

December 31, 2003

MEMORANDUM TO: Joseph G. Giitter, Chief
Special Projects and Inspection Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

THROUGH: Brian W. Smith, Chief **/RA/**
Special Projects Section
Special Projects and Inspection Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

FROM: Yawar H. Faraz, Senior Project Manager **/RA/**
Special Projects Section
Special Projects and Inspection Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

SUBJECT: DECEMBER 18, 2003, MEETING SUMMARY: OPEN MEETING
BETWEEN U.S. NUCLEAR REGULATORY COMMISSION, U.S.
DEPARTMENT OF ENERGY AND U.S. ENRICHMENT
CORPORATION

On August 27, 2003, U.S. Nuclear Regulatory Commission (NRC) staff held an open meeting with U.S. Department of Energy (DOE) and U.S. Enrichment Corporation (USEC) staff to discuss the contents of the draft Memorandum of Understanding between the DOE and the NRC regarding regulatory oversight for USEC's Lead Cascade facility. The Lead Cascade facility is to be housed in an existing DOE Gas Centrifuge Enrichment Plant building at the Portsmouth Gaseous Diffusion Plant site in Piketon, Ohio.

I am attaching a meeting summary for your use. This meeting summary contains no proprietary or classified information.

Docket: 70-7003

Attachments: 1. Summary of Meeting between
NRC, DOE, and USEC
2. Attendee List
3. USEC comments on Daft MOU
4. Meeting Handouts

cc:

William Szymanski/DOE HQ
James Curtiss/W&S
Peter Miner/USEC
Rod Krich/LES
Randall DeVault/DOE Oak Ridge
Dan Minter/SODI
Michael Marroitte/NIRS
Bob Taft/Governor Ohio
Mike DeWine/Senator Ohio
George V. Voinovich/Senator Ohio
Rob Portman/Congressman Ohio
Bob Ney/Congressman Ohio
Carol O'Claire/State of Ohio

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NAME	YFaraz		LGross		BSmith	
DATE	12 /30 /03		12 / 31 /03		12 / 31 /03	

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Summary of Meeting Between NRC, DOE, and USEC

Date: December 18, 2003

Place: U.S. Nuclear Regulatory Commission (NRC) Offices; Rockville, Maryland

Attendees: See Attachment 2

Purpose:

The purpose of this meeting requested by the U.S. Enrichment Corporation (USEC) was for the NRC, the Department of Energy (DOE), and USEC to discuss the contents of the draft Memorandum of Understanding (MOU) between the DOE and the NRC regarding regulatory oversight for USEC's Lead Cascade facility. The meeting was open to members of the public; however, no members of the public attended the meeting.

Discussion:

Prior to the introduction of the meeting participants, NRC staff provided background information on the development of the MOU. DOE staff stated that it anticipated the regulatory oversight transition between DOE and NRC concerning the Lead Cascade to be smooth, as was the case for the gaseous diffusion plants.

The NRC had provided the latest draft of the MOU (ML033490506) to USEC on December 15, 2003. USEC provided its comments on the draft MOU at the meeting in the form of a marked-up version of the MOU (Attachment 3). USEC described these suggested modifications as minor. During the meeting, USEC made a presentation (Attachment 4) which included specific examples clarifying the regulatory oversight roles and responsibilities of the two agencies. During its presentation, USEC asked NRC and DOE to revise the MOU clarifying the transition of security oversight of subcontractor, vendor, and partner facilities. The NRC and DOE agreed and indicated that the applicable sections of the MOU would be clarified.

DOE and NRC provided two clarifications during USEC's presentation. On page 3 of its presentation, USEC indicated that DOE will provide oversight for safety, security, and safeguards of the CTC facility in Oak Ridge, TN. DOE clarified that for the CTC, DOE only provides oversight in the security area. On pages 8 and 9 of its presentation, USEC indicated that industrial safety will be provided by DOE and NRC, respectively. Both DOE and NRC clarified that each agency would provide oversight for only that portion of industrial safety that has radiological implications.

During its presentation, USEC staff indicated that it is developing implementation plans and schedules for the various phases of the Lead Cascade. In response to an NRC staff request, USEC committed to provide these documents to the NRC as they are developed to help facilitate NRC development and planning of its inspection and review activities.

