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

June 9, 2005

United States Enrichment Corporation
ATTN: Mr. Russ B. Starkey Jr.
Vice President - Operations
Two Democracy Center
6903 Rockledge Drive
Bethesda, MD 20817

SUBJECT: NRC INSPECTION REPORT 70-7002/2005-002 AND NOTICE OF VIOLATION

Dear Mr. Starkey:

On April 28, 2005, the NRC completed a routine inspection at the Portsmouth Gaseous Diffusion Plant. The purpose of the inspection was to determine whether activities authorized by the certificate were conducted safely and in accordance with NRC requirements. At the conclusion of the inspection on May 18, 2004, the NRC inspectors discussed the findings with members of your staff.

This inspection consisted of an examination of activities conducted under the certificate as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of the certificate. Areas examined during the routine inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation was evaluated in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, which is included on the NRC's web site at http://www.nrc.gov/what-we-do/regulatory/enforcement.html. The violation is cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding the violation are described in detail in the subject inspection report. The violation involves the failure to document an equipment deficiency as required by your work control process.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response to this letter will be 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. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so it can be made available to the Public without redaction.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

/RA/
Jay L. Henson, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

Docket No. 70-7002
Certificate No. GDP-2

Enclosures: 1. Notice of Violation
2. NRC Inspection Report

cc w/encls:
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T. A. Brooks, Manager, Nuclear Regulatory Affairs
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NAME	OLopez	NRivera	CTaylor	DHartland			
DATE	6/ /2005	6/ /2005	6/ /2005	6/ /2005	6/ /2005	6/ /2005	6/ /2005
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NOTICE OF VIOLATION

United States Enrichment Corporation — Docket No. 70-7002
Portsmouth Gaseous Diffusion Plant — Certificate No. GDP-2

During an NRC routine inspection conducted from April 25, through May 18, 2005, the inspectors identified one violation of NRC requirements. In accordance with NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions," the violation is listed below.

> Technical Safety Requirement 3.9.1 requires, in part, that approved written procedures be implemented for activities described in Safety Analysis (SAR) Report Section 6.11.4.1, and listed in Appendix A to Safety Analysis Report.
>
> Appendix A of SAR Section 6.11 describes "work control" as an activity for which procedures shall be implemented.
>
> Step 6.6 of Procedure XP2-US-FO1102, “Shift Routines,” requires that each operator shall perform a thorough general inspection of their assigned area each shift and note any deficiencies that may be present. Also, Step 6.6.2 of Procedure XP2-US-FO1102 requires that equipment deficiencies shall be documented in accordance with Procedure XP2-GP-GP1030, “Work Control Process” and/or Procedure XP2-BM-CI1030, “Problem Reporting.”
>
> Step 10.0 of Procedure XP4-CU-UG2196, “Routine Operation and Testing of X-640-1 Fire Water Diesel-Drive Pump,” states, in part, that “a packing leak that would constitute a deficient condition is a continuous leak or drip resulting in standing water on the floor.”
>
> Contrary to the above, on and before April 26, 2005, operators performing shiftly general inspections in the X-640-1 pump house failed to document an equipment deficiency in accordance with Procedure XP2-GP-GP1030. Specifically, the operators failed to document that the secondary recycle valve packing was leaking continuously resulting in standing water on the floor.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 76.70, United States Enrichment Corporation is hereby required to submit a written statement or explanation in reply to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with a copy to the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). Your reply to the violation should be clearly marked as a "Reply to a Notice of Violation" and should include for the violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or

include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to why the Certificate should not be modified, suspended, or revoked, or why such other action, as may be proper, should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html (the Public Electronic Reading room). If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 9th day of June, 2005

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.	70-7002
Certificate No.	GDP-2
Report No.	70-7002/2005-002
Facility Operator:	United States Enrichment Corporation
Facility Name:	Portsmouth Gaseous Diffusion Plant
Location:	3930 U.S. Route 23 South P.O. Box 628 Piketon, OH 45661
Dates:	April 25, through May 18, 2005
Inspectors:	Omar López, Fuel Facility Inspector Nilda Rivera, Fuel Facility Inspector Cynthia Taylor, Fuel Facility Inspector Adrienne King, Inspector-in-Training
Approved by:	Jay L. Henson, Chief Fuel Facility Inspection Branch 2 Division of Fuel Facility Inspection

Enclosure 2

EXECUTIVE SUMMARY

United States Enrichment Corporation
Portsmouth Gaseous Diffusion Plant
NRC Inspection Report 70-7002/2005-002

This inspection included aspects of certificatee chemical safety, fire safety, environmental protection, waste management, transportation, training, radiation protection, and emergency preparedness. The report covers regional inspection activities and includes follow-up of issues identified during previous inspections.

