



A Global Energy Company

April 20, 2007

GDP 07-0014

3/21/07

72 FR 13313

①

Chief, Rules and Directives Branch  
Division of Administrative Services  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington DC 20555-0001

RECEIVED

2007 APR 23 PM 3:05

RULES AND DIRECTIVES  
BRANCH  
USNRC

**Paducah Gaseous Diffusion Plant (PGDP)  
Portsmouth Gaseous Diffusion Plant (PORTS)  
American Centrifuge Lead Cascade Facility (LC)  
American Centrifuge Plant (ACP)  
Docket Nos. 70-7001, 70-7002, 70-7003 and 70-7004  
Certificate Nos. GDP-1 and GDP-2; License Nos. SNM-7003 and SNM-2011  
USEC Comments on the Proposed Revisions to NUREG/BR-0006 and NUREG/BR-0007  
(72FR13313 dated March 21, 2007)**

USEC Inc. (USEC) appreciates the opportunity to provide the enclosed comments to the proposed revisions to NUREG/BR-0006, "Instructions for Completing Nuclear Material Transaction Reports" and NUREG/BR-0007, "Instructions for the Preparation and Distribution of Material Status Reports".

If you have any questions regarding this matter, please contact me at 301-564-3250 or Mark Smith at 301-564-3244. There are no new commitments contained in this submittal.

Sincerely,

Steven A. Toelle  
Director, Regulatory Affairs

Enclosures:

1. USEC Comments on NUREG/BR-0006
2. USEC Comments on NUREG/BR-0007

cc: D. Hartland, Senior Fuel Facility Inspector, NRC Region II  
J. Henson, Chief, Fuel Facility Branch 2, NRC Region II  
M. Weber, Director, Office of Nuclear Material Safety and Safeguards, NRC HQ  
M. Thomas, Senior Resident Inspector, NRC PGDP  
M. Raddatz, Project Manager, NRC HQ  
B. Smith, Chief, Enrichment and Conversion Branch, NRC HQ

USEC Inc.  
6903 Rockledge Drive, Bethesda, MD 20817-1818  
Telephone 301-564-3200 Fax 301-564-3201 <http://www.usec.com>

*E-RIDS = ADM-03*  
*add =*  
*B. Horn (bgh2)*

*SUNSI Review Complete*  
*Template = ADM-013*

USEC Comments on NUREG/BR-0006

**1. Page 2, Section 1.2, Regulatory Authority, Reporting Transactions for Source Material, 1<sup>st</sup> sentence**

Please add non-obligated source material to this paragraph to agree with rule making change.

**2. Page 2, Section 1.2, Regulatory Authority, Reporting Transactions for Source Material, 3<sup>rd</sup> sentence**

Allowing selective usage of three decimal reporting for source materials has the potential to generate data inconsistencies. USEC suggests either requiring everyone to report to 3 decimals or eliminate the option. For illustration, how would NMMSS process data provided in the following example? Facility A ships an item and reports 3 decimals to facility B. Facility A can only report source material items to 3 decimals. Facility B does not have the capability to report source items to 3 decimals and submits their data in Kilograms.

**3. Page 3, Section 1.3, Reporting/Distribution requirements, 1<sup>st</sup> Paragraph, 2<sup>nd</sup> Sentence**

Please include feeds, withdrawals, and blends with the nuclear material changes referenced in parenthesis.

**4. Page 5, Section 2.1, Instructions for Completing DOE/NRC Form 741, 2<sup>nd</sup> Paragraph**

Please add, "in computer readable format" to this paragraph. As currently worded, it is implied that a paper copy of the DOE/NRC Form 741 must be submitted to NMMSS.

**5. Page 6, Section 6a. Shipper, and Section 6b. Receiver, Action Code M**

Please include feeds, withdrawals and blends with the one party adjustments referenced in parenthesis.

**6. Page 7, Section 2.1.11, Nature of Transaction**

Please clarify if the X code is required for Action Code M when material ownership is changed from government to private ownership or vice versa.