Attachment 1

NRC Action Items:

Revise draft MOU with DOE. Discuss MOU changes in a conference call with USEC and DOE.

Attendee List

<u>Name</u>	<u>Organization</u>	<u>E-MAIL ADDRESS</u>	<u>PHONE NO.</u>
Peter J. Miner	USEC	minerpj@ports.usec.com	(740)897-2710
Trent Wertz	USEC	wertzt@usec.com	(301)528-8259
Jim Morgan	USEC	morganjb1@ports.usec.com	(740)897-2855
Brian Smith	NRC	bws1@nrc.gov	(301)415-5331
Norma Garcia-Santos	NRC	ngs@nrc.gov	(301)415-6680
Tim Johnson	NRC	tcj@nrc.gov	(301)415-7299
J. Dale Jackson	DOE	jacksonjd@oro.doe.gov	(865)576-0889
Yawar Faraz	NRC	yhf@nrc.gov	(301)415-8113
Leigh Trocine	NRC	lxt@nrc.gov	(301)415-2319
Dennis Scott	USEC	scottd@usec.com	(301)564-3352
Randall DeVault	DOE	devaultm@oro.doe.gov	(865)241-8277
Jay Henson	RGN II	(By phone)	
David Mardis	DOE	mardisdg@oro.doe.gov	
Jim Lieberman	NRC	jxl@nrc.gov	(301)415-2746
Mark Lombard	NRC	mxl7@nrc.gov	(301)415-5316
Steven Toelle	USEC	toelles@usec.com	(301)564-3350
Mario Robles	USEC	roblesm@usec.com	(301)564-3408
Robert C. Pierson	NRC	rcp@nrc.gov	(301)415-7213
Anne Troy	DOE	anne.troy@hq.doe.gov	
Dan E. Martin	NRC	dem@nrc.gov	(301)415-7254
Wilkins R. Smith	NRC	wrs@nrc.gov	(301)415-5788

<u>Name</u>	<u>Organization</u>	<u>E-MAIL ADDRESS</u>	<u>PHONE NO.</u>
Dan Stout	USEC	stoutd@usec.com	(301)564-3350
J. Keith Everly	NRC	jke@nrc.gov	(301)415-7048
Rick Coriell	USEC	coriellr@ports.usec.com	(740)897-2212
Mark Smith	USEC	smithm@usec.com	(301)564-3244
William Syzmanski	DOE	william.szymanski@hq.doe.gov	(202)586-9086
Steven Arndt	NRC	saa@nrc.gov	(301)415-6502
Aida Rivera-Varona	NRC	axr1@nrc.gov	(301)415-4001
Rafael Rodriguez	NRC	rlr1@nrc.gov	(301)415-0193
Elizabeth M. Stucklee	USEC	stucklee@usec.com	(301)564-3399
Terri Slack	DOE	slacktt@oro.doe.gov	(865)576-1213
Joseph Giitter	NRC	jgg@nrc.gov	(301)415-7485

December 15, 2003

Mr. Mario Robles, Manager
Advanced Technology Licensing
U. S. Enrichment Corporation, Inc.
6903 Rockledge Drive
Bethesda, MD 20817-1818

SUBJECT: ~~REVISIONS TO THE SECOND DRAFT OF THE MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF ENERGY AND THE NUCLEAR REGULATORY COMMISSION ON THE LEAD CASCADE FACILITY~~

Dear Mr. Robles:

By letter dated October 30, 2003, the Nuclear Regulatory Commission (NRC) provided the United States Enrichment Corporation, Inc. (USEC Inc.), the second draft of the subject document which delineates the roles and responsibilities of the Department of Energy (DOE) and the NRC for the deployment and utilization of gas centrifuge technology by USEC Inc. in its American Centrifuge Lead Cascade Facility. Following the issuance of the October 30 letter, DOE's and NRC's further consideration of the draft Memorandum of Understanding (MOU) has resulted in additional changes; especially in Section IV entitled "Responsibilities." All changes have been incorporated in the enclosed version of the draft MOU.