Chemical Safety

- Safety analyses reviewed identified process hazard information and safety-related controls for the existing plant configuration. The certificatee's program inventory of hazardous chemicals was adequate to control the chemical hazards (Paragraph 2.a).

- Surveillance and maintenance activities reviewed were performed in accordance with regulatory requirements (Paragraph 2.b).

- The certificatee's change request system provided appropriate safety review and management approval (Paragraph 2.c).

- The audit program was adequately implemented to ensure that recommendations from audit findings were addressed in a timely manner (Paragraph 2.d).

Fire Safety

- Fire protection and detection equipment observed by the inspectors was adequately maintained. Housekeeping was adequate to ensure fire hazards were minimized. However, a violation was identified for failure to document an equipment deficiency as required by the certificatee's work control process (Paragraph 3.a).

- Emergency packets were maintained and building surveys were performed in accordance with certificatee procedures (Paragraph 3.b).

Environmental Protection

- The environmental monitoring program activities reviewed were in accordance with certificate requirements (Paragraph 4.a).

Waste Management

- No violations of certificate requirements were identified during review of waste management activities. The projected offsite dose was well below the as low as reasonably achievable constraint of 10 millirem per year specified in 10 CFR 20.1101(d) (Paragraph 5.a).

- The radioactive waste storage and processing areas were adequately controlled, housekeeping was adequate, and package integrity and labeling were maintained in accordance with the certificate and 10 CFR part 20 requirements (Paragraph 5.b).

Transportation

- The activities associated with the preparation and delivery of shipping containers were conducted in a safe manner and in accordance with regulatory requirements (Paragraph 6.a).

Operator Training

- The training program covered the training required in the regulations and the certificate and demonstrated adequate control for rehired and reassigned operators (Paragraph 7.a).

- Training observed was adequate in evaluating the performance of the operators (Paragraph 7.b).

Radiation Protection

- Self-assessments of the radiation protection program were implemented in accordance with the certificate and regulatory requirements (Paragraph 8.a).

- Based on dosimetry results from March 2004 through January 2005, the collective assigned external and internal exposures were well below the certificatee's as low as reasonably achievable goals and regulatory limits for occupational exposure as specified in 10 CFR 20.1201 (Paragraph 8.b).

- Respiratory protection equipment issuance, maintenance, and training were adequately implemented for the respirator program (Paragraph 8.c).

- Radiological safety postings and radiation work permits were properly utilized to communicate potential hazards and protective equipment requirements to workers (Paragraph 8.d).

- Based on the certificatee’s performance, interviews, and documentation, the inspectors determined that notification and reporting was done in accordance with the regulations and the requirements in the certificate (Paragraph 8.e).

- Based on records review and interviews, the inspectors concluded that the certificatee’s as low as reasonably achievable program was being properly implemented (Paragraph 8.f).

Emergency Preparedness

- Program changes made since the last inspection did not reduce the effectiveness of the program. The independent audit was a detailed and critical assessment of the program (Paragraph 9.a).

- Emergency response personnel were adequately trained on the appropriate topics. The certificatee's emergency preparedness training program was in compliance with regulatory requirements (Paragraph 9.b).

- Based on interviews and records reviewed, the inspectors determined that the certificatee was periodically contacting off-site support groups to maintain a state of readiness for responding to emergencies (Paragraph 9.c).

- The drill and exercise program was effectively implemented as evidenced by the types of scenarios postulated and the frequency at which drills were being conducted. (Paragraph 9.d).

- Based on facility tours, interviews, and review of surveillance documentation, the inspectors concluded that the facilities and equipment were adequately maintained. (Paragraph 9.e).

Report Details

1. Summary of Plant Status

The certificatee performed routine operations throughout the inspection period.

4. Chemical Safety (Inspection Procedure (IP) 88051- 63)

a. Process Safety Information (IP 88056)
Hazard Identification and Assessment (IP 88057)

(1) Scope and Observations

The inspectors reviewed the applicable sections of the Safety Analysis Report (SAR) for Buildings X-344, X-343, and X-330 to ensure that they contained process safety information and safety-related controls for the existing plant configuration. The inspectors noted that the SAR identified systems with potential chemical hazards that could have affected operations involving special nuclear materials. The inspectors walked down safety significant controls for Building X-343 and the chlorine trifluoride (ClF_3) tank in Building X-330 with operations personnel. The inspectors confirmed that active and passive engineered controls and administrative controls that were referenced in the SAR were maintained and implemented adequately.

The inspectors toured Buildings X-344, X-343, X-705, X-611E, X-333, and X-330. During the plant tours, the inspectors noted that postings and procedures were available to the operators. The inspectors observed that plant personnel wore the proper personal protective equipment. Safety showers and eye wash stations throughout the facility were in satisfactory condition and had been tested regularly. The inspectors did not observe any issues where housekeeping could have affected the radiological safety or emergency egress of the facility.