**7. Page 11, Section 2.1.26e, Number of Items, last sentence**

When changing ownership of material in cylinders from government to private or vice versa, both DOE and USEC require the number of cylinders affected by the change to be

USEC Comments on NUREG/BR-0006

documented in this field. Ownership change transactions are completed using an M action code. Please allow this field to be optional for action code M.

**8. Page 16, Section 2.1.2, Reporting Receiver's Data, 1<sup>st</sup> bullet; Page 22, Section 4.2 Receiver**

Please change 10 days to 10 workdays to agree with proposed Rulemaking change.

**9. Page A-1, Composition Codes and Page B-1, Inventory Change type codes**

The codes referenced in these appendices appear to only include the IAEA codes. The IAEA codes do not include all composition codes and inventory change codes submitted by USEC to NMMSS. Please include all codes or add a footnote which states only IAEA codes are referenced in these appendices.

**10. Page A-1, Appendix A, Composition Codes**

Please add the same footnote from BR-0007 page 14 to allow USEC facilities to use the inventory composition codes that have been authorized for use by the NRC. Not all composition codes currently used by the USEC facilities are included in this appendix.

**11. Page D-1, Glossary, Holding Account Definition**

In accordance with the existing Fundamental Nuclear Materials Control Plans (FNMCPs) for the Gaseous Diffusion Plants and Centrifuge Facilities, USEC is currently using "V" Reporting Identification Symbols (RISs) for waste containers for which safeguards have been terminated. If NRC requires the use of holding accounts instead of "V" RISs, operations at enrichment facilities would be adversely impacted. Items in holding accounts would then have to be retained on the accountability books until shipped offsite. Any consolidated items would require accountability measurements prior to shipment. Significant resources would be needed to inventory all items currently in the "V" RIS before returning them to active inventory.

USEC currently possesses thousands of waste drums removed from the current inventory database when declared waste under the existing FNMCP. An initial and annual container inventory for the thousands of drums would be required to return the drums to the accountability program. The FNMCP, FNMCP procedures, waste management procedures, and training programs for NMC&A personnel and waste management operators must be revised. Database changes must be completed and measurement control programs must be established. The burden of returning these drums to an accountability program would require re-characterizing each drum and applying a tamper indicating device to each. Placing the drums in storage arrays to allow the ability to perform future inventories would require more than double the current storage area for these drums. Staffing would need to be increased and many months required to effect

USEC Comments on NUREG/BR-0006

these changes. DOE manual, DOE M 470.4-6, Section A, Chapter 1, 1.q.(1)(c), allows the use of "V" RISs for waste containers for which safeguards have been terminated. This allowance for waste containers should be allowed by the rule.

The costs associated with adding waste items to active inventory must be evaluated against the benefits obtained from increasing the level of accountability.

**12. Supplemental Instructions for Completing Blocks 17, 18, 19, 20 and 21 on DOE/NRC Form 741; Page F-1, Note, 1<sup>st</sup> Bullet**

NRC approval is required for all exchanges of material between E-1 through E-4. Exchanges of this type may occur on a daily basis for the American Centrifuge facility. Please clarify if daily NRC authorizations will be required for these exchanges. Additionally, USEC database upgrades are required to track E-1 through E-4 material. Please make this requirement optional and allow tracking of material type 20 as is currently allowed by DOE.

**13. Supplemental Instructions for Completing Blocks 17, 18, 19, 20 and 21 on DOE/NRC Form 741; Page F-1, Note 3<sup>rd</sup> Bullet**

Please clarify if NRC written authorization is required for obligation exchanges between USEC and a DOE contractor at the same site. If not, please add this exception to the text.

**14. Supplemental Instructions for Completing Blocks 17, 18, 19, 20 and 21 on DOE/NRC Form 741; Page F-3, Section 3.c Domestic Transfer, Internal Transactions and Exports**

Revise text to agree with proposed rulemaking change concerning not generating Receiver's 741 form for exports.

USEC Comments on NUREG/BR-0007

**1. Page 1, Section 1, Introduction, 3<sup>rd</sup> Paragraph**

DOE manual, DOE M 470.4-6, Section B, Chapter XIII, contains the requirements for reporting the status of nuclear material for U.S. GOVT-owned inventory. This level of reporting is an expanded level of detail which also meets the inventory reporting requirements of NRC. We recommend using the DOE format for submitting physical inventory data.

