UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

October 26, 2011

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

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT NO. 70-7001/2011-004

Dear Mr. Van Namen:

This letter refers to the results of the above-referenced Nuclear Regulatory Commission (NRC) inspection conducted at the United States Enrichment Corporation, Paducah Gaseous Diffusion Plant in Paducah, KY from July 1 through September 30, 2011. The purpose of the inspection was to determine whether activities authorized by the certificate were conducted safely and in accordance with NRC requirements. The NRC inspectors discussed their findings with members of your staff at exit meetings held on August 4, 2011, for the Radiation Protection and Emergency Planning inspections, on September 22, 2011, for the Environmental, Waste Management, and Transportation inspections, and on October 11, 2011, for this integrated inspection report.

These inspections were examinations of activities conducted under your certificate of compliance as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your certificate of compliance. Areas examined during the inspections are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. No findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions concerning this inspection, please contact me at (404) 997-4418.

Sincerely,

/RA/

Joselito O. Calle, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

Docket No. 70-7001
Certificate No. GDP-1

Enclosure:
NRC Inspection Report No. 70-7001/2011-004

cc w/encl:
Mark Keef
Director of Paducah Government Services
Paducah Gaseous Diffusion Plant
United States Enrichment Corporation
Electronic Mail Distribution

Steve Penrod
Vice President Enrichment Operations
United States Enrichment Corporation
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General Manager
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Vernon Shanks
Manager, Nuclear Regulatory Affairs
Paducah Gaseous Diffusion Plant
United States Enrichment Corporation
Electronic Mail Distribution

cc w/encl: (Cont'd on page 3)

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cc w/encl: (Cont'd on page 3)

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ADAMS: X Yes ACCESSION NUMBER: ML11299A158 X SUNSI REVIEW COMPLETE X FORM 665 ATTACHED

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OFFICIAL RECORD COPY DOCUMENT NAME: G:\DNMSII\FFBII\REPORTS\DRAFT INSPECTION REPORT FOLDER\PADUCAH\70-7001-2011-004 LETTER - EXEC SUMMARY - REPORT DRAFT 4-JCALLE.DOCX

(cc w/encl: cont'd)
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Letter to Mr. Robert Van Namen from Joselito O. Calle dated October 26, 2011

Subject: NRC INSPECTION REPORT NO. 70-7001/2011-004

Distribution w/encl:
T. Hiltz, NMSS
J. Calle, RII
D. Hartland, RII
K. Mattern, NMSS
M. Miller, RII
R. Russell, RII

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	70-7001
Certificate No.:	GDP-1
Report No.:	70-7001/2011-004
Certificate holder:	United States Enrichment Corporation
Facility:	Paducah Gaseous Diffusion Plant
Location:	5600 Hobbs Road, Kevil, KY 42053
Dates:	July 1 through September 30, 2011
Inspectors:	M. Miller, Senior Resident Inspector G. Chapman, Health Physicist J. Pelchat, Senior Fuel Facility Inspector R. Prince, Fuel Facility Inspector R. Russell, Resident Inspector P. Startz, Fuel Facility Inspector M. Thomas, Senior Project Inspector
Approved by:	J. Calle, Chief Fuel Facility Inspection Branch 2 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

United States Enrichment Corporation
Paducah Gaseous Diffusion Plant
Inspection Report 70-7001/2011-004
July 1 – September 30, 2011

U.S. Nuclear Regulatory Commission (NRC) resident inspectors and regional inspectors from the Region II office conducted inspections at the Paducah Gaseous Diffusion Plant (PGDP) during normal and off normal shifts in the areas of management organizations and controls, operator training, operational safety, maintenance and surveillance of safety controls, fire protection, permanent plant modifications, and configuration control. The inspectors performed a selective examination of activities which was accomplished by direct observation of safety significant activities and equipment, tours of the facilities, interviews and discussions with personnel, independent verification of safety system status and limiting operation conditions, corrective actions, and a review of facility records. No findings of significance were identified. The NRC's program for overseeing the safe operation of uranium enrichment facilities is described in Manual Chapter (MC) 2600, "Fuel Cycle Facility Operational Safety and Safeguards Inspection Program," dated January 27, 2010.

Radiation Protection

The inspectors determined that the certificate holder adequately implemented the radiation protection program consistent with the certificate and regulatory requirements. (Section 2)

Radioactive Waste Management

Radioactive waste activities were performed in accordance with regulatory requirements and procedures. (Section 3)

Transportation of Radioactive Material

Shipments of radioactive materials were prepared and shipped in accordance with applicable regulations and plant procedures. Certificates of compliance were maintained and current. Shipping records were properly completed and maintained in accordance with applicable regulations. (Section 4)

Effluent Control and Environmental Protection

Effluent and environmental monitoring program activities were implemented in accordance with approved procedures. Measures had been established to identify adverse trends at appropriate action levels to provide early indication of any increase in effluent release rates. Effluent releases were noted to be well below regulatory limits. Personnel were knowledgeable of their responsibilities. Effluent sampling, analysis, and monitoring equipment were operable and within current calibration. Routine operability checks performed on laboratory analytical equipment were performed in accordance with approved procedures. (Section 5)

Emergency Preparedness

An adequate program was in place and was capable of assessing the impact of changes on the effectiveness of the emergency preparedness program. The site emergency procedures reviewed were consistent with the Emergency Plan. Training for emergency response personnel was performed in accordance with the implementing procedures. The certificate holder had established effective agreements with local offsite responders. Based on operability checks, review of surveillance documentation, and direct inspection, the emergency response equipment, instrumentation, and supplies were maintained in sufficient quantities and a state of operational readiness. (Section 6)

Plant Operations

The inspectors conducted walkdowns in the central control facility, upper cascade, lower cascade, and UF_6 handling areas and observed appropriate conduct of operations and proper staffing levels. The inspectors interviewed Plant Shift Superintendents, building managers, first line managers, operators, maintenance technicians, and operator trainees, on all crews. The inspectors determined operations personnel were knowledgeable of equipment status associated with their assigned facilities and control room personnel activities were commensurate with the plant configuration and plant activities in progress. The inspectors determined corrective action program entries were made to asses operating trends and note out-of-service safety systems. (Section 7)

Configuration Control

The inspectors determined the certificate holder adequately implemented the configuration-control program. The inspectors determined that proposed changes did not involve unreviewed safety questions and that changes to approved design-change documents were controlled. (Section 8)

Maintenance and Surveillance Observations

The inspectors verified maintenance and surveillance activities were performed in a safe manner, testing activities were performed in accordance with procedures, and calibrated measuring and test equipment were used. The inspectors verified test and acceptance criteria were clear and conformed with the technical safety requirements manual, and deficiencies or out-of-tolerance values identified during the testing were documented, reviewed, and resolved. (Section 9)

Management Organization and Controls

The inspectors determined the qualifications and work experience of the individuals recently appointed to key management positions met the requirements of the Safety Analysis Report. The inspectors determined the certificate holder's corrective action program adequately addressed the identification, reporting, tracking, and closure of assessment and tracking reports. The inspectors noted issues entered into the program were adequately screened for

safety significance and appropriate corrective actions identified. The inspectors determined the Plant Operations Review Committee meetings were conducted in accordance with approved procedures. (Section 10)

Attachment
Partial List of Persons Contacted
Inspection Procedures Used
List of Items Opened, Closed, and Discussed

REPORT DETAILS

1. Summary of Plant Status

The certificate holder performed routine operations and maintenance throughout the inspection period. Plant load was maintained at the summer load levels and assay was according to the production schedule throughout this inspection period.