The inspectors also noted that in areas where chemical cylinders were stored and used, appropriate operator aids were posted listing the approved number of cylinders that were allowed in the areas. The inspectors reviewed and discussed with certificatee personnel the latest hazardous chemical inventory report. The inspectors determined that the certificatee had information on the quantities, forms, and storage locations of the most hazardous chemicals on site.

(2) Conclusions

The inspectors determined that safety analyses reviewed identified process hazard information and safety-related controls for the existing plant configuration. The certificatee's program inventory of hazardous chemicals was adequate to control the chemical hazards.

b. Maintenance and Inspection (IP 88062)
Detection and Monitoring (IP 88060)

(1) Scope and Observations

The inspectors examined calibration, preventive maintenance, and functional test records for a selection of safety significant controls. The inspectors also interviewed certificatee personnel regarding the inspection, testing, and maintenance of safety controls for the ClF_3 tank and autoclaves. The inspectors reviewed maintenance and inspection records for selected safety controls such as high pressure alarms, uranium hexafluoride (UF_6) detection systems, pigtail high pressure alarms, pigtail line isolation systems, crane systems, and mechanical integrity test records. The inspectors determined that preventive maintenance for the safety controls was current and that the procedures used to perform the tests contained adequate detail.

The inspectors observed activities related to inspection of autoclave high condensate level probes and testing of the UF_6 detection system and reviewed respective work packages. The inspectors noted that activities observed were performed in a safe manner and in accordance with procedures. The inspectors also noted that test acceptance criteria were clear and conformed with the Technical Safety Requirements and Safety Analysis Report. The inspectors also noted that work packages contained safety precautions, required personal protective equipment, and adequate procedures.

(2) Conclusions

The inspectors determined that surveillance and maintenance activities reviewed were performed in accordance with regulatory requirements.

c. Management of Change (IP 88063)

(1) Scope and Observations

The inspectors discussed and reviewed with the certificatee the engineering change request related to the modification of Autoclaves No. 1 and 2 in Building X-343 to allow for controlled feeding of UF_6 into cascade holding drums. The inspectors confirmed that change was reviewed, approved, and documented in accordance with certificatee procedures. The change request records adequately detailed the extent of the modifications.

(2) Conclusions

The certificatee's change request system provided appropriate safety review and management approval.

d. Audits and Inspections (IP 88066)
Incident Investigations (IP 88065)

(1) Scope and Observations

The inspectors reviewed several audit reports related to conduct of operations in Building X-705 and maintenance of the High Pressure Fire Water System. The audit reports described observations and findings and provided corrective actions to address them. The inspectors considered the audit findings and corrective actions to be adequate. The inspectors confirmed that the corrective actions were tracked using the licensee's corrective action program.

(2) Conclusions

The audit program was adequately implemented to ensure that recommendations from audit findings were addressed in a timely manner.

3. Fire Safety (IP 88055)

a. Fire Safety of Process, Equipment, and Storage Areas (O4.04)
Fire Protection Systems (O4.05)

(1) Scope and Observations

The inspectors performed walk-down inspections and reviewed test results to ensure proper inspection, testing, and maintenance (ITM) of key fire safety systems and equipment important to safety. The inspectors also reviewed other documentation to assess compliance with certificate requirements

The inspectors conducted walk-down inspections of UF_6 process areas and pump houses. Portable fire extinguishers were charged to the normal operating zones and no visible damage was noted. The inspectors observed that fire doors throughout the facility were in proper working condition and that emergency egress pathways were clear of obstructions. The inspectors noted that housekeeping was adequate and that areas were kept free of transient combustibles large enough to be a fire exposure hazard.

The inspectors reviewed functional test records and examined equipment for selected fire protection systems including pumps and valves, smoke detectors, fire alarm systems, fire trucks, and sprinkler systems. The inspectors determined that the ITM for the fire protection systems reviewed was adequate and that the equipment was maintained in proper condition for use.

However, on April 26, 2005, during a walkdown of the X-640-1 pump house, the inspectors observed that the material condition of the building and equipment was poor. The inspectors noted standing water on the floor and that several valves had packing

leaks. The inspectors noted that the secondary make-up recycle valve was leaking through the packing and the valve did not have an attached deficiency tag. The deficiency tag would have indicated that a work request had been generated and entered into the work control system.

Step 6.6 of Procedure XP2-US-FO1102, "Shift Routines," required that each operator shall perform a thorough general inspection of their assigned area each shift and note any deficiencies that may be present. Also, Step 6.6.2 of Procedure XP2-US-FO1102 required that equipment deficiencies shall be documented in accordance with XP2-GP-GP1030, "Work Control Process" and/or XP2-BM-CI1030,"Problem Reporting." Step 10.0 of Procedure XP4-CU-UG2196, "Routine Operation and Testing of X-640-1 Fire Water Diesel-Drive Pump," stated, in part, that "a packing leak that would constitute a deficient condition is a continuous leak or drip resulting in standing water on the floor." Failure to document the secondary recycle valve packing, that was leaking continuously resulting in standing water on the floor, in accordance with Procedure XP2-GP-GP1030 is a violation (VIO 70-7002/2005-002-01).

