April 20, 2007
AET 07-0023

Mr. Michael F. Weber
Director, Office of Nuclear Material Safety and Safeguards
Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

American Centrifuge Plant
Docket Number 70-7004; License Number SNM-2011
Submittal of Information Concerning Radiological Characterization Results for the American Centrifuge Plant

Dear Mr. Weber:

Pursuant to recent discussions with U.S. Nuclear Regulatory Commission (NRC) staff, USEC Inc. (USEC) submits details regarding the radiological characterization survey completed for buildings to be leased/subleased for the American Centrifuge Plant as Enclosure 1 of this letter.

If you have any questions regarding this matter, please contact me at (301) 564-3470.

Sincerely,

Peter J. Miner
Director, Regulatory and Quality Assurance

Enclosures: As Stated

cc: S. Echols, NRC HQ
J. Henson, NRC Region II
B. Smith, NRC HQ

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NMSS01

Enclosure 1 of AET 07-0023

Radiological Characterization Results for the American Centrifuge Plant

Does not contain
Export Controlled Information

Enclosure 1 of AET 07-0023

Reviewer: R.L. Coriell
Date: April 16, 2007

USEC Inc. (USEC) is currently in the process of identifying and leasing/subleasing existing facilities (i.e., buildings, storage yards, land, etc.) from the U.S. Department of Energy (DOE) on the reservation in Piketon, Ohio for the purposes of deploying the American Centrifuge Plant (ACP). As a standard practice, USEC reviews existing DOE information related to the radiological condition of each facility (and also reviews for other potential concerns, such as hazardous chemicals) and conducts radiological monitoring to ensure that all requirements for the posting and control of radioactive material are adhered to as required by current NRC-approved programs and supporting procedures prior to the transition of real property. Recently, during this assessment process, USEC has identified that certain facilities identified for lease/sublease contain DOE legacy radioactive material in the form of contaminated parts, equipment, and structures left behind following the termination of Gas Centrifuge Enrichment Plant (GCEP) operations.

The following facilities/areas were included in this review and surveyed for lease/sublease and turnover to USEC on April 16, 2007:

X-3000 Office Building (less X-220D-1 Telephone Switch)
Common Area surrounding the X-3001, X-3012, and the X-7727H
Common Area west of X-7726
X-1107EP NW Pedestrian Portal
X-2207E NW Parking Lot
X-1020 three rooms-Sublease
XT-860B Rubb Building at X-3346
X-2232C Interconnecting Process Piping
X-7745S Area South of X-3001/X-3002 (Land)
X-7746E Cylinder Storage Yard Area (Land)
X-7746N Cylinder Storage Yard Area (Land)
X-7746W Cylinder Storage Yard Area (Land)
X-7746S Cylinder Storage Yard Area (Land)
X-3346A Feed and Product Shipping and Receiving Building Area (Land)
X-3356 Product and Tails Withdrawal Building (Land)
X-1107FP South Pedestrian Portal
X-1107FV Vehicle
X-2207F Parking Lot

Other facilities/areas included within this recent review and characterization include the following:

X-3346 Feed and Customer Services Building (includes Liquid Effluent Tank)
X-7721 three classified rooms
X-7745R Recycle/Assembly Storage area
X-3002 Process Building

These facilities were not leased/subleased to USEC on April 16, 2007. Other facilities/areas are scheduled for turnover at later dates as shown in Exhibit A of the GCEP Lease.

The assessment process for facilities/areas includes the following steps:

1. Review of DOE radiological survey data, if available
2. Review of Gaseous Diffusion Plant characterization survey data
3. Discussions with knowledgeable personnel concerning historical use of the facility/areas
4. Physical inspection of the facility/area to identify areas of potential concern

Facilities/areas identified with potential radiological concerns based on these four criteria were baseline surveyed to establish posting of the area and labeling of identified equipment. The assessment indicated potential radioactive material in the X-3346 Feed and Customer Services Building, X-7745R Recycle/Assembly Storage area (concrete pad), and X-3002 Process Building.

The following tables summarize the survey results:

Facility	Posted Restricted Areas/Types	Size	Type	Maximum General Area Radiation Levels in Routinely Occupied Areas
X-3346	Fixed Contamination Area	Floors Parts (not installed) Installed Equipment	Fixed Fixed Fixed	0.6 – 0.8 μRoentgen (μR)/hour (hr) 0.6 – 0.8 μR/hr 0.6 – 0.8 μR/hr
X-7745R	Fixed Contamination Area	Concrete Pad	Fixed	0.6 – 0.8 μR/hr
X-3002	Fixed Contamination Area	Floors	Fixed	0.6 – 0.8 μR/hr

Facility	Size	Restricted Area (approximate)	Maximum Contamination Levels (fixed)*	Maximum Radiation Levels on Contact with Parts and Equipment
X-3346	95,000 square feet (ft^2)	625 ft^2	24,000 disintegration per minute (dpm)/100 square centimeter (cm^2) alpha 100,000 dpm/100 cm^2 beta/gamma	< 1.0 millirem (mrem)/hr gamma
X-7745R	384,000 ft^2	0 ft^2 **	<400 dpm/100 cm^2 alpha <5,000 dpm/100 cm^2 beta/gamma	< 1.0 mrem/hr gamma
X-3002	303,680 ft^2	16 ft^2	<400 dpm/100 cm^2 alpha 10,000 dpm/100 cm^2 beta/gamma	< 1.0 mrem/hr gamma

* Radiological monitoring identified no transferable radioactivity above the detection limits of 200 dpm/100 cm^2 alpha and 700 dpm/100 cm^2 beta/gamma

** X-7745R is currently posted by the DOE as a Fixed Contamination Area/Radioactive Material Area due to previous activities/material that was stored in the area by the DOE. USEC has not identified any radioactive contamination above detection limits that would require the area to be posted as a Restricted Area due to the presence of radioactive material.

Although residual fixed radioactive contamination is currently present in two of these DOE facilities (as depicted within the previous tables), the actual locations, amounts, and intensity of activity has been determined to be at normal background radiation levels for whole body exposure. For perspective, if a worker were to be present in these areas for 2,000 work hours, their annual occupational exposure would not exceed 2.0 mrem. No loose (transferable) contamination was present above detection limits for the instruments used, thus there would be no risk of measurable internal dose to the worker from this material