2. Radiation Protection (Inspection Procedure (IP) 88030)

a. Inspection Scope and Observations

The inspectors evaluated the performance of the Radiation Protection (RP) program to verify that it was being implemented and documented in accordance with regulatory requirements. The inspectors discussed organizational changes and personnel responsibilities with the Radiation Protection Manager (RPM) responsible for radiological controls. The RPM reports to the production support manager who in turn reports to the Plant Manager for the Paducah plant. The RPM also has direct access to the General Manager and the Plant Manager on radiation safety matters. The inspectors verified the RP program was independent of direct operations management.

No major organizational changes had occurred since the last inspection. The certificate holder employs two health physicists, 27 health physics technicians, and 21 additional contract health physics technicians. At the time of the inspection there was one vacant position for a health physics technician. The inspectors reviewed the most recent completed annual radiation protection program audit completed by the RP program staff covering calendar year 2010. In addition, the inspectors reviewed a sample of the nine to ten topical assessments of the radiation protection program performed each year by the Nuclear Safety and Quality Organization. The Nuclear Safety and Quality Organization implemented the site-wide quality assurance program and reported directly to USEC corporate headquarters, independently of plant management. These topical radiation safety assessments repeat on a three-year cycle. The inspectors verified that the certificate holder maintained adequate records that documented the appropriate identification, evaluation, and resolution of program review and assessment findings in the Assessment and Tracking Report (ATR) system.

The inspectors reviewed the RP program and its implementing procedures to determine that those procedures were consistent with NRC regulations and certificate requirements. Through interviews with responsible staff and a review of a representative sample of procedure modifications, the inspectors determined that RP procedures were reviewed and updated when necessary and contained an appropriate level of detail for the operations involved. The inspectors determined that modifications of the RP program and procedures were reviewed, approved, and implemented in accordance with regulations and certificate requirements.

The inspectors examined selected portable survey instruments and fixed monitoring equipment to verify that the equipment was calibrated and in good operating condition. The inspectors reviewed records associated with the calibration of portable survey instruments and portal monitors. Calibration and functional performance check

procedures were determined to be current and adequate. Interviews of instrument calibration personnel revealed that they had a good working knowledge of the equipment and the associated calibration procedures. The inspectors reviewed calibration and source response check sources for appropriate configuration and to confirm suitability of sources for their intended function. The inspectors noted that the certificate holder performed instrument calibrations on site. The inspectors reviewed selected calibration records for accuracy and completeness. Through interviews of health physics technicians assigned to various buildings and examination of selected radiation survey instruments and air sampling equipment throughout the facility, the inspectors noted that the equipment and instrumentation observed while in use was in current calibration. The inspectors further noted that radiation survey equipment was, when appropriate, source-checked to confirm its proper operation. The inspectors determined that radiation protection instruments and equipment were properly calibrated and operated in accordance with the applicable certificate holder requirements and procedures.

The inspectors reviewed the certificate holder's internal dosimetry program used to assess doses resultant to the uptake of uranium by workers and to verify the adequacy of the RP program. The certificate holder's calculation of internal dose to employees was primarily based on *in vitro* urine bioassay samples using mass spectroscopy for uranium in coordination with the air sampling program to determine time periods of exposure and radionuclides involved. The uranium was conservatively assumed to be present at an assay level of 5.5% enrichment when determining intake and radiological exposure. The inspectors reviewed procedures and documentation associated with bioassay exposure calculations and determined that if sample results exceed the certificate holder's administrative limits, additional sampling and analysis for isotopic radionuclides was performed utilizing contract laboratories. The certificate holder's limit of detection for in vitro urine bioassay was approximately 0.5 micrograms/liter (µg/l) uranium. The annual radiation dose to a notional individual with a bioassay result of 1 µg/l over the span of a year would be about 0.008 rem. Therefore the inspectors determined that samples at or below the method detection limit would represent a negligible dose, far below any applicable investigative or regulatory limits. The inspectors also confirmed that the certificate holder had implemented adequate procedures to ensure that routine and special bioassay samples were collected as required.

The inspectors reviewed the results of special urine samples that were collected due to upset events to verify the samples were analyzed and assessed as required by certificate holder procedures. Samples from select individuals, based on the nature and location of their work, were also screened for gross beta activity using liquid scintillation counting and, if the results of that analysis exceeded administrative limits, samples were further analyzed for technetium 99 (^{99}Tc).

The inspectors reviewed the quality control program associated with the in-house bioassay program and determined it included the routine use of control charts, and the counting of spiked, blank, and duplicate samples to verify the accuracy of analytical results. The inspectors interviewed personnel responsible for the review and maintenance of bioassay exposure records and determined the individuals to be knowledgeable of program requirements.

The inspectors reviewed the exposure evaluation for a fetus carried by a declared pregnant worker that was performed in late 2010. The certificate holder contracted with the Oak Ridge National Laboratories to perform an independent fetal dosimetric evaluation. The certificate holder utilized the code developed by the Task Group on Internal Dosimetry (INDOS) of the International Commission on Radiological Protection (ICRP). This code utilized biokinetic models from ICRP 30 to estimate the fetal dose resulting from a chronic exposure over a 22-day period. This period was selected as the estimated time frame of exposure based on area entry data and on air sampling data, and best fit the data. The total intake was estimated to be about one 1 nanocurie (nCi) (less than 1 milligram) and the resultant occupational dose to the worker/mother was estimated be 0.003 rem.