(2) Conclusions

Fire protection and detection equipment observed by the inspectors was adequately maintained. Housekeeping was adequate to ensure fire hazards were minimized. However, a violation was identified for failure to document an equipment deficiency as required by the certificatee's work control process.

b. Review of Documentation Related to the Fire Protection Program, Insure's Audit and Safety Committee (O4.O2)
Pre-Fire Plan (O4.07)

(1) Scope and Observations

The inspectors reviewed the certificatee's emergency packets for Buildings X-343, X-333, X-330, and X-344 to determine if they had been maintained in accordance with certificatee procedures. The inspectors observed that the emergency packets identified the location of fire fighting equipment such as portable extinguishers, automatic fire suppression systems, hydrants, and fire hoses. Also, the packets included a description of the site areas, hazardous chemical and material safety data sheets, combustible materials, and fire hazards in each area. The inspectors also reviewed the annual building surveys for these buildings. The inspectors noted that findings were entered in the corrective action program and building managers were informed of the survey results. No problems were identified.

(2) Conclusions

The inspectors concluded that emergency packets were maintained and building surveys performed in accordance with certificatee procedures.

4. Environmental Protection (IP 88045)

a. Quality Control Records (R2.04)
Monitoring Stations (R2.05)
Monitoring Programs Reports (R2.06)
Effluent Monitoring Instruments (R3.04)

(1) Scope and Observations

The inspectors reviewed selected portions of the certificatee's environmental protection program to verify that program implementation and sample results were consistent with certificate requirements and to determine that radioactivity was not accumulating in environmental media as a result of plant operations.

The inspectors reviewed selected results from environmental samples collected in calendar year (CY) 2004. The inspectors observed that gross alpha, gross beta, and uranium values consistently remained below certificate plant action levels. The inspectors observed the collection of outfall water samples at different locations of the facility. The technician demonstrated good sampling practices for the prevention of cross contamination between samples and the collection of representative samples. The inspectors noted that the monitoring instruments were calibrated and in good condition. The inspectors also observed that the chain of custody was adequately implemented during the collection of the samples. No problems were identified.

The inspectors toured the laboratory facilities related to the analytical measurements of the collected samples. The inspectors verified that the analytical measurements were performed according to requirements, that the equipment used was in good condition and calibrated, and that control of documents and samples was adequate. No problems were noted.

(2) Conclusions

The environmental monitoring program activities reviewed were in accordance with certificate requirements.

5. Radioactive Waste Management and Low Level Radioactive Waste Storage (IPs 88035 and 84900)

a. Radioactive Liquid Effluents (R3.01)
Radioactive Airborne Effluents (R3.02)
Records and Reports (R3.03)
Procedures (R3.05)

(1) Scope and Observations

The inspectors reviewed waste management activities to ensure that they were being conducted in accordance with certificate requirements. The inspectors also reviewed the facility's liquid and airborne effluent results to verify that releases were within 10 CFR Part 20 limits.

The inspectors reviewed the liquid effluent and vent sampling results and quantities of radioactive materials released for calender year 2004. The inspectors noted that uranium emissions from Buildings X-343 and X-344 exceeded plant action levels during August and September 2004, respectively. Also, the inspectors noted that the X-230 holding ponds exceeded plant action levels during CY 2004. The inspectors noted that the certificatee issued investigation reports for each exceedance. In each report, the certificatee documented the cause for the increase in activity and implemented corrective actions to prevent recurrence, as applicable. The inspectors verified that the regulatory limits were not exceeded.

The projected CY 2004 total offsite dose due to all radionuclides effluents was calculated to be 0.001 millirem. The inspectors determined that the projected offsite dose was well below the as low as reasonably achievable constraint of 10 millirem per year specified in 10 CFR 20.1101(d).

The inspectors toured various locations of the facility and observed the collection of the vent stack samplers. The inspectors noted that the technicians were following their procedures and adequate personal protective equipment was used. No problems were noted.

(2) Conclusions

The inspectors did not identify any violations of certificate requirements during review of waste management activities. The projected offsite dose was well below the as low as reasonably achievable constraint of 10 millirem per year specified in 10 CFR 20.1101(d).

b. Management Controls and Surveys (R5.01)
Adequacy of Storage Area (R5.02)
Package Integrity and Labeling (R5.03)
Radioactive Solid Waste (R3.06)
Storage of High-Level Wastes (R3.07)

(1) Scope and Observations

The inspectors toured radioactive waste storage and processing areas and verified that control, housekeeping, and package integrity and labeling were maintained in accordance with the certificate and 10 CFR Part 20 requirements.