Per your request, we have arranged to meet with you and DOE to discuss the contents of the MOU in an open meeting on December 18, 2003, at NRC Headquarters. In the meeting, we will attempt to address any comments or concerns that you may have regarding the language in the MOU. If you need to discuss this matter further, please call me at (301) 415-8113.

Sincerely,

~~/RA/~~

Yawar H. Faraz, Project Manager
Special Projects Section
Special Projects and Inspection Branch
Division of Fuel Cycle Safety
and Safeguards,
Office of Nuclear Material Safety
and Safeguards

Docket: ~~70-7003~~

Enclosure: ~~MOU Between DOE and NRC~~

cc: James Curtiss, W&S ~~Carol O'Claire, Ohio DPS~~ ~~Rod Krich, LES~~
~~William Szymanski, DOE~~ ~~Randall DeVault, DOE~~
~~Michael Marriotte, NIRS~~ ~~Dan Minter, SODI~~

December 15, 2003

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Advanced Technology Licensing
U. S. Enrichment Corporation, Inc.
6903 Rockledge Drive
Bethesda, MD 20817-1818

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—/RA/

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Office of Nuclear Material Safety
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Docket: 70-7003

Enclosure: MOU Between DOE and NRC

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Dan Minter, SODI Randall DeVault, DOE
Rod Krich, LES Michael Marriotte, NIRS

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OFC	SPIB	SPIB	SPIB	SPIB	OGG	FCSS
NAME	YFaraz:dw	LGross	BSmith	JGitter	JLieberman	RPierson
DATE	12/12/03	12/12/03	12/12/03	12/12/03	12/15/03	12/15/03

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**MEMORANDUM OF UNDERSTANDING
BETWEEN THE
DEPARTMENT OF ENERGY
AND THE
NUCLEAR REGULATORY COMMISSION**

**COOPERATION REGARDING THE
GAS CENTRIFUGE LEAD CASCADE FACILITIES
AT THE PORTSMOUTH GASEOUS DIFFUSION PLANT**

I. BACKGROUND

The Atomic Energy Act of 1954 (the Act), as amended by the Energy Policy Act of 1992 (42 U.S.C. §2297 et seq.) created the United States Enrichment Corporation (USEC), a government corporation, for the purpose of managing and operating the uranium enrichment enterprise owned and previously operated by the Department of Energy (DOE). USEC subsequently leased from DOE, portions of the Portsmouth Gaseous Diffusion Plant (Portsmouth Site) and the Paducah Gaseous Diffusion Plant (Paducah Site) which related to the gaseous diffusion plant (GDP) process. The framework for DOE's authority to regulate nuclear safety, safeguards and security at the GDP sites is contained in the applicable Price Anderson Amendments Act of 1988 requirements and the Regulatory Oversight Agreement (ROA).¹

The Energy Policy Act of 1992 also required the Nuclear Regulatory Commission (NRC) to certify USEC's operation of the GDPs to ensure compliance with its safety, safeguards and security requirements. DOE agreed to retain oversight of the plants until the NRC finished its certification process and was ready to assume jurisdiction.

In November 1996, NRC issued initial certifications of compliance for the plants. The certificates provided for a transition period before NRC assumed regulatory authority to allow USEC to complete actions such as procedural revisions and training. DOE continued regulatory oversight during this transition period. Transition to NRC regulatory oversight occurred on March 3, 1997. By agreement dated October 10, 1995, DOE and USEC agreed that the DOE ROA will continue to govern leased uncertified facilities or activities after NRC certification.

In June 2002, USEC Inc., (parent company of USEC) and DOE signed an Agreement² whereby USEC Inc. made long-term commitments that will ensure stability for the domestic uranium enrichment industry and provide a continued, reliable fuel source for the world's nuclear reactors.

The U.S. gas centrifuge technology was developed by the U.S. government and demonstrated by DOE until 1985. In September 2002, USEC Inc. signed a Cooperative Research and Development Agreement (CRADA) with UT-Battelle LLC, approved by DOE, to expand cooperative efforts to deploy proven U.S. gas centrifuge uranium enrichment technology. USEC

¹Exhibit D of the Lease Agreement between the U.S. Department of Energy and the United States Enrichment Corporation; dated July 1, 1993

² Agreement between the U.S. Department of Energy ("DOE") and USEC Inc.; dated June 17, 2002

Inc.'s design will use the advantages of DOE's design while incorporating key technological advancements and cost reductions. UT-Battelle LLC and USEC Inc. will conduct further centrifuge development work at DOE's East Tennessee Technology Park (ETTP) in Oak Ridge, TN, where centrifuge test facilities already exist.