The inspector's review determined that using methodology described in NRC Regulatory Guide (RG) 8.36, "Radiation Dose to the Embryo/Fetus" (July 1992), the contractor estimated that the dose to the embryo/fetus to be less than 0.001 rem. Since no external exposure or other internal exposure was determined to have occurred during the gestation period, the total embryo/fetus exposure was determined to be about 0.001 rem. Further inspector review determined that the contractor then performed a second set of calculations to bound their assessment using the "Integrated Modules for Bioassay Analysis" (IMBA) code, based on ICRP reports 66, 67, 68, 69, 71. The calculations assumed a chronic exposure period of 33 days based on the date that the employee last submitted a bioassay sample with no detectable activity and also conservatively assumed a chronic intake based on only the highest bioassay sample result. Using this conservative revision, the worker/mother intake was increased to about 3 nCi and, using ICRP 88 data, the resultant fetal dose exposure was estimated to be about 0.009 rem, which is still significantly below the 0.500 rem fetal exposure limit established in 10 CFR 20.1208. From a statistical prospective, the actual measured bioassay results for the worker/mother more closely fit the INDOS model than the IMBA model and the certificate holder utilized the results from the INDOS and RG 8.36 methods to provide the dose of record consistent with its certificate requirements and procedures. The inspectors determined that the certificate holder properly assessed the dose to the fetus carried by the declared pregnant worker and the fetal exposure was well below any applicable regulatory requirement.

The certificate holder did not, nor was it required to, operate an *in vivo* bioassay program. Were an *in vivo* bioassay of an individual be required on an emergent basis, the certificate holder had procedures to take that individual to a Department of Energy facility for whole body counting. The inspectors determined that the certificate holder had implemented its internal radiation monitoring program in accordance with regulatory requirements.

The inspectors reviewed the certificate holder's implementation of its external dosimetry program and determined that USEC issued thermoluminescent dosimeters (TLDs) to 1838 employees, contractors, and visitors during 2010, which represented an approximate 40 percent increase in the number of individuals monitored in 2009. Certificate holder representatives stated that the expansion of decontamination and decommissioning activities on-site accounted for the major portion of this increase. The inspectors verified that the TLDs issued by the certificate holder were provided and

processed by a supplier that was accredited by the National Voluntary Laboratory Accreditation Program. The inspectors also confirmed that the certificate holder had adequate procedures for ensuring the timely issuance and retrieval of TLDs.

The inspectors reviewed selected personnel exposure data to verify that exposures were maintained as low as reasonably achievable (ALARA) and within the occupational radiation exposure limits specified in 10 CFR 20.1201. Table 1 below displays the occupational exposure data for calendar years (CYs) 2008 through 2010.

Table 1 – Occupational Exposure Data

Year	Mean Deep Dose Equivalent (DDE)-rem	Maximum DDE-rem	Mean Committed Effective Dose Equivalent (CEDE)-rem	Maximum CEDE-rem	Mean Total Effective Dose Equivalent (TEDE) – rem	Maximum TEDE - rem
2008	0.004	0.294	N/D†	0.026	0.056	0.294
2009	0.004	0.277	N/D	0.018	0.051	0.277
2010	0.004	0.230	N/D	0.013	0.036	0.230

† - nondetectable

In addition, the certificate holder also assessed the mass of uranium in urine to demonstrate compliance with the requirement in 10 CFR 20.1201(e) to limit an individual's intake of soluble uranium to 10 milligrams a week in consideration of chemical toxicity. Table 2 summarizes the maximum individual intakes of uranium calculated by the certificate holder.

Table 2 – Maximum Individual Intakes of Soluble Uranium

Year	Intakes of Uranium – milligrams/week
2008	1.2
2009	0.4
2010	0.6

In 2010, no occupationally exposed individuals monitored by the certificate holder exceeded the certificate holder's administrative dose limit of 0.5 rem, which was ten percent of the occupational dose limit specified in 10 CFR 20.1301.

The inspectors reviewed skin dose estimates associated with personnel contamination in 2010 and 2011. The certificate holder utilized the VARSKIN code to estimate skin dose, an algorithm used by the NRC staff to calculate skin dose from radioactive contamination of the skin or protective clothing. The highest skin exposure to an individual took place as the result of skin contamination that occurred during an asbestos remediation activity in December 2010. The contaminated areas on the individual were repeatedly decontaminated in accordance with plant procedures. However, some contamination became entrained in the skin tissue and further efforts to remove the

contamination would have increased the risk of tissue trauma and resultant internal exposure. The certificate holder evaluated the employee's skin exposure using the VARSKIN code and survey results from the date of the exposure. Subsequent surveys determined that the skin contamination decayed to non-detectable levels over a period of about eight days. The calculated shallow dose equivalent (skin dose) based on day one survey results was 0.011 rem as compared to the regulatory limit of 50 rem. At the request of the inspectors, the certificate holder re-evaluated the exposure to account for the presence of contamination over a period of eight days. The re-evaluation used the conservative assumption that the levels of contamination remained constant over the span of eight days, even though surveys of the individual demonstrated that the levels of radiocontamination were, in fact, decreasing. The calculated skin exposure over a period of eight days was 0.136 rem. This was well below the regulatory limit of 50 rem and the actual dose would have been much less as a result of the decreasing levels of contamination present in the individual's skin. The inspectors determined that the release of this individual to go home posed a negligible potential for radiation exposures to any member of the public.

The inspectors determined that the certificate holder had implemented its external radiation monitoring program in accordance with regulatory requirements. Combined with the findings regarding the certificate holder's internal dosimetry program, the inspectors determined that occupational radiation doses were properly monitored and well below the applicable regulatory limits.

The inspectors reviewed elements of the certificate holder's program relating to the use and maintenance of respiratory protection equipment. Certificate holder employees wore a respirator a single time and then turned it in. Staff members responsible for the maintenance of respirators disassemble, clean, and rebuild the respirators prior to reuse. Based on field observations and discussions with responsible personnel, the inspectors determined that the respiratory protection equipment was adequately maintained and used in accordance with approved procedures. Provisions to ensure that only qualified individuals use respiratory protection equipment were adequate and implemented in accordance with approved procedures. The inspectors determined that the certificate holder's respiratory protection program was adequate.

The inspectors reviewed radiological signs and postings within the controlled areas and to entrances leading into the controlled areas to determine compliance with regulatory requirements. Radiological areas were posted in accordance with certificate conditions and accurately reflected radiological conditions in the areas. The inspectors walked down the C-333, C-335, C-337 and C-400 buildings and noted that the facilities were adequately posted and controlled.

The radiation survey program was reviewed to determine if surveys were effective in the identification of airborne radioactive material and radioactive surface contamination. The inspectors reviewed and determined that the certificate holder had established schedules for periodic surveys of work areas. The inspectors also observed the RP technicians collecting stationary air samples in the controlled areas The inspectors observed RP technicians and other plant employees performing routine surveys in the cascade buildings and at the exit locations from controlled areas and determined that the technicians demonstrated adequate contamination survey techniques.