The inspectors toured radioactive waste storage and processing areas in Buildings XT-847, X-333, and X-700 and observed that the areas were well maintained and that packages were properly tagged. The material condition of the waste storage areas was good. No evidence of water intrusion into the buildings or significant degradation of equipment or containers was noted. The inspectors reviewed the 90-day hazardous waste logs and verified that they were accurate. The inspectors also reviewed the 90-day weekly inspection check lists, and no problems were noted.

The inspectors verified compliance with posted criticality controls by randomly checking that the uranium mass and assay were quantified and documented on tags attached to the containers. The physical and chemical characteristics of the containers were properly documented, and inventory records were also being properly maintained.

(2) Conclusions

The radioactive waste storage and processing areas were adequately controlled, the housekeeping was adequate, and the package integrity and labeling were maintained in accordance with the certificate and 10 CFR part 20 requirements.

6. Transportation and Waste Generation Requirements (IPs 86740 and 84850)

(1) Scope and Observations

Transportation activities associated with the packaging and shipment of radioactive materials and waste were reviewed to verify they were conducted in accordance with NRC and Department of Transportation regulations.

The inspectors observed two limited aspects of vehicle loading and determined that the appropriate surveys were taken to verify that radiation and contamination levels were within allowable limits and that appropriate container labeling/markings had been applied. Shipping papers included the appropriate information, and the waste manifest records were in compliance with 10 CFR 61.55 and 61.56. Training for packaging and transport personnel was current and consistent with the requirements in 49 CFR Part 172 Subpart H.

(2) Conclusions

The activities associated with the preparation and delivery of shipping containers were conducted in a safe manner and in accordance with regulatory requirements.

7. Operator Training/Retraining and Chemical Safety Training (IPs 88010 and 88061)

a. General Employee Training (F2.01-F2.05)

(1) Scope and Observations

The training program was reviewed for compliance with the requirements of 10 CFR 19.12, *"Instructions to workers,"* and to verify that operators were trained prior to performing their duties. The inspectors determined that the training program provided the general employee and follow-up training for radiological, criticality, fire, and chemical safety as required. The inspectors also reviewed the contents of the tests given to the operators. No problems were noted.

The inspectors reviewed selected records of five new and six current employees, which included two employees reassigned to other work areas. The inspectors noted that managers and supervisors were notified in advance of training due and of past-due training for individuals reporting to them. The inspectors also reviewed portions of the certificatee procedure for the control of rehired operators which provided general requirements for training based on the time they had been away from the work activities for which they would be qualified. The training records of rehired and reassigned operators showed the specific requirements needed to be completed prior to being qualified. No problems were noted.

(2) Conclusions

The training program covered the training required in the regulations and the certificate and demonstrated adequate control for rehired and reassigned operators.

b. Chemical Safety Training (IP 88061)
On-the-job Training (F2.06)

(1) Scope and Observations

The inspectors observed portions of hazwoper and on-the-job training (OJT). The inspectors noted that the trainees participated actively. The OJT was the final step of the training activity and required demonstration of specific tasks under observation of the training personnel. The inspectors noted that the required training included safety and health hazards and emphasized the importance of communication between operators through the OJT. No problems were noted.

(2) Conclusions

The inspectors determined that the training observed was adequate in evaluating the performance of the operators.

8. Radiation Protection (IP 83822)

a. Review of Radiation Protection Program Changes and Procedures (R1.01 and R1.02)

(1) Scope and Observations

The inspectors conducted interviews and reviewed certificatee documentation to ascertain the status of self-assessments of radiation program implementation and procedures

In response to issues identified previously regarding poor radiation worker practices, the certificatee instituted a self-assessment program for managers. The program required managers, with the aid of a checklist, to observe radiation protection practices in selective work areas throughout the plant. The assessments were performed monthly, and participation from first line supervisors and managers was required. Members of the radiation protection staff continued to perform internal self-assessments on a monthly basis to determine if various program elements were being implemented in accordance with the certificate and regulatory requirements. The inspectors determined that the assessments reviewed were effective in verifying program implementation and included both compliance and performance activity.

From a review of records and discussions with the certificatee, the inspectors determined that the certificatee had made several revisions to radiation protection procedures that involved administrative changes and program improvements. Most notable was the enhancement to the “Management by Walking-Around” procedure to require the monthly management assessments. The inspectors concluded that procedural changes and reviews were completed in accordance with the certificate.