USEC Inc. announced in December 2002 that it will site its [American Centrifuge Demonstration Facility \(also referred to as the "Lead Cascade"\)](#) centrifuge uranium enrichment test and demonstration facility at DOE's Portsmouth Site. USEC Inc. submitted a 10 CFR Part 70 license application to the NRC in February 2003 to possess and use a limited quantity of special nuclear material in the American Centrifuge Demonstration Facility. The Lead Cascade will consist of up to 240 full-scale centrifuge machines in a closed cycle, enriching uranium within the process, while only withdrawing small quantities of low-enriched uranium for sampling purposes. The purpose of the Lead Cascade is to provide updated cost, schedule and performance data to reduce the financial risks of eventually building a \$1 billion to \$1.5 billion commercial enrichment plant.

USEC has temporarily leased portions of DOE's gas centrifuge enrichment plant (GCEP) facilities at the Portsmouth Site to begin [cleaning removing DOE material and equipment from the GCEP facilities \("GCEP Cleanup"\)](#). Following USEC's [cleaning of the GCEP Cleanup work facility](#), USEC Inc. will sub-lease from USEC, these same facilities for deploying the Lead Cascade. As described in USEC Inc.'s license application, a portion of the ~~leased~~ GCEP facilities will be regulated by NRC. The remaining portion of the ~~leased~~ facilities will be regulated by DOE.

II. DEFINITIONS

When utilized in this document, the following terms shall have the meanings indicated below.

"Lead Cascade Facilities" or "Lead Cascade" shall mean the USEC Inc. operated test and demonstration facility located at the Portsmouth Site. It includes the gas centrifuge machines and associated support equipment and facilities as described by USEC Inc.'s License Application for the American Centrifuge Lead Cascade Facility.³

"Leased Facilities or Leased Premises" shall mean the real property located at the Portsmouth Site [leased to USEC as](#) described in the Lease between DOE and USEC.⁴

"Transition" shall mean the transition from DOE regulatory oversight to NRC regulatory oversight for nuclear safety and appropriate aspects of safeguards and security of the Lead Cascade

³ License Application; American Centrifuge Lead Cascade Facility at USEC's Facilities in Piketon, Ohio; Document No. LA-2605-0001; dated February 2003

⁴ Exhibit A (as amended) to the Lease Agreement between the Department of Energy and United States Enrichment Corporation, dated July 1, 1993

Facilities and activities. Transition will occur following NRC's pre-operational inspections and regulatory compliance reviews but prior to the introduction of uranium hexafluoride (UF₆) into the Lead Cascade Facilities.

"GCEP Facilities" shall mean the gas centrifuge enrichment plant facilities previously developed and utilized by DOE at the Portsmouth Site.

III. PURPOSE AND SCOPE

It is the intent of NRC and DOE to work in concert to distinguish **between** Lead Cascade activities under DOE oversight from those under NRC oversight. Accordingly, the purposes of this Memorandum of Understanding (MOU) are as follows:

1. To enter into a written, mutual understanding of the roles and responsibilities of the NRC and DOE during the deployment and utilization of gas centrifuge technology by USEC Inc., and to outline the process for transitioning regulatory oversight from DOE to NRC.
2. To clarify the regulatory boundaries between the NRC and DOE and to avoid dual regulation of USEC Inc., recognizing that USEC Inc. will be conducting both NRC-regulated and DOE-regulated activities associated with the Lead Cascade concurrently in the same buildings.
3. To define the way in which NRC and DOE will cooperate to facilitate the obtaining of information and knowledge regarding gas centrifuge technology and facility operations.
4. To supplement the following agreements as applicable to the Lead Cascade Facilities and activities:
 - "Agreement Defining Security Responsibilities at the Paducah and Portsmouth Gaseous Diffusion Plants Between the Department of Energy's Office of Safeguards and Security and the Nuclear Regulatory Commission's Division of Security," dated March 10, 1995, and
 - "Memorandum of Understanding between the Nuclear Regulatory Commission and Department of Energy on Cooperation Regarding the Gaseous Diffusion Plants," dated October 28, 1997.