The inspectors reviewed selected survey results for accuracy and completeness. Procedures associated with the scheduling and performing of radiological surveillance activities were determined to be adequate. The area radiation and contamination survey programs were appropriately implemented to protect workers and identify potential work areas that might pose an internal or external radiation hazard.

The certificate holder's ALARA program was reviewed to determine if the program and ALARA goals were developed and implemented in accordance with the certificate. On a quarterly basis, the certificate holder conducted Radiation Protection Committee meetings detailing ALARA goals and exposure summaries to identify trends. In cases where exposures were elevated, consideration was given to ways for reducing exposures. The certificate holder was below the ALARA goals it had set for CY 2010. Based on records reviewed and interviews, the inspectors determined that the certificate holder's ALARA program was properly implemented.

b. Conclusion

No findings of significance were identified.

3. Radioactive Waste Management (IP 88035)

a. Inspection Scope and Observations

The inspectors evaluated whether the certificate holder has established and was maintaining adequate and controlled procedures and quality assurance (QA) programs to eeensure compliance with the requirements of 10 CFR Part 20 and 10 CFR Part 61 applicable to low-level radioactive waste from, classification, stablilization, and shipment manifests/tracking.

The inspectors reviewed the QA program for radioactive waste management and determined that the certificate holder was performing audits as specified in the license application. The findings from these audits were appropriately being entered into a corrective action program for resolution. The inspectors reviewed the certificate holder's program for classifying low-level radioactive waste. The inspectors looked at the procedures for classifying waste as well as records relating to waste. The inspectors determined that the certificate holder had an effective program for determining the classification of low-level waste.

The inspectors reviewed the certificate holder's program for ensuring that the waste form meets the requirements of 10 CFR 61.56. The certificate holder had adequate procedures in place to ensure that waste was packaged in compliance with the regulations.

The inspectors reviewed the certificate holder's procedures for labeling waste shipments and tracking radioactive waste. The procedures were adequate to ensure that radioactive waste was properly labeled based on the contents of the shipment, and the procedures specified actions to be taken should the shipments not reach the intended destination in the time specified.

The inspectors reviewed the procedures for placement, inspection, and repackaging of radioactive waste. The certificate holder had programs in place to ensure that solid waste was being placed in specific storage areas based on the type of waste. The certificate holder also had requirements for periodic inspection and repackaging of waste.

The inspectors performed walk-downs of selected certificate holder radioactive storage areas. The storage areas had adequate postings to ensure that the proper material was being stored in the area and the material was safely stored in accordance with the nuclear criticality safety requirements. The containers were properly labeled to reflect the material within the containers and the containers were generally in good physical condition. The containers were being stored in a manner that provided immediate access for inspections.

b. Conclusion

No findings of significance were identified.

4. Transportation of Radioactive Material (IP 86740)

a. Inspection Scope and Observations

The inspectors evaluated whether the certificate holder had established and was maintaining an effective management-controlled program, to ensure radiological and nuclear safety in the receipt, packaging, delivery to a carrier and, as applicable, the private carriage of licensed radioactive materials. The inspectors also evaluated whether transportation activities were in compliance with the applicable NRC (10 CFR Parts 20 and 71) and Department of transportation (DOT) (49 CFR Parts 171-178) transport regulations.

The inspectors observed the certificate holder load packages of material for domestic transport using the UX-30 packaging design. The personnel loading the packages followed the appropriate procedures. The inspectors also interviewed the radiation protection and transportation personnel to ensure they were knowledgeable of NRC and DOT requirements.

The inspectors reviewed the certificate holder's process for an export to Japan of uranium hexafluoride using the MST-30 packaging design. The certificate holder used the MST-30 package certified under the Japanese Certificate of Competent Authority J/159/AF-96 and revalidated by the U.S. DOT for import/export use only to/from the United States under DOT Competent Authority Certification Certificate USA/0585/AF-96, Revision (Rev.) 2, dated November 30 2007. The certificate holder has been granted a general license under 10 CFR 71.21, "General license: Use of foreign approved package," to transport, or deliver for transport, licensed material in a package, the design of which has been approved in a foreign national competent authority certificate, that has been revalidated by DOT as meeting the applicable requirements of 49 CFR 171.12.

Certain conditions of 10 CFR 71.21 are required to be met in order to use the general license provision for transport of licensed material. The inspectors verified that the majority of provisions in 71.21 were met by the certificate holder.

The inspectors reviewed the training of the transportation staff to ensure they had received the proper training as specified by the license.

The inspectors reviewed audits of the transportation program and determined the certificate holder was performing periodic audits of the transportation program as required. The results of the audits were being appropriately addressed in the corrective action program.

The inspectors concluded that the transportation activities reviewed were conducted in accordance with requirements.

b. Conclusion

No findings of significance were identified.

5. Effluent Control and Environmental Protection (IP 88045)

a. Scope and Observations

The scope of this inspection include the following sections of Inspection Procedure 880454: Management Controls (02.01); Quality Control of Analytical Measurements (02.02), Program Implementation (02.03); Radioactive Liquid Effluents (02.04); Radioactive Airborne Effluents (02.05); and Procedures for Controlling the Release of Radioactive Liquid and Gaseous Effluents (02.06).

The inspectors reviewed the certificated holder's organization and staffing structures associated with the effluent and environmental monitoring programs. They determined that no significant organization or personnel changes had been made since the last inspection.

The inspectors reviewed procedures relating to the conduct and implementation of the effluent and environmental monitoring programs. They interviewed personnel regarding processes utilized by the certificate holder to evaluate, review, and track and trend data associated with effluent and environmental monitoring programs. The inspectors determined that adequate controls are in place to identify adverse trends and that appropriate action levels have been established to provide early indication of adverse trends. Action levels are established to maintain offsite doses at a small fraction of regulatory dose limits. The inspectors reviewed and discussed with certificate holder personnel the most recent NESHAP Annual Report for USEC, dated July 14, 2011. Effluent releases were noted to be well below regulatory limits. No adverse trends were identified.

The inspectors toured the Analytical Laboratory facility and noted that equipment utilized for the analysis of effluent and environmental samples and laboratory areas were adequately maintained. They reviewed procedures and associated data sheets to

determine if appropriate controls have been established to maintain analytical equipment within established operating and calibration parameters. The inspectors noted that the certificate holders' program utilizes spiked and blank samples as quality control measures when analyzing samples. Based on discussions with responsible personnel, the inspectors determined that personnel were knowledgeable of the importance of maintaining analytical equipment within prescribed operating limits.