(2) Conclusions

Self-assessments of the radiation protection program and procedures were implemented in accordance with the certificate and regulatory requirements.

b. External and Internal Exposure Control (R1.04 and R1.05)

(3) Scope and Observations

The inspectors reviewed and discussed with certificatee representatives personnel exposure data to determine if exposures were in compliance with 10 CFR Part 20 limits, and if controls were in place to maintain occupational doses as low as reasonably achievable (ALARA). Table 1 below displays the maximum assigned exposure data for CY 2003 and 2004.

When CY 2004 exposures were compared to CY 2003, the maximum assigned exposures for deep dose equivalent (DDE) and shallow dose equivalent (SDE) had decreased in all areas. All results remained significantly less than the regulatory occupational limits of five rem, total effective dose equivalent (TEDE) to the whole body, and 50 rem, SDE to the skin or extremities. The maximum assigned whole body dose was 0.416 rem for CY 2004 (16% reduction from CY 2003), and the maximum assigned skin or extremity dose was 0.509 rem (10% reduction from CY 2003). The maximum assigned TEDE (internal and external exposure) was 0.416 rem (8% percent of the limit).

The inspectors also noted that the continued use of specialized tungsten shielding by the certificatee in the X-340 complex for processing feed contaminated with technetium-99 was effective in preventing exposure to high radiation areas by plant personnel. The certificatee indicated that the dose rates had not exceeded the 50 mrem/hr threshold since the installation of the additional shielding.

The inspectors reviewed the certificatee's program for assessing internal exposure to verify that administrative and physical controls were in place to maintain occupational dose ALARA. Table 1 below presents the maximum assigned internal dose, referred to as the committed effective dose equivalent (CEDE). When CY 2004 exposures were compared to CY 2003, the maximum assigned CEDE had increased but remained significantly less than the regulatory occupational limits of five rem (0.246 rem or 4% percent of the limit). However, the collective CEDE had decreased by 4% from the previous year. The certificatee attributed the decrease to additional training in radiation protection and operator awareness.

The inspectors determined that the internal exposure program was adequately based on the type of operations and work activities ongoing at the site. In addition, the inspectors reviewed the methodology by which workers were selected to participate in the bioassay program and found no problems. The inspectors reviewed in-vivo results and determined that no workers had exceeded the 10 mg/week uranium chemical toxicity limit. Based on the current site activities, the certificatee's personnel monitoring program for external and internal exposures was properly implemented.

Table 1. Annual Exposures

Year	Deep Dose Equivalent (DDE)	Shallow Dose Extremity (SDE)	Total Effective Dose Equivalent (TEDE)	Collective TEDE (person-rem)	Committed Effective Dose Equivalent (CEDE)
2003	0.496 rem	0.569 rem	0.496 rem	17.56 rem	0.242rem
2004	0.416 rem	0.509 rem	0.416 rem	13.55 rem	0.246 rem

(2) Conclusions

Based on dosimetry results from March 2004 through January 2005, the collective assigned external and internal exposures were well below the certificatee's ALARA goals and regulatory limits for occupational exposure as specified in 10 CFR 20.1201.

c. Respiratory Protection (R1.06)

(1) Scope and Observations

Respiratory protection equipment issuance, storage, maintenance, and training were examined for adequacy in assuring that equipment was properly maintained and issued to certified users only.

The inspectors observed activities at the respirator facility involving fit testing and issuance of equipment. The inspectors observed one worker who successfully completed a respirator fit test. Fit tests were conducted every 12 months during which the workers were fitted for half-face and full-face respirators. The inspectors also randomly selected and reviewed records to verify that the workers' certifications were current and that the appropriate respirators were issued. No examples were noted of unauthorized use of equipment by untrained personnel or by workers with expired training.

(2) Conclusions

The issuance of respiratory protection equipment met regulatory requirements. No negative observations or findings were noted.

d. Postings, Labeling and Control (R1.07)

(1) Scope and Observations

Several work locations were examined to determine if radioactive containers were properly labeled and to assess the adequacy of contamination control barriers and posting of radiation areas as required by 10 CFR 20.1902. Radiation work permits (RWPs) were reviewed to determine the adequacy of the requirements posted for worker protection and the degree to which those requirements were being implemented.

All observed work areas involving radioactive material or potentially contaminated material were properly posted. Selected containers examined during facility tours were labeled or had other markings on the containers in accordance with requirements. The inspectors reviewed several RWPs associated with maintenance activities in Buildings X-705 and X-330 and the X-340 complex. The inspectors determined that the selected RWPs were adequate for the type of work being performed. The inspectors observed that instruments used to measure radioactive contamination and airborne radioactivity were in proper working condition. In addition, the inspectors observed that proper personal protective clothing and dosimetry were issued and worn.

After interviewing the certificatee staff and reviewing the daily incident reporting logs and monthly health physics audits, the inspectors determined that the staff was aware and knowledgeable of issues raised by health physics staff and management. The certificatee staff was cognizant of the RWPs that were active, and current survey maps were available.