Nothing in this MOU restricts or otherwise limits the authority of either NRC or DOE to exercise its full regulatory authority, including both inspection and enforcement authority.

IV. RESPONSIBILITIES

- A. Upon leasing the Lead Cascade Facilities to USEC and prior to the transition to NRC regulation:
 - 1) DOE is responsible for ensuring that USEC/USEC Inc. has adequately established and is implementing nuclear safety, safeguards and security

programs in accordance with the applicable Price-Anderson Amendments Act requirements and the Regulatory Oversight Agreement between DOE and USEC for activities prior to transition except as provided in IV.A.2 below. This includes DOE continuing to serve as the cognizant security agency (CSA) for USEC Inc.'s subcontractor/vendor/partner facilities performing work related to the Lead Cascade for which there is no current CSA.

- 2) NRC may make observations for the purpose of obtaining information and knowledge of USEC Inc.'s proposed Lead Cascade operations and is responsible for preoperational inspections and licensing reviews. Specifically, NRC is solely responsible for determining the adequacy of the management measures, including quality control, applied to items relied on for safety (IROFS) and other USEC Inc. activities addressed by the Lead Cascade license application and NRC requirements. NRC is solely responsible for activities that affect the safe operation of the Lead Cascade or compliance with 10 CFR Part 70 requirements. As a result of such activities, NRC may take regulatory action it deems appropriate for matters within NRC jurisdiction. Matters associated with activities prior to transition proposed Lead Cascade equipment and operations that are not within NRC jurisdiction will be referred to DOE as described in IV.A.1 above. NRC also has the ability to participate in DOE's regulatory oversight activities for USEC Inc.'s subcontractor/vendor/partner facilities performing work related to the Lead Cascade.

3.B. Following transition to NRC regulation, NRC will be solely responsible for all regulatory oversight of the Lead Cascade including conducting nuclear safety, safeguards, and security reviews and inspections of the Lead Cascade Facilities and activities, other than for activities covered under IV.D. After transition, the NRC may observe activities in the remaining GCEP facilities that could adversely impact the safety/safeguards condition of the Lead Cascade facility. NRC will serve as the CSA for USEC Inc.'s subcontractor/vendor/partner facilities after transition. DOE may participate in NRC's regulatory oversight activities for such subcontractor/vendor/partner facilities.

4.C. Upon termination of NRC's 10 CFR Part 70 license (including any amendments or renewals), DOE will resume its responsibilities for conducting nuclear safety, safeguards and security reviews and inspections of the Lead Cascade Facilities and activities except for those portions that may become licensed as part of USEC Inc.'s commercial gas centrifuge enrichment plant.

7.D. Access Authorizations and CSA

- 1) DOE will continue to be solely responsible for all access authorization programs for USEC Inc., its subsidiaries, and subcontractors/vendors/partners.
- 2) DOE will serve as the CSA for areas of the Portsmouth Site that are leased from DOE but not licensed or certified by the NRC.
- 3) NRC will continue to serve as the CSA for USEC Inc. Lead Cascade support

facilities outside the Portsmouth Site or any of its subsidiaries that are not currently regulated by DOE (e.g., USEC Inc.'s headquarters in Bethesda, MD and research and development facility in Lone Oak, KY).

- 4) DOE will continue to serve as the CSA for USEC Inc. Lead Cascade support facilities outside the Portsmouth Site that are currently regulated by DOE (e.g., USEC Inc.'s Centrifuge Technology Center and K-1600 facilities in Oak Ridge, TN).