The inspectors observed the performance of personnel while collecting stack effluent samples from the building C-310 vent stack. Certificate holder personnel demonstrated and explained various aspects of their functions associated with the maintenance and operation of the vent stack sampling equipment and remote alarm functions. Certificate holder personnel where knowledgeable of their responsibilities and activities were performed in accordance with approved procedures. The inspectors interviewed Building 310 Area Control Room operators pertaining to response actions in the event that they encountered a local low-flow alarm on the vent stack sample line. Individuals were knowledgeable of required actions in the event of an alarm indication.

The inspectors observed the chain-of-custody steps associated with the collection of the C-310 vent stack sample. Certificate holder personnel prepared the required sample aliquots and labeled samples in accordance with the analytical laboratory sample labeling program. The inspectors reviewed and discussed the vent stack sample analysis results with laboratory personnel. They determined that adequate controls are in place to ensure the validation and verification of effluent monitoring data. The inspectors determined that personnel were knowledgeable of the importance of maintaining the accuracy of environmental and effluent monitoring data.

The inspectors reviewed records associated with the calibration and operation of the C-310 stack vent monitor. They determined that calibration records were current and that effluent monitors calibrated in accordance with approved procedures.

The inspectors reviewed the certificate holder's corrective action program data base for issues relating to the effluent and environmental monitoring programs. They noted that the threshold for entering issues into the corrective action program was appropriate for the timely identification of any adverse trends relating to these program areas.

b. Conclusion

No findings of significance were identified.

6. Emergency Preparedness (IP 88050)

a. Scope and Observations

The inspectors evaluated revisions to the Emergency Management Plan, USEC-01-EP, Rev. 127, to assess the impacts on the effectiveness of the emergency preparedness program. Plan changes were submitted to the NRC within the required time frame and in accordance with requirements of 10 CFR 76.91(o). The inspectors reviewed revisions to the Emergency Management Plan and concluded that the changes were primarily

administrative updates. The inspectors evaluated a select number of emergency preparedness implementing procedures to evaluate the certificate holder's compliance with them. The inspectors determined that no significant physical changes had occurred to the facility or to the support infrastructure that would negatively impact compliance with the Emergency Management Plan or the emergency preparedness implementing procedures.

The inspectors conducted physical inspections of the facility to evaluate the material condition and operational status of safety systems, equipment, and supplies required to support emergency response challenges. Areas reviewed included vehicles located at the onsite fire station including fire apparatus, emergency response/rescue trucks, ambulance, and other support trailers containing equipment and supplies. The inspectors traveled to all four remote public warning systems used to warn the local public about potential events at the plant. Each of the four public warning systems were in good physical condition, the towers were equipped with lightning protection and were grounded, the local site was clear of timber that could fall and damage the system, electrical enclosures housing backup batteries and electrical control systems were in good condition, and all hardware was locked and resistant to vandalism. The inspectors verified that periodic testing of various public warning systems, plant sirens, and other plant communications systems had been completed as required.

The inspectors conducted select tours of the facility focusing on the Emergency Operations Center, onsite fire station, and onsite health services facility. The inspectors verified that current copies of the Emergency Management Plan and emergency preparedness implementing procedures were readily available to the emergency organization personnel. The documentation was properly located in designated buildings and in response vehicles. The certificate holder's pre-fire plans had previously been reviewed in a June 2011 inspection and were determined to be adequate.

The inspectors reviewed training records for select individuals assigned to various emergency response organization positions and determined that the appropriate personnel had been trained in accordance with procedural requirements. The scope of training requirements was appropriate for the assigned actions and responsibilities of personnel. Inspectors verified that several key positions including the Plant Shift Supervisor/Crisis Manager and the Incident Commander had received the training as outlined in the training requirements. Inspectors determined that emergency response training was position-specific and included performance based training utilizing drills, exercises, maintaining knowledge of changes to the Emergency Management Plan and emergency preparedness implementing procedures, and reviewing and incorporating lessons learned. The inspectors also conducted an interview with the alternate Plant Shift Superintendent/Incident Commander to assess their familiarity with procedures and the responsibilities of the Incident Commander. The interview included challenging the individual with postulated accident scenarios to evaluate their response relative to the Emergency Management Plan. The individual demonstrated adequate knowledge and understanding of the Emergency Management Plan and made timely and accurate emergency classifications in accordance with the emergency plan.

The inspectors participated in and evaluated an annual evacuation drill conducted on August 3, 2011. The announced drill involved the activation of the onsite evacuation sirens. Certificate holder evaluators were deployed to monitor the progress of personnel as they evacuated buildings and traveled to their assigned assembly points. The exercise was determined to be successful except that personnel evacuating from the C-333 building reported to the wrong assembly point. The mistake in assembly point was self-identified and the issue was entered into the certificate holder's corrective action system as ATRC-11-1999. The NRC inspectors evacuated from the C-100 building in accordance with the Facility Evacuation Action Plan, KY/B-368, Rev. 7.

The inspectors reviewed the certificate holder's conduct of periodic emergency preparedness drills and exercises, and determined that the activities had been conducted in accordance with the certificate holder's procedures and regulatory requirements. The inspectors verified that drill critiques had been conducted and issues identified during the critiques had been captured in the corrective action program or the Emergency Management Lessons Learned tracking system.

The inspectors reviewed the certificate holder's agreements with local offsite assistance organizations and determined that the agreements had been adequately maintained as agreed and were current. The certificate holder had offered and provided facility familiarization tours, and had conducted safety training for offsite support agencies on a periodic basis. The inspectors traveled to Paducah Kentucky and interviewed representatives of the Paducah Fire Department, the Western Baptist Hospital, and the McCracken County Sheriff's Office. The interviews included inquiries regarding their interaction, support of, and relationship with the certificate holder. The interview responses were consistently positive. Positive responses from the interviews supported the conclusion that the certificate holder had maintained adequate engagement with the appropriate offsite support agencies and had provided adequate training to their personnel. The certificate holder had also been supporting an active outreach program consisting of a biannual calendar that was distributed to adjacent neighboring residences and businesses. The calendar included information about the public warning sirens, automated phone notification system, area map, facility telephone numbers, and sheltering information during a plant emergency.

The inspectors reviewed audits conducted by the certificate holder. Inspectors focused on audits involving the emergency preparedness program over the previous year and noted that the audits covered the following topics as required by the Emergency Management Plan: procedures, facilities, equipment, training, drills, and exercises. Deficiencies identified during the audits had been entered into the corrective action program or the Emergency Management Lessons Learned database. The certificate holder had adequately tracked the progress of the corrective actions using ATRs or the Lessons Learned Database. The corrective action programs adequately addressed the identification, reporting, tracking and closure of ATRs. The inspectors noted that audit teams performed follow-up surveillances to validate that deficiencies had been resolved and closed in accordance with procedures.