(2) Conclusions

During tours of the various areas, the inspectors noted that radiological signs, postings, and RWPs were properly posted or readily available. The staff was cognizant of the RWPs that were active, and current survey maps were available.

e. Notifications and Reports (R1.09)

(3) Inspection Scope and Observations

The inspectors reviewed incidents to determine the adequacy of the certificatee's reviews and evaluations, and to determine if events met the requirements for reportability to the NRC. The inspectors verified that selected incidents did not require notification to the NRC. The certificatee's review and evaluation of the incidents were prompt and actions to prevent recurrence were timely.

Randomly selected workers were questioned regarding the availability and/or provision to provide exposure data by the certificatee. In every interview, the workers indicated that at least annually the exposure information was provided. In addition, the inspectors confirmed that the certificatee was reporting exposure data to the NRC via Form 5 in a timely manner.

(2) Conclusions

Based on certificatee performance, interviews, and documentation, the inspectors determined that notification and reporting was done in accordance with the regulations and the requirements in the certificate.

f. Implementation of ALARA Program (R1.10)

(1) Scope and Observations

The ALARA program was reviewed to determine if the certificatee was periodically performing audits/evaluations to assess if exposures resulting from high activity projects could be lowered, and if ALARA goals were being developed and implemented on a regular basis. In addition, the program for reinforcing the ALARA concept among employees was assessed.

On an annual basis, the certificatee issued an ALARA performance report containing exposure summaries to identify undesirable trends. In those cases where exposures were elevated, consideration was given to ways for reducing exposures. ALARA goals and objectives were established in 2004. A majority of the goals were completed and those not finished were carried into the current year.

Several workers were interviewed regarding ALARA and demonstrated an adequate knowledge and/or understanding of concepts. The inspectors interviewed radiation protection personnel assigned responsibility for the ALARA evaluations and assessments associated with the major activities contributing to exposures. Based on the interviews

and support documentation associated with the past project evaluations, the inspectors concluded that the certificatee was properly implementing a program to maintain exposures as low as is reasonably achievable.

(2) Conclusions

The inspectors concluded from program documentation reviewed and staff interviews that the certificatee was properly implementing a program to maintain exposures as low as reasonably achievable.

g. Follow up on Previously Identified Issues (R1.12)

(Closed) VIO 70-7002/2004-001-01: Failure to follow radiological control procedures. Examples included failure to remove protective clothing in the proper sequence; failure to perform an adequate hand survey when leaving a controlled area; failure to wear required minimum protective clothing as specified on the RWP; and, donning of respiratory protection equipment that was not issued for use by the individual.

The certificatee investigated the violation and initiated corrective actions including the installation of automated personnel contamination monitors, modifications in the personnel decontamination procedure, re-training of radiation technicians and personnel, and increased audits of personnel frisking at step-off pads. The inspectors reviewed the certificatee's investigation and verified that the corrective actions were implemented. The inspectors observed that corrective actions were effective in improving radiation worker practices, and this item is closed.

9. Emergency Preparedness (IP 88050)

d. Review of Program Changes (F3.01)

(1) Scope and Observations

Changes to the certificatee's emergency organization, facilities, and equipment were reviewed to assess the impact on the effectiveness of the program. The adequacy of the emergency preparedness audit required by Section 7.5 of the Emergency Plan was also evaluated.

The inspectors verified that no significant changes were made since the last inspection. The independent audit for CY 2004 was performance-based via observation of the emergency exercise held on October 8, 2003. The independent audit provided an adequate assessment of the certificatee's ability to implement the emergency response program to protect the plant and public during postulated accident conditions.

(2) Conclusions

The independent audit provided an adequate assessment of the certificatee's ability to implement the emergency response program.

b. Training and Staffing of Emergency Organization (F3.03)

(1) Scope and Observations

Through a record review and discussions with on-site personnel, the inspectors verified that the certificatee had provided training that was consistent with the frequency and performance objectives outlined in the Emergency Plan. The inspectors also verified that the training covered the use of any special emergency equipment such as communication devices, self contained breathing air packs, monitoring devices for radioactive and other hazardous materials, and first aid for personnel who have become injured or contaminated. The inspectors also verified the adequacy of the certificatee's methods for tracking the initial qualification and subsequent re-qualification requirements for response personnel.

(2) Conclusion

Emergency response personnel were adequately trained in the appropriate topics. The certificatee's emergency preparedness training program was in compliance with regulatory requirements.

c. Offsite Support (F3.04)

(1) Scope and Observations

The inspectors ascertained by plant tours, staff interviews, annual training, and review of event critique reports that off-site agencies such as the local ambulance service, hospitals, and law enforcement responders understood their respective response roles as contained in the memorandums of understanding. The inspectors also reviewed the written agreements with the off-site agencies and verified that they were adequate. In addition, the inspectors determined that the certificatee sent invitations annually to off-site responders for participation in annual refresher training and tours of the facility.