V. INTERFACES BETWEEN DOE AND NRC

A. Exchange of Information and Technical Staff Support

1. DOE and NRC agree to make available to each other information and technical support concerning matters of common interest.⁵ DOE and NRC agree to meet, as necessary, at mutually agreeable times and locations, to exchange information on matters of common interest.
2. DOE agrees to notify NRC in a timely manner of the following:
 - a. Substantial proposed changes to the Portsmouth Site involving matters of common interest.
 - b. Substantial proposed changes to the Lease Agreement between the Department of Energy and the United States Enrichment Corporation, dated July 1, 1993.
 - c. Substantial proposed changes to the DOE Regulatory Oversight Agreement between DOE and USEC.
 - d. Substantial proposed changes to "USEC and DOE Resolution of Shared Site Issues at the Gaseous Diffusion Plants (Revision 1)," dated March 30, 1998.
 - e. All changes in the above areas once completed.
3. NRC agrees to notify DOE in a timely manner of the following:
 - a. Substantial proposed changes required by NRC of USEC Inc.'s operations potentially impacting safety, safeguards and/or security on site.

⁵ Matters of common interest concern the Lead Cascade site areas, railways, roadways, structures, systems, components, hazards, activities, tenant mix, population, etc. which can impact safety, safeguards or security risks under DOE or NRC jurisdiction during normal, off-normal, or emergency conditions

- b. Changes to the conditions or terms of the NRC license to be issued to USEC Inc.
 - c. Reportable events which could have a negative impact on centrifuge operations.
4. NRC and DOE will share all observation, audit, assessment, and inspection reports on Lead Cascade systems or areas addressed in this MOU.
 5. NRC and DOE will inform each other of enforcement actions involving the Lead Cascade Facilities and activities.
 6. NRC and DOE agree to mutually develop, maintain, and share a Lead Cascade Facility drawing which reflects each agency's regulatory jurisdiction following transition within the Lead Cascade Facilities. The initial development of this document and any subsequent revisions will be mutually agreed upon by each agency.
 7. Each agency recognizes that it is responsible for the protection, control, and accounting of Restricted Data or other information used or otherwise furnished in connection with this MOU in accordance with its established procedures. To the extent that this information contains classified, proprietary, Safeguards Information (SGI), Official Use Only (OUO), Export Control Information (ECI) and Unclassified Controlled Nuclear Information (UCNI), it will be properly controlled.

B. Emergency Response

1. In accordance with the Federal Radiological Emergency Response Plan (FRERP), the NRC will be the Lead Federal Agency (LFA) for an emergency at the Portsmouth Site. If the origin of the emergency is determined to be in the DOE portion of the plant, then the LFA would be transferred to DOE. DOE and NRC will use appropriate joint procedures which will ensure compatibility in response to emergencies in Leased Facilities under NRC regulatory oversight.
2. The emergency planning requirements for the Lead Cascade, including offsite notifications and emergency classification levels and their corresponding emergency action levels, will be in accordance with the site emergency plans and procedures which will be coordinated by the NRC among shared site regulators and tenants before and during implementation.

C. Referrals

1. During the course of conducting DOE reviews and inspections of nuclear safety, safeguards, and security in leased areas, DOE inspectors may

identify nuclear safety, safeguards, or security concerns that could affect the licensing of the USEC Inc. Leased Facilities and activities. In such instances, those concerns identified by DOE will be referred to the NRC for appropriate action. If DOE identifies situations with immediate safety, safeguards, or security significance, it will immediately communicate this information to USEC Inc. and the NRC's Regional Branch Chief and Lead Cascade Project Manager.

2. Similarly, during the course of conducting nuclear safety, safeguards and security observations and inspections of the Lead Cascade Facilities and activities, NRC personnel may identify nuclear safety, safeguards or security concerns within the area of DOE responsibility. NRC will refer these concerns to the DOE Regulatory Oversight Manager for appropriate disposition. If the NRC identifies situations with immediate safety, safeguards, or security significance, it will immediately communicate this information to USEC Inc. and the DOE Regulatory Oversight Manager.
3. Each agency will be responsible for processing, under its established program(s), allegations – declarations, statements or assertions of impropriety or inadequacy whose validity has not been established – and employee complaints or concerns of regulatory significance. Each agency will keep the other agency informed, as appropriate, of the existence, status and resolution of such allegations, complaints, or concerns. Each agency will assure, in accordance with ~~their~~its agency's procedures, that each allegation, complaint, or concern is promptly referred to the agency or entity that has jurisdiction over the allegation, complaint, or concern.

