USEC
A Global Energy Company

March 21, 2014
GDP 14-0006

ATTN: Document Control Desk
Mr. Osiris Siurano-Perez, Project Manager
Uranium Enrichment Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Paducah Gaseous Diffusion Plant (PGDP)
Docket No. 70-7001, Certificate No. GDP-1
United States Enrichment Corporation (USEC) Response to U.S. Nuclear Regulatory Commission's (NRC's) Request for Additional Information (RAI), dated February 27, 2013,
(TAC No. L32794)

Dear Mr. Siurano-Perez:

This letter provides USEC's response to the NRC letter dated March 13, 2014, which requested additional information for the Certificate Amendment Request (CAR) submitted in USEC letter GDP 13-0020 dated December 13, 2013. Enclosure 1 contains the USEC responses to the five RAIs included in NRC TAC NO. L36030 letter dated March 13, 2014.

USEC requests NRC review of the responses to the RAIs for Certificate Amendment Request (CAR) submitted with GDP 13-0020 as soon as practical. Should you have any questions related to this submittal, please contact me at (301) 564-3250. There are no new commitments contained in this submittal.

Sincerely,

S. A. Toelle

Steven A. Toelle
Director, Regulatory Affairs

Enclosure: Request for Additional Information - Responses

cc: M. Crespo, NRC Region II
M. Sykes, NRC Region II

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NMSS22

Request for Additional Information Regarding
The United States Enrichment Corporation's Certificate
Amendment Request to Revise Technical Safety Requirements
Section 3.0 Minimum Staffing Requirements
Dated March 13, 2014
Docket: 70-7001

The following responses provide additional information as requested:

RAI-1. What provisions, in accordance with your training program, has PGDP made to ensure appropriate formal qualification of the e-squad members to meet health physics qualification requirements?

Response:

The PGDP emergency plan (EP) does not require any of the emergency squad personnel to be qualified as health physics (HP) technicians. The EP states (Section 4.2.2.1) that within the plant emergency squad are personnel that have experience and are trained in firefighting, HAZMAT response, health physics, and environmental response. The PGDP emergency squad personnel, as first responders, only require limited HP task-specific training/qualification to perform their duties as specified in the EP and Emergency Plan Implementing Procedures (EPIPs). Emergency squad personnel are trained to operate specific HP instruments (i.e., contamination meter, dose rate meter, high volume air sampler, etc.), that provide HP data and information that the squad will utilize to perform required tasks/duties and participate in exercises designed to reinforce radiation and contamination instrument knowledge and use. This periodic HP training for emergency squad personnel will remain as specified and required in the EP and implementing training modules. The NRC's request cites NUREG/CR-5569, Health Physics Position Paper (HPPOS) #238 as requiring certain emergency preparedness functions be performed by American National Standards Institute (ANSI) qualified HP technicians. At PGDP the HP technicians currently on shift do not perform any first responder tasks (e.g., lead emergency search and rescue teams, lead environmental monitoring teams, or perform off-site dose assessments) and so their immediate presence is not required to respond to an emergency. Emergency squad personnel are available at all times in numbers sufficient to cope with foreseeable emergencies. If needed, additional HP support is on call. USEC notes that HPPOS #238 applicability is specified as Reactors. The PGDP commitment to the ANSI standard referenced in HPPOS #238 is documented in Safety Analysis Report (SAR) Chapter 1, Appendix A, Section 1.3, which states that PGDP satisfies only Section 4.3.3 of ANSI 3.1 for the Radiation Protection Manager (identified in SAR Section 6.1). Therefore, HPPOS #238 is not part of the PGDP Certification Basis.

RAI-2. PGDP's E-Plan states that... "Upon request from the hospitals, plant health physics personnel are dispatched to assist in contamination control and decontamination of the patient, hospital staff, and hospital facilities/equipment." If requested by off-site hospitals, what provisions have been made to ensure a qualified HP tech is dispatched to assist in contamination control and decontamination of the patient, hospital staff, and hospital facilities/equipment?