Based upon discussion with NMMSS staff, USEC RISs will generate an error if material type 29 is submitted to NMMSS with a J owner code when the data is processed with Licensee edits.

**2. Page 2, Section 1.2 Regulatory Authority, 2<sup>nd</sup> Paragraph**

NMMSS does not require or collect transaction data using the enrichment categories for material type 20 (E1 – E4). Therefore NMMSS cannot generate 742 data by these enrichment categories for reconciliation purposes. Requiring a Form 742 and 742C for material type 20 categories E1 – E4 increases the reporting burden to USEC but adds no value since the data cannot be reconciled. This requirement conflicts with DOE manual, DOE M 470.4-6 reporting requirements for Material Type 20.

Material balancing for material type 20 at USEC facilities is based upon DOE manual, DOE M 470.4-6 and NRC Form 327 requirements (< 20% and => 20%). Extensive software modifications and an extensive increase in reconciliation time would be required to report and reconcile material type 20 data to meet both the M-742 requirements (E1 – E4) and 327 requirements. Please allow USEC to submit and reconcile 742 data according to DOE manual, DOE M 470.4-6.

**3. Page 3, Section 1.2 Regulatory Authority, 1<sup>st</sup> Sentence**

In accordance with the existing Fundamental Nuclear Materials Control Plans (FNMCPs) for the Gaseous Diffusion Plants and Centrifuge Facilities, USEC is currently using “V” Reporting Identification Symbols (RISs) for waste containers for which safeguards have been terminated. If NRC requires the use of holding accounts instead of “V” RISs, operations at enrichment facilities would be adversely impacted. Items in holding accounts would then have to be retained on the accountability books until shipped offsite. Any consolidated items would require accountability measurements prior to shipment. Significant resources would be needed to inventory all items currently in the “V” RIS before returning them to active inventory.

USEC currently possesses thousands of waste drums removed from the current inventory database when declared waste under the existing FNMCP. An initial and annual container inventory for the thousands of drums would be required to return the drums to the accountability program. The FNMCP, FNMCP procedures, waste management

USEC Comments on NUREG/BR-0007

procedures, and training programs for NMC&A personnel and waste management operators must be revised. Database changes must be completed and measurement control programs must be established. The burden of returning these drums to an accountability program would require re-characterizing each drum and applying a tamper indicating device to each. Placing the drums in storage arrays to allow the ability to perform future inventories would require more than double the current storage area for these drums. Staffing would need to be increased and many months required to effect these changes. DOE manual, DOE M 470.4-6, Section A, Chapter 1, 1.q.(1)(c), allows the use of "V" RISs for waste containers for which safeguards have been terminated. This allowance for waste containers should be allowed by the rule.

The costs associated with adding waste items to active inventory must be evaluated against the benefits obtained from increasing the level of accountability.

**4. Page 4, Section 1.5 Reconciliation**

DOE manual, DOE M 470.4-6 allows USEC to validate and certify the NMMSS operator generated 742 Form. We understand this report will meet the reporting requirements of NRC and maintains the burden of reconciling the data with USEC. Please allow licensee's the option to either generate their own 742 form or certify the NMMSS operator generated 742 form as allowed by DOE Orders.

**5. Page 6, Section 2.1 Section A, Material Accountability, Column A, Element Weight Note: 3 decimal places for source material.**

Allowing selective usage of three decimal reporting for source materials has the potential to generate data inconsistencies. USEC suggests either requiring everyone to report to 3 decimals or eliminate the option. For illustration, how would NMMSS process data provided in the following example? Facility A ships an item and reports 3 decimals to facility B. Facility A can only report source material items to 3 decimals. Facility B does not have the capability to report source items to 3 decimals and submits their data in Kilograms.

**6. Page 7, Receipts**

11. Procurement From DOE – "From Other Materials - Depleted Uranium". Depleted material balance feeds to the Cascade are reported in this category but are not included in the revised NUREG.