D. Coordination

1. DOE will coordinate with USEC Inc. to inform NRC's Regional Branch Chief and Lead Cascade Project Manager of GCEP Facility reportable events, under DOE's occurrence reporting system, for which DOE is responsible.
2. DOE and NRC shall consult with each other before disclosing information related to the MOU to preclude dissemination of information which may be exempt ~~for~~from disclosure under the Freedom of Information Act. It is NRC's practice to place all docket-related DOE correspondence that is not classified, restricted or proprietary in the ADAMS System, unless DOE specifically requests, with appropriate justification, that the information be withheld.

5.3. On occasion, DOE may need to move its nuclear materials through USEC Inc.-leased areas to another location. NRC will not require DOE to fill out Form 741 and/or 742 if the nuclear materials only pass through (and are not processed in) USEC Inc.-leased areas, and the time frame in which the nuclear materials are in the USEC Inc.-leased areas ~~is not expected to~~ ~~does not normally~~ exceed eight (8) hours.

E. The transition date will be coordinated with USEC Inc. and mutually agreed upon by NRC and DOE.

VI. POINTS OF CONTACT

- A. The principal senior management contacts for this MOU will be DOE's Director of Nuclear Fuel Security and Uranium Technology, Oak Ridge Operations Office, and the Director, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, NRC. These individuals may designate appropriate staff representatives for the purpose of administering this MOU.
- B. Identification of these contacts is not intended to restrict communication between DOE and NRC staff members on technical and other day-to-day activities.

VII. RESOLUTION OF DISPUTES

- A. If disagreements or conflicts about matters within the scope of this MOU arise, DOE and NRC will work together to resolve these differences.
- B. Resolution of differences between DOE staff and NRC staff will be the initial responsibility of the DOE Regulatory Oversight Manager in Oak Ridge Operations, and the chief of the responsible branch within the NRC.
- C. If the issue can not be resolved at the staff level, the NRC and DOE agree to refer the matter within thirty (30) days to the Director of Nuclear Fuel Security and Uranium Technology, Oak Ridge Operations Office, and the Director, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, NRC.

VIII. EFFECTIVE DATE AND MODIFICATION

This MOU shall become effective upon signing by the DOE Director of the Office of Nuclear Fuel Security and Uranium Technology, Oak Ridge Operations (DOE), and the Director, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards (NRC). It will be subject to periodic reviews and may be amended or modified upon written agreement by the parties. This MOU may be terminated by mutual agreement or by written notice from either party by submittal six (6) months in advance of termination.

IX. SEPARABILITY

If any provision(s) of this MOU, or the application of any provision(s) to any person or circumstances, is (are) held invalid, the remainder of this MOU and the application of such provision(s) to other persons or circumstances shall not be affected.

For the U.S. Nuclear Regulatory Commission

Director, Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards

For the U.S. Department of Energy

Director, Office of Nuclear Fuel Security
and Uranium Technology
Oak Ridge Operations

Regulatory Oversight Meeting for the American Centrifuge Demonstration Facility



**NRC Headquarters
Rockville, Maryland
December 18, 2003**

Purpose

- Discuss the revised draft Memorandum of Understanding (MOU) between DOE and NRC to obtain a clear understanding of roles and responsibilities throughout the phases of the Lead Cascade project

Introduction

- USEC appreciates the DOE and NRC effort in developing the MOU and the stated goal of avoiding dual regulation (MOU, Section III.2)
- USEC believes that the revised draft MOU provides greater clarity and will provide for adequate oversight of safety, security and safeguards
- USEC would like to confirm its understanding of the MOU by “walking through” a few specific examples
- USEC needs clarification regarding the transition of security oversight envisioned by the MOU
- Additional minor markups of MOU suggested for clarity

Program Oversight

- **Demonstration**
 - **Oak Ridge, TN (CTC and K-1600)**
 - DOE provides oversight for safety, security and safeguards
 - **Piketon, OH (Lead Cascade)**
 - DOE will provide oversight for safety, security and safeguards prior to the introduction of UF₆
 - NRC will provide oversight for safety, security and safeguards after the introduction of UF₆ (“possession and use” license)
 - Transition of oversight will occur following NRC pre-operational reviews
 - NRC will have sole responsibility for “activities addressed by the Lead Cascade license application” before and after transition
- **Deployment (Paducah, KY or Piketon, OH)**
 - **NRC oversight for both construction and operation (“uranium enrichment facility” license)**