Response:

As specified in the PGDP EP, plant HP personnel will continue to be dispatched to assist as requested in contamination control and decontamination of the patient, hospital staff, and hospital facilities/equipment. HP personnel may be directed to report to the hospital from either HP personnel on site or from on-call HP personnel off site. The current EP does not require that the on-shift HP technician be utilized for this task. In addition, the local hospitals currently have non-PGDP HP trained and qualified personnel that can respond to hospital radiological needs.

RAI-3. What provisions have been made for the daily instrument quality control checks and instrument verification and replacement of faulty meters for the e-squad that is currently performed by qualified HP personnel?

Response:

The daily instrument quality control checks, instrument verification and replacement of faulty meters will continue to be performed by either HP personnel or personnel who have been specifically trained to perform these tasks. During weekday shifts, these tasks will normally be done by HP personnel assigned to day shift operations. During weekends and holidays, the daily instrument checks will be performed by personnel qualified to perform the tasks.

RAI-4. What provisions have been made to provide the technical advice on the consequences and control of personnel exposure at the onset of an emergency prior to activation of the emergency operations center?

Response:

The initial Emergency Response Organization (ERO) consists of the plant emergency squad with the Plant Shift Superintendent (PSS) or other qualified individual as incident commander (IC) at the scene. Upon classification of the emergency as an Alert or Site Area Emergency in accordance with plant procedure, the PSS becomes the Crisis Manager (CM) and maintains overall control of the plant during the emergency until relieved after the Emergency Operations Center is operational. The PSS/IC is well trained to make initial decisions concerning the control of personnel exposure at the onset of an emergency. The emergency squad personnel are task trained to use specific HP instruments (i.e., contamination meter, dose rate meter, high volume air sampler, etc.). The specific task knowledge and guidance for completing these tasks are provided by specific EP training modules and procedures.

RAI-5. Emergency Action Levels (EALs) at PGDP are based on Emergency Response Planning Guide (ERPG) levels, which are based on airborne concentrations of radioactive materials or chemicals. The E-Squad personnel are not trained to measure radioactivity air concentrations to determine EALs. What provisions have been made to ensure the availability of qualified personnel to perform the air sampling and monitoring required for the classification of emergencies based on air concentrations and ERPGs?

Response:

Emergency Action Levels (EALs) are specific, predetermined, observable criteria used to detect, recognize and determine the class of emergencies. The PGDP EAL matrices in CP2-EP-EP5055,

Emergency Classification, provides the EALs for credible events at PGDP. None of the events listed in the PGDP Matrices (except a nuclear criticality event – see below) require an airborne radioactive material concentration sample or field radiation level measurement as part of the EAL criteria. The only radiological event in the PGDP EAL Matrices is a nuclear criticality occurring on site. The Criticality Accident Alarm System (CAAS) is the primary indicator of a nuclear criticality at PGDP. A radioactive airborne concentration measurement is not required by the EAL for a criticality event classification. When a criticality does occur, the PGDP EAL Matrix states that plant shift superintendent (PSS) will make a criticality accident response according to CP2-EP-EP5038, "Criticality and Radiation Emergencies". The procedure dictates that this response ensures immediate actions are taken (i.e., alarm announcements, personnel evacuation, emergency squad deployment, ventilation changes, establishing restricted areas/boundaries, etc.). The only immediate radiation monitoring required for a criticality accident response is for plant emergency squad or HP personnel, if available, to monitor dose rates at and near assembly areas and boundaries established by Protective Force (PF) personnel, ensure PF and other emergency response personnel are provided with electronic dosimeters, and process personnel for contamination and exposure to the nuclear criticality. In addition, during evaluation of the potential criticality, the IC may direct the emergency squad to conduct an exterior and interior building radiation survey.