The inspectors noted that the certificate holder was continuing to implement their emergency preparedness program improvements including revised procedures, implementation of lessons learned, and deployment of additional equipment in accordance with the results of an internal self-assessment and correction action plan prompted by the Fukushima Daiichi event.

b. Conclusion

No findings of significance were identified.

7. Plant Operations (IP 88100)

a. Scope and Observations

The inspectors observed routine operations and conducted walkdowns during this inspection period in the central control facility, the process buildings, the purge and product building, the surge and waste building, the toll transfer and sampling building, and both of the feed vaporization facilities. The inspectors reviewed the status of the system's operability in the certificate holder's computer tracking system, iPlant. The inspectors assessed operations personnel alertness and general knowledge of equipment status associated with their assigned facilities. The inspectors conducted interviews with building managers, first line managers, operators, and operator trainees regarding safety training and procedures for handling safety issues. While conducting plant tours, the inspectors noted that housekeeping and the legibility of radiological signs were adequate.

The inspectors determined that all required notices to workers were appropriately and conspicuously posted in accordance with 10 CFR 19.11 and 10 CFR 21.6. The inspectors confirmed that the certificate holder met the requirement to conspicuously post copies of NRC Form-3, "Notice to Employees," in sufficient quantities and locations to permit workers engaged in licensed activities to observe them on the way to or from any activity location to which the document was applicable.

The inspectors reviewed shift staffing work sheets and observed control room personnel and determined that proper control room staffing was maintained, access to the control room was properly controlled, and operator behavior was commensurate with the plant configuration and plant activities in progress. The inspectors reviewed control room and plant shift superintendent log books, daily operating instructions, and corrective action program entries to asses operating trends and activities and to note any out-of-service safety systems.

The inspectors toured portions of the upper cascade, lower cascade, and UF_6 handling areas on a near-daily basis ensuring that the entire plant was toured each month. The inspectors checked general plant areas for unauthorized storage of flammable material or excessive fire loads.

The inspectors assessed the operability of selected safety equipment by reviewing the lockout-tagout sheets for selected systems. For recent lockout-tagouts, the inspectors verified that the systems were properly returned to the normal configuration. The inspectors selected two safety-related lockout-tagouts in effect and independently verified they were properly prepared and implemented. The inspectors verified the proper selection and placement of tags on breakers, switches, and valves. Additionally, the inspectors verified that tagged components were in the required positions.

b. Conclusion

No findings of significance were identified.

8. Configuration Control (IP 88101)

a. Scope and Observations

The inspectors reviewed the adequacy and implementation of the facility's configuration-control program. The inspectors determined that proposed changes did not involve un-reviewed safety questions and that changes to approved design-change documents were controlled. The inspectors reviewed plant operations review committee packages, attended plant operation review committee meetings, interviewed the parties responsible for proposed changes, and walked down the implementation of the changes.

b. Conclusion

No findings of significance were identified.

9. Maintenance and Surveillance Observations (IP 88102 and 88103)

a. Scope and Observations

For several maintainence activities and surveillance tests, the inspectors observed prejob briefs; verified the latest edition of the procedure was in use; verified the use of an approved work package; and confirmed the tasks were performed at the required frequency.

During the observation of maintenance and surveillance activities, the inspectors verified that: activities observed were performed in a safe manner; testing was performed in accordance with procedures; and measuring and test equipment were within calibration due dates. The inspectors verified technical safety requirements manual limiting conditions for operation were entered, when appropriate; removal and restoration of the affected components were properly accomplished; test and acceptance criteria were clear and conformed with the technical safety requirements manual and the safety analysis report; and deficiencies or out-of-tolerance values identified during the testing were documented, reviewed, and resolved by appropriate management personnel.

b. Conclusion

No findings of significance were identified.

10. Management Organization and Controls (IP 88105)

a. Scope and Observations

The inspectors discussed the current organization with the certificate holder management and noted that several organizational changes had been made since the last inspection of management organization and controls. New personnel were appointed to the positions of General Manager, Plant Manager, Customer Service and Product Scheduling Manager, and Engineering Manager. The inspectors discussed the process utilized by the certificate holder to ensure that individuals appointed to positions described in the Safety Analysis Report (SAR) met the applicable qualification requirements. Based on a review of documentation and discussions with certificate holder personnel, the inspectors determined that adequate measures have been established to ensure that qualifications and work experience requirements were reviewed and verified prior to appointing individuals to the applicable positions.

The inspectors reviewed the certificate holder's corrective action program procedures. Program requirements adequately addressed the identification, reporting, tracking and closure of ATRs. The inspectors reviewed the daily ATR summary reports covering a period of several weeks. The inspectors noted that the threshold for identifying and entering issues into the problem identification and resolution program was appropriate. Based on discussions with certificate holder personnel and a review of applicable documents, the inspectors determined that ATRs were adequately screened for safety significance and appropriate corrective actions identified.

The inspectors determined Plant Operations Review Committee (PORC) meetings were regularly scheduled and meetings were conducted in accordance with approved procedures with the required quorum of members present. Presenters were prepared and agenda items were appropriately reviewed. The inspectors determined that the PORC was functioning in accordance with plant procedures and certificate requirements.

The inspectors reviewed selected conditions adverse to quality and significant conditions adverse to quality reports for completeness and accuracy. The inspectors determined that incident investigation reports adequately identified apparent and root causes of an event. Investigation reports were developed, reviewed, and corrective actions identified and assigned in accordance with the certificate holders corrective action program.

The inspectors reviewed the certificate holder's program associated with the issuance of procedures and controls with respect to procedure revisions. Administrative requirements describing the procedure review, distribution and control, and approval processes were established. The inspectors interviewed personnel responsible for the procedure control program and determined that personnel were knowledgeable of program requirements and their responsibilities. Controls for the issuance and distribution of controlled copies of procedures were adequately implemented.

b. Conclusion

No findings of significance were identified.

11. Exit Meetings

The inspectors summarized the inspection scope and results for Radiological Protection and Emergency Preparedness on August 4, 2011, with J. Lewis and members of his staff in an exit meeting.

The inspectors summarized the inspection scope and results for the Environmental, Waste Management and Transportation on September 22, 2011, with J. Lewis and members of his staff in an exit meeting.