Program Phases

- **“GCEP Cleanup”**
 - Removal of DOE materials, old centrifuges and equipment
- **“Refurbishment/Installation”**
 - Upgrade facility infrastructure
 - Installation of new centrifuges and support systems
- **“Pre-Operational Reviews”**
 - Management Measures Verification Review
 - Operational Readiness Review
- **“Nuclear Operations”**
 - Introduction of licensed materials
 - Operation on process gas

Regulators and Regulatory Bases

- **DOE**

- Regulatory oversight provided in accordance with applicable Price-Anderson Amendments Act (PAAA) requirements and the Regulatory Oversight Agreement (ROA) between DOE and USEC
- Existing United States Enrichment Corporation procedures and programs developed to meet 10 CFR 76 satisfy DOE requirements

- **NRC**

- Regulatory oversight provided in accordance with the 10 CFR 70 license to be issued
- USEC Inc. procedures and programs developed consistent with the Lead Cascade license application will satisfy 10 CFR 70 requirements

Examples

- **LEAD CASCADE PHASE: “GCEP Cleanup”**
 - Removal of DOE material, old centrifuges and equipment
 - DOE oversight of safety, security and safeguards

Activity	Evaluation Area	Regulator	Regulatory Basis
Removal of old casings	Lifting & Rigging Safety	DOE	PAAA-ROA (10 CFR 76)
Weld cutting of old piping	Fire Safety	DOE	PAAA-ROA (10 CFR 76)
Disassembly of old Centrifuges	Radiation Safety	DOE	PAAA-ROA (10 CFR 76)

Examples

- **LEAD CASCADE PHASE: “Refurbishment/Installation”**
 - Upgrade facility infrastructure
 - Installation of new centrifuges and support systems
 - DOE oversight of safety, security and safeguards
 - NRC standards used for items/programs described in application

Activity	Evaluation Area	Regulator	Regulatory Basis
Welding of new process piping	Fire Safety	DOE	PAAA-ROA (10 CFR 76)
Welding of new process piping	Quality Assurance	NRC	License Application (10 CFR 70)
Installation of re-used casing	Lifting & Rigging Safety	DOE	PAAA-ROA (10 CFR 76)
Qualification of re-used casing	Structural Integrity	NRC	License Application (10 CFR 70)

Examples

- **LEAD CASCADE PHASE: “Pre-Operational Reviews”**
 - Management Measures Verification Review
 - Operational Readiness Review
 - Transition from DOE to NRC oversight

Activity	Evaluation Area	Regulator	Regulatory Basis
Energizing new circuits	Industrial Safety	DOE	PAAA-ROA (10 CFR 76)
Energizing/de-energizing circuits	Process Controls	NRC	License Application (10 CFR 70)
Centrifuge operator training	Personnel Qualification	NRC	License Application (10 CFR 70)

Examples

- **LEAD CASCADE PHASE: “Nuclear Operations”**
 - Introduction of licensed materials
 - Operation on process gas
 - NRC oversight of safety, security and safeguards

Activity	Evaluation Area	Regulator	Regulatory Basis
Energizing new circuits	Industrial Safety and Process Controls	NRC	License Application (10 CFR 70)
Welding of new process piping	Fire Safety	NRC	License Application (10 CFR 70)
Installation of re-used casing	Lifting & Rigging Safety	NRC	License Application (10 CFR 70)

Security Transition Clarifications

- **MOU Section IV(B) states that DOE will transition to the NRC as the Cognizant Security Agency (CSA) for USEC Inc.'s sub-contractors, vendor, and partner facilities that provide services and components for the Lead Cascade**
- **Sub-contractors, vendors, and partners will be performing work for USEC Inc. both before and after the “transition”**
 - Work is independent of when UF₆ is introduced into the Lead Cascade
- **MOU would first require development and implementation of DOE security plan and program followed by an NRC security plan and program**

Conclusions

- **USEC appreciates the DOE and NRC effort in developing the MOU**
- **USEC has suggested minor changes to the MOU for clarity**
- **USEC will continue to work with the DOE and NRC to assure the implementation of safe, effective operations during the various phases of the Lead Cascade project**