The inspectors reviewed pertinent records and interviewed EP staff to verify that the certificatee had maintained its certification of compliance with the "Emergency Planning and Community Right-To-Know Act of 1986."

(2) Conclusion

The off-site support organizations understood their respective written agreements with the certificatee. The performance of off-site responders during actual emergencies and drills was adequate.

d. Drills and Exercises (F3.05)

(5) Scope and Observations

Section 7.3 of the Emergency Plan required a biennial exercise be performed involving the onsite emergency management organization and allow for participation by the offsite support agencies. This area was reviewed for adequacy in testing both onsite and offsite emergency response capability.

The recent biennial exercise conducted on October 8, 2003, included offsite agency participation. The inspectors reviewed accident scenario documentation covering the period of March 2002 through October 2003, and determined that credible scenarios were being used that provided the appropriate challenges for testing the capabilities of the emergency management program. The next biennial exercise is scheduled for October 2005.

(6) Conclusions

The drill and exercise program was effectively implemented as evidenced by the types of scenarios postulated and the frequency at which drills were being conducted.

e. Emergency Equipment and Facilities (F3.06)

(1) Scope and Observations

The emergency facilities, emergency response equipment, instrumentation, and supplies were inspected to determine the state of operational readiness. The inspectors examined emergency equipment and supplies (e.g. protective clothing, gas sampling tubes, etc.) used for personnel protection during an emergency which were stored in the emergency response room and the emergency response vehicle. No problems were noted. The equipment and supplies were available as described in procedures and performed the intended function when checked for operability.

Periodic maintenance and surveillance records, covering the period of March 2003 to February 2005, disclosed that emergency equipment and facilities were properly maintained. The inspectors verified via interviews and documentation review that periodic testing and maintenance was being performed on the public warning system (sirens) to ensure operability. The results disclosed that when problems were identified, prompt corrective actions were taken to resolve them.

(2) Conclusions

Based on facility tours, interviews, and review of surveillance documentation, the inspectors concluded that the facilities and equipment were adequately maintained.

10. Exit Interview

The inspection scope and results were presented to members of the certificatee management on April 28, 2005. On May 18, 2005, the inspectors held another exit meeting with certificatee management to further discuss the inspection results. The inspectors asked the certificatee staff whether any materials examined during the inspection should be considered proprietary. The certificatee staff did not identify any of the materials as proprietary. No dissenting comments were received from the licensee.

ATTACHMENT

1. PARTIAL LIST OF PERSONS CONTACTED

United States Enrichment Corporation

P. Musser, General Manager
S. Fout, Plant Manager
J. Anzelmo, Plant Services Manager
R. Bouts, Training Manager
J. Boyce, Fire Services Manager
T. Brooks, Nuclear Regulatory Affairs Manager
T. Canterbury, Engineering Manager
M. Conkel, Maintenance Manager
D. Fosson, Operations Manager
R. Lawton, Nuclear Safety and Quality Manager
M. Redden, Emergency Management Program Manager
T. Taulbee, Radiation Protection Manager
G. Workman, Production Support Manager

2. INSPECTION PROCEDURES USED

IP 84850	Radioactive Waste Management - Inspection of Waste Generator Requirements of 10 CFR Part 20 and 10 CFR Part 61
IP 84900	Low Level Radioactive Waste Storage
IP 86740	Inspection of Transportation Activities
IP 88010	Operator Training/Retraining
IP 88035	Radioactive Waste Management
IP 88045	Environmental Protection
IP 88055	Fire Protection
IP 88056	Process Safety Information
IP 88057	Hazard Identification and Assessment
IP 88060	Detection and Monitoring
IP 88061	Chemical Safety Training
IP 88062	Maintenance and Inspection
IP 88063	Management of Change
IP 88065	Incident Investigation
IP 88066	Audits and Inspection

3. ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Type	Summary
70-7002/2005-02-01	Opened	VIO	Failure to document the secondary recycle valve packing, that was leaking continuously resulting in standing water on the floor, in accordance with Procedure XP2-GP-GP1030 (Paragraph 3.a).

70-7002/2004-01-01	Closed	VIO	Failure to Follow Radiological Control Procedures (Paragraph 8.g).

4. LIST OF ACRONYMS USED

ALARA	as low as reasonably achievable
CY	calendar year
CEDE	committed effective dose equivalent
CFR	Code of Federal Regulations
ClF_3	chlorine trifluoride
DDE	deep dose equivalent
IP	Inspection Procedure
ITM	inspection, testing, and maintenance
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
OJT	On-the-Job Training
PARS	publicly available records
RWPs	radiation work permits
SDE	shallow dose equivalent
TEDE	total effective dose equivalent
UF_6	uranium hexafluoride
VIO	violation