come forward.
    - d. On February 4, 2008, the damaged pigtail was retrieved and stored per NCS requirements, and the NCS incident evaluation was completed.
    - e. On February 5, 2008, the crane and lifting devices used by Operator 1 on January 29, 2008 were tested and inspected.
    - f. On February 12, 2008, USEC conducted an "All Hands Stand Down" meeting with all plant personnel to inform them about the event and to reinforce

management expectations.

- g. On February 22, 2008, Operations initiated a Long-Term Order requiring that two operators be present during cylinder connections and disconnections.
- h. On February 29, 2008, the General Manager sent a letter to all employees reinforcing the need for procedural compliance.
- i. On February 29, 2008, the General Manager sent a letter to all employees reinforcing the need to stop work and report errors.
- j. In March 2008, USEC completed repairs of the 2E autoclave manifold.
- k. In March 2008, a Use of Procedures question bank was distributed as a coaching tool plant-wide. The question bank covers the stop work requirements and other rules that govern procedure use at the plant.
- l. In April 2008, USEC conducted a session for all supervisors to reinforce the responsibilities of line management to establish and maintain a strong safety culture. In addition, supervisors were tasked with conducting a Nuclear Safety Culture briefing for all workers that highlights the safety implication of not reporting mistakes and the related guidance in the USEC Code of Conduct.
- m. In August 2008, USEC revised its new employee training materials to include additional training on the elements of a Safety Conscious Work Environment.
- n. In October 2008, USEC revised the relevant plant procedures to require two operators to be present for selected cylinder operations.
- o. In October 2008, USEC developed recurring training for Operations and Maintenance supervisors to reinforce “conduct of” principles and procedure compliance. Training will be conducted for a period of 12 months from the date of issuance of the Confirmatory Order.
- p. In November 2008, USEC conducted briefings for all personnel who handle fissile materials on the importance of complying with procedures.

- q. In March 2009, the General Manager and Plant Manager conducted over 25 briefings for all employees with regard to safety culture, open communications, teamwork to identify vulnerabilities early, procedural compliance, and reporting off-normal conditions.
  - r. USEC took disciplinary action to address the unacceptable performance of the three individuals involved in the incident.
4. In addition to the actions completed by USEC as discussed above, USEC agreed to additional corrective actions and enhancements, as fully delineated below in Section V of the Confirmatory Order.
  5. At the ADR session, the NRC and USEC agreed that (1) the actions referenced in Section III.3 and Section V, would be incorporated into a Confirmatory Order, and (2) the resulting Confirmatory Order would be considered by the NRC for any assessment of USEC, as appropriate.
  6. In consideration of the completed corrective actions delineated in Section III.3 and the commitments delineated in Section V of this Confirmatory Order, the NRC agreed to refrain from proposing a civil penalty or issuing a Notice of Violation for all matters discussed in the NRC's letter to USEC of February 25, 2009 (EA-08-344).
  7. This agreement is binding upon successors and assigns of USEC.

On August 12, 2009, USEC consented to issuance of this Order with the commitments, as described in Section V below. USEC further agreed that this Order is to be effective upon issuance and that it has waived its right to a hearing.

## IV

Since USEC has completed the actions as delineated in Section III.3, and agreed to take the actions as set forth in Section V, the NRC has concluded that its concerns can be resolved through issuance of this Order.

I find that USEC's commitments as set forth in Section V are acceptable and necessary and conclude that with these commitments the public health and safety are reasonably assured. In view of the foregoing, I have determined that public health and safety require that USEC's commitments be confirmed by this Order. Based on the above and USEC's consent, this Order is immediately effective upon issuance.

## V

Accordingly, pursuant to Sections 104b, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Part 76, IT IS HEREBY ORDERED, EFFECTIVE IMMEDIATELY, THAT CERTIFICATE NO. GDP-1 BE MODIFIED AS FOLLOWS:

- a. USEC agrees to conduct an end-point effectiveness review of actions targeting improvement in procedural compliance. USEC will review plant data for instances of failing to comply with applicable sections of CP2-PS-PS1044, "Use of Procedures."
- b. USEC agrees to conduct a mid-point effectiveness review of its efforts to enforce compliance with the USEC Code of Conduct. USEC will review plant data for instances of intentional procedure or USEC Code of Conduct violations. The acceptable success criterion is zero instances of intentional procedure or USEC

Code of Conduct violations.