The inspectors summarized the inspection scope and results for this integrated inspection report on October 11, 2011, with Mr. J. Lewis and members of his staff. The inspectors asked the certificate holder whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified. No dissenting comments were received from the certificate holder.

ATTACHMENT

1. Partial List of Persons Contacted

Name	Title
Keith Ahern	Production Support Manager
Paul Beane	Nuclear Safety and Quality Manager
Brian Bell	Waste Management and Environmental Control Manager
Mike Boren	Regulatory Compliance and Nuclear Operations
Kent Brandon	Radiochemist
Mike Buckner	Plant Manager
Rickie Byrd	Section Manager
Spencer Childers	Quality Control Manager
Mark Grisham	Health Physics Section Supervisor
Sherrill Gunn	Operations Manager
Lee Fink	Regulatory Engineer
Dallas Gardner	Regualtory Engineer
Robert Helme	Engineering Manager
Tracey Henson	Nuclear Criticality Safety Manager
O.E. Hickman	Radiation Protection Manager
James Lewis	General Manager
Charlie Martin	Field Services Manager
Jerome Mansfield	Emergency Management
Louis Moffatt, II	Cascade Manager
Holly Nelson	Sample Management
Steve Penrod	Vice President Enrichment Operations
John Price	Analytical Laboratory Manager
Vernon Shanks	Regulatory Affairs Manager
Stephen Smith	Security Manager
Diane Snow	Environmental, Safety, and Health Manager
Dave Stadler	Lead, Regulatory Engineer
Jeffery Stephens	Regulatory Engineer
April Tilford	Emergency Management
Craig Willett	Maintenance Manager

2. List of Items Opened, Closed, and Discussed

Opened

70-7001/2011-005	LER	Loss Of Criticality Control Report Required Under Bulletin 91-01, Supplement 1, for Spacing of Disassembed Pump At 08:15 a.m. on August 19, 2011, the certificate holder discovered that shop personnel disassembeled a pump and the shop's personnel placed the pump's two piston slides and cam within 2 feet of the internal oil separators. Nuclear Criticality Safety Approval (NCSA) GEN-011 required a minimum 2-foot edge-to-edge spacing between pump

		housing subcomponents and internal oil separators to ensure interaction between fissile items was minimized during movement and storage. The Plant Shift Superintendent and the Nuclear Criticality Safety Manager were notified and access to the area was restricted. Event Number: 47176; ATR-11-2161; PGDP Event Report No. PAD-2011-13
70-7001/2011-007	LER	Scale Pit Water Detection Alarm Malfunction At 8:54 a.m. on September 30, 2011, Operators notified the Plant Shift Superintendent (PSS) that an operator found water in the withdrawal Position 5 weight-scale pit. The operator also found that the sump pump breaker was tripped. The operator closed the sump pump breaker and the pump started immediately. The water was removed by the sump pump. There were no UF_6 cylinders in the withdrawal room during this event. The water came from a leaking steam condensate valve. The nuclear criticality safety manager concluded that because the Purge & Product Building Scale Pit Sump Pump did not function as credited in the nuclear criticality safety evaluations/approvals, this event was a violation of NCSE 032 (NCSA 310-004) and one leg of double contingency was lost. The certificate-holder reported this event to the NRC as a 24-hour event report in accordance with NRC Bulletin 91-01 Supplement 1. Event Number: 47310; ATR-11-2160; PGDP Event Report No. PAD-2011-17
70-7001/2011-004-01	URI	Process Gas Leak Detector (PGLD) General License Requirements The certificate-holder had in its possession over 4,000 process gas leak detectors and each one contained 80 µCuries of Americium-241. The labels on these devices described general license requirements and requirements for labeling, leak testing, repairing, transfer, and disposal. The certificate-holder had not disclosed possession of these devices in the initial *Certificate Application and Request for Materials Authorization* to the NRC.

Opened and Closed

70-7001/2011-003 LER "Alert" Declared Due to Onsite Release of Fluorine/Chlorinated Fluorine Gas Mixture

The Plant Shift Superintendent properly declared an "Alert" based on a chlorine trifluoride release from the Drying Agent Storage Building, C-350, on July 27, 2011 at 4:15 a.m. The certificate-holder terminated the "Alert" at 6:31 a.m.

The NRC resident inspectors responded and went to the Emergency Operations Center and the scene of the release when the "Alert" was declared. The NRC does not have regulatory authority over chlorine trifluoride storage. The resident inspectors observed the certificate holder's implementation of the Emergency Plan and their corrective actions. The inspectors had no further questions. This Event Notification was closed.

Event Number: 47099; ATR-11-1900 through1902; PGDP Event Report No. PAD-2011-11

70-7001/2011-004 LER Unplanned Contamination Area (this report was retracted)

On July 31, 2011 a water leak was found going from the ceiling to the floor in the north end of the Purge & Product Building C-310. The leak created a puddle about 8' by 6'. Health Physics surveyed the floor and posted the area as a contaminated area.

This certificate-holder reported this event under the 24-hour event reporting requirements of 10 CFR 76.120(c)(1)(i).

The certificate-holder decontaminated the area and removed the contaminated area postings before the 24-hour reporting time limit expired. The certificate-holder had placed a bucket on the floor to contain the continuing leak and posted the bucket as a contaminated bucket. With the leak contained, the floor decontaminated and the area returned to the radiological control level that existed prior to the leak within the 24-hour reporting time limit, the certificate-holder concluded that this event notification was not required. The certificate-holder retracted this notification.

		Regional Radiation Protection inspectors reviewed this event and had no further questions. This Event Notification was closed. Event Number: 47111; ATR-11-1944; PGDP Event Report No. PAD-2011-12
70-7001/2011-006	LER	Hydraulic Leak Contained On Site - State Officials Notified On September 30, 2011 at 7:30 a.m. [CDT], the main hydraulic hose ruptured on a coal truck making a routine delivery to the CÀ600 coal pile. The PSS was notified and it was determined that approximately 30 to 35 gallons of hydraulic fluid was released on the coal pile delivery area which was greater than the reportable quantity for petroleum products. At 8:10 a.m. [CDT], the PSS made notification to the Kentucky Environmental Response Team (KERT) and a courtesy notification to the Kentucky Department for Environmental Protection (KDEP.) The event was reportable under Criteria P in Appendix D of USEC procedure UE2-RA-RE1030 as any event or situation, related to the health and safety of the public or on-site personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made. The resident inspector's reviewed the certificate holder's corrective actions and have no further questions. This Event Notification was closed. Event Number 47307, ATR -11-2607, PGDP Event Report No. PAD-2011-16
70-7001/2011-002-03	URI	Report of Medical Care for Contaminated Worker 10 CFR Part 76.120 required the certificate holder to notify the NRC within 24 hours for events involving unplanned medical treatment of a radioactive contaminated individual at a medical facility. In contrast, the SAR Section 6.9, "Event Investigations and Reporting," allowed an exclusion for reporting contaminated workers treated at the on-site medical facility. The certificate holder has revised SAR Section 6.9 to align with 10 CFR Part 76.120 requirements.