12. "From Other Materials – Enriched Uranium". Enriched material balance feeds to the Cascade are reported in this category but are not included in the revised NUREG.

USEC Comments on NUREG/BR-0007

13. Procurement For The Account Of DOE - "From Other Materials - Normal Uranium". Normal material balance feeds to the Cascade are reported in this category but are not included in the revised NUREG.

35. "Enriching Services - Procurement by USEC." Quantities of Special Nuclear Material (or source nuclear material) which have been received for enriching services and reported to the NRC on DOE/NRC Form 741 are reported in this category but not included in the revised NUREG.

**7. Page 9, Removals**

41. Expended In Space Programs - Leave Blank. "To Other Materials Depleted Uranium". Depleted material balance withdrawals from the Cascade are reported in this category but are not included in the revised NUREG.

42. Sales To U.S. Govt - "To Other Materials - Enriched Uranium". Enriched material balance withdrawals from the Cascade are reported in this category but are not included in the revised NUREG.

43. Sales To Others For The Account Of U.S. Govt - "To Other Materials Normal Uranium". Normal material balance Withdrawals from the Cascade are reported in this category but are not included in the revised NUREG.

**8. Page 11, 83. Bias Adjustment**

Current plans are not to modify USEC's reporting classification with the NMMSS upgrade scheduled for April 2008. Current NMMSS database edit checks will not allow data submission with inventory change code 83.

**9. Page 12, 3 Instructions For Completing DOE/NRC Form 742C, Physical Inventory Listing**

DOE manual, DOE M 470.4-6, Section B, Chapter XIII, contains the requirements for reporting the status of nuclear material for U.S. GOVT-owned inventory. This level of reporting is an expanded level of detail which also meets the inventory reporting requirements of NRC. We recommend using the DOE format for submitting physical inventory data which includes additional material types other than those listed on page 13, Section 5a, Material Type Code, and not require the enrichment categories for material type 20 (E1 - E4). Also see BR-0007 Comment # 2, Page 2, Section 1.2 Regulatory Authority, 2<sup>nd</sup> Paragraph.

USEC Comments on NUREG/BR-0007

**10. Page D-1 Glossary Holding Account Definition**

In accordance with the existing Fundamental Nuclear Materials Control Plans (FNMCPs) for the Gaseous Diffusion Plants and Centrifuge Facilities, USEC is currently using "V" Reporting Identification Symbols (RISs) for waste containers for which safeguards have been terminated. If NRC requires the use of holding accounts instead of "V" RISs, operations at enrichment facilities would be adversely impacted. Items in holding accounts would then have to be retained on the accountability books until shipped offsite. Any consolidated items would require accountability measurements prior to shipment. Significant resources would be needed to inventory all items currently in the "V" RIS before returning them to active inventory.

USEC currently possesses thousands of waste drums removed from the current inventory database when declared waste under the existing FNMCP. An initial and annual container inventory for the thousands of drums would be required to return the drums to the accountability program. The FNMCP, FNMCP procedures, waste management procedures, and training programs for NMC&A personnel and waste management operators must be revised. Database changes must be completed and measurement control programs must be established. The burden of returning these drums to an accountability program would require re-characterizing each drum and applying a tamper indicating device to each. Placing the drums in storage arrays to allow the ability to perform future inventories would require more than double the current storage area for these drums. Staffing would need to be increased and many months required to effect these changes. DOE manual, DOE M 470.4-6, Section A, Chapter 1, 1.q.(1)(c), allows the use of "V" RISs for waste containers for which safeguards have been terminated. This allowance for waste containers should be allowed by the rule.

The costs associated with adding waste items to active inventory must be evaluated against the benefits obtained from increasing the level of accountability.

**11. Page E-1 and E-2 IAEA Change Type Codes**

The IAEA codes do not include material type 89. This is a potential issue for the American Centrifuge Plant, should it be selected by the IAEA. Please concur that any issues regarding these codes will be negotiated with the IAEA to limit facility impacts and that a USEC subject matter expert will be included in the IAEA requirements development.