- c. Not later than 180 days after the issuance of the confirmatory order, USEC will conduct a review of the Assessment Tracking Reports classified as either “Significant Conditions Adverse to Quality” or “Level 1 events” during the 12 months preceding the issuance of the confirmatory order, in addition to this occurrence, to determine if weaknesses in any of the 13 safety culture components, as identified in NRC Regulatory Information Summary 2006-13, caused or significantly contributed to the event.
- d. Within 90 days after conducting the review described in paragraph V.d and following completion of the Safety Conscious Work Environment assessment, USEC will assess the safety culture component weaknesses identified above, integrate the results with the Safety Conscious Work Environment assessment, and develop any appropriate corrective actions.
- e. USEC-Paducah agrees to complete the items listed in Section V within 12 months of issuance of the Confirmatory Order.
- f. Within three months of completion of the terms of the Confirmatory Order, USEC-Paducah will provide the NRC with a letter discussing its basis for concluding that the Order has been satisfied.

The Regional Administrator, NRC Region II, may relax or rescind, in writing, any of the above conditions upon a showing by USEC of good cause.

Any person adversely affected by this Confirmatory Order, other than USEC, may request a hearing within 20 days of its publication in the Federal Register. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time must be directed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and include a statement of good cause for the extension.

If a person other than USEC requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.309 (d) and (f).

If a hearing is requested by a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Confirmatory Order should be sustained.

A request for a hearing must be filed in accordance with the NRC E-Filing rule, which became effective on October 15, 2007. The NRC E-filing Final Rule was issued on August 28, 2007 (72 Federal Register 49,139) and was codified in pertinent part at 10 CFR Part 2, Subpart B. The E-Filing process requires participants to submit and serve documents over the internet or, in some cases, to mail copies on electronic optical storage media. Participants may not submit paper copies of their filings unless they seek a waiver in accordance with the procedures described below.

To comply with the procedural requirements associated with E-Filing, at least five (5) days prior to the filing deadline the requestor must contact the Office of the Secretary by e-mail at HEARINGDOCKET@NRC.GOV, or by calling (301) 415-1677, to request (1) a digital ID

certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any NRC proceeding in which it is participating; and/or (2) creation of an electronic docket for the proceeding (even in instances when the requestor (or its counsel or representative) already holds an NRC-issued digital ID certificate). Each requestor will need to download the Workplace Forms Viewer™ to access the Electronic Information Exchange (EIE), a component of the E-Filing system. The Workplace Forms Viewer™ is free and is available at <http://www.nrc.gov/site-help/e-submittals/install-viewer.html>. Information about applying for a digital ID certificate also is available on NRC's public website at <http://www.nrc.gov/site-help/e-submittals/apply-certificates.html>.

Once a requestor has obtained a digital ID certificate, had a docket created, and downloaded the EIE viewer, he/she can then submit a request for a hearing through EIE. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public website at <http://www.nrc.gov/site-help/e-submittals.html>. A filing is considered complete at the time the filer submits its document through EIE. To be timely, electronic filings must be submitted to the EIE system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The EIE system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants separately. Therefore, any others who wish to participate in the proceeding (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request is filed so that they may obtain access to the document via the E-Filing system.

A person filing electronically may seek assistance through the “Contact Us” link located on the NRC website at <http://www.nrc.gov/site-help/e-submittals.html> or by calling the NRC technical help line, which is available between 8:00 a.m. and 8:00 p.m., Eastern Time, Monday through Friday, excluding government holidays. The help line number is (866) 672-7640.

Participants who believe that they have good cause for not submitting documents electronically must file a motion, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by (1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket, which is available to the public at [http://ehd.nrc.gov/EHD\\_Proceeding/home.asp](http://ehd.nrc.gov/EHD_Proceeding/home.asp), unless excluded pursuant to an order of the Commission, an Atomic Safety and Licensing Board, or a Presiding Officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their works.



## VII

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section V above shall be final 20 days from the date this Order is published in the Federal Register without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section V shall be final when the extension expires if a hearing request has not been received. A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

FOR THE NUCLEAR REGULATORY COMMISSION

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Victor M. McCree  
Deputy Regional Administrator for Operations

Dated this 18<sup>th</sup> day of August 2009