Closed

70-7001/2010-002-01	URI	Widespread Contamination Event on March 16, 2010 This is closed to 70-701/2010-02-01 – Confirmatory Order dated August 18, 2009. Corrective actions will be reviewed as part of the inspection for the Confirmatory Action Letter.
70-7001/2007-401-01	URI	Classified Mailing This is closed to 70-7001/2010-02-01 – Confirmatory Order dated August 18, 2009. Corrective actions will be reviewed as part of the inspection for the Confirmatory Action Letter.
70-7001/2007-401-02	VIO	Employee failed to follow procedures when he used a Play Station while on duty in Feburary 28, 2007. The certificate holder has implemented the required corrective actions and no similar violations have occurred during the subsequent 4 years. ATRC-07-0504
70-7001/2011-002-01	VIO	Unsecured Radioactive Source The certificate holder appealed the significance determination for this violation because they concluded that this violation was minor. Upon further review, the NRC withdrew the violation.
70-7001/2009-001-01	VIO	Routinely Exceeds TSR Hours of Work Limits. The inspectors reviewed the corrective actions implemented by the certificate-holder. The corrective actions have resulted in a 90% reduction in the number of times employees have had to work more than the TSR Hours of Work Limits from 2008 to 2011. This Violation is closed.

Discussed

None

3. List of Inspection Procedures Used

Regional Inspections

88030 Radiation Protection
88035 Radioactive Waste Management
86740 Transportation
88045 Effluent Control and Environmental Protection
88050 Emergency Preparedness

Resident Inspections

88100 Plant Operations
88101 Configuration Control
88102 Surveillance Observations
88103 Maintenance Observations
88105 Management Organization and Controls

4. List of Documents Reviewed

Radiation Protection (88030)

Conduct of Radiological Operations, DP2-HP-RP1030, Rev. 2, dated 8/27/10
Staplex High Volume Air Sampler with AKI, TBRA Number: 01-0007, dated 7/3/01
Transuranic Contamination Bounding Value, 2002 Annual Report, dated 6/23/03
Calculation of Intake Estimates and Assignment of Internal Dose from Bioassay Measurements, CP4-HP-DS7603, Rev. 2, dated 3/28/11
Routine and Special In Vitro Bioassay, CP4-HP-DS7600, Rev. 3, dated 5/3/02
Dosimetry Program Standards, UE2-HP-RP1034, Rev. 3, dated 3/10/06
PGDP Urinalysis Program for Detection of Intakes of Radionuclides, CP2-HP-DS1030, Rev. 6, dated 2/10/11
Embryo/Fetus Protection Program, CP2-HP-RP1034, Rev. 1, dated 5/31/05

Effluent Control and Environmental Protection (88045)

CP4-EW-EV6250, Rev. 10, C-310 Vent Stack Sampling
CP4-EW-EV6203, Rev. 6, Sampling at KPDES Locations
CP4-EW-EV6305, Rev. 2, Field Use of American Sigma Flow Meter and Refrigerated Sampler
CP4-TS-RL6007, Rev. 3, Calibration and Performance Checks for VAX Based Alpha Spectrometer System
CP4-TS-RL7100, Rev. 5, Analysis by Liquid Scintillation Counting
CP4-TS-RL7111, Rev. 5, Gross Alpha and Beta Determination
CP4-TS-RL6003, Rev. 5, Calibration and Performance Checks for Tennelec Alpha/Beta Proportional Counters
CP4-TS-RL6006, Rev. 2, Calibration and Performance Checks for VAX Based Germanium Detectors
CP4-TS-RL7117, Rev. 9, Sample Preparation for Radiochemistry Analyzes
CP4-TS-RL7120, Rev. 6, Thorium, Uranium, Neptunium/Plutonium Analysis by Alpha Spectroscopy

CP4-TS-RL7124, Rev. 7, Analysis by Gamma Spectroscopy
CP2-EW-EN1040, Rev. 7, Establishment of Baseline Effluent Quantities for radiological Discharges and Action Levels for Environmental Monitoring
CP2-EW-EN1041, Rev. 4, Maintaining and Demonstrating Compliance with Limits on the Committed Effective Dose Equivalent to Members of the Public Resulting from Plant Operations
C-310 200-Foot Stack Flow Calibration Report, 8/10/11
National Emissions standards for Hazardous Air Pollutants (NESHAP) Annual Report for the USEC Operations of the PGDP, Rev. 2, 7/14/11
Safety Analysis Report – PGDP, Section 5.1, Environmental Protection – Radiological
Quarterly Checks of C-310 Stack Mass Flowmeter, Work Orders: 1107488-01 (dated 8/9/11), 1103072-01 (dated 5/10/11), 1018409-01 (dated 2/16/11), and 1012723-01 (dated 11/17/10)
Radiation Protection Committee Meeting Minutes, RPC 11-02, 7/23/11
Radiation Protection Committee Meeting Minutes, RPC 11-01, 3/24/11
TDAG.AL, Rev. 10, Training Development and Administrative Guide (TDAG) for Laboratory Technicians
Martin Marietta Energy Systems Report, Emissions Test Results for Stack C-310 at the Paducah Gaseous Diffusion Plant-Uranium Particulate, dated 3/92
ATRs 10-2909, 10-2998, 10-3120, 10-3122, 10-3139, 10-3116, 11-0190, 11-0865

Emergency Preparedness (88050)

USEC-01-EP,	Rev .127	Emergency Management Plan
CP2-EP-EP1031	Rev. 4	Public Address System
CP4-SF-SF2102	Rev .5	Operation & Testing of the Public Warning System
CP2-EP-EP5030	Rev. 11	Personnel Accountability
CP2-EP-EP5032	Rev. 7	Plant Emergency Management Program 7
CP2-EP-EP5042	Rev. 2	Termination & Recovery after Emergency
CP2-EP-EP5044	Rev. 4	Off-site Emergency Response Assistance
CP2-EP-EP5046	Rev. 14	Emergency Operations Center
CP2-EP-EP5052	Rev. 8	Emergency Response Drills & Exercises
CP2-EP-EP5055	Rev.19	Emergency Classification
CP2-EP-EP5058	Rev.12	Maintenance of Emergency Facilities and Equipment
CP2-EP-EP5059	Rev .5	Emergency Communications