



August 23, 2012

Attn: Document Control Desk  
Director  
Office of Federal and State Materials and  
Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: SUA-1597 License Condition 11.2

To Whom It May Concern:

With the issuance of License Number SUA-1597 (Docket No. 040-09067) to Uranerz Energy Corporation (Uranerz) by the Nuclear Regulatory Commission (NRC), the NRC has requested through License Condition 11.2 that "The licensee shall submit the results of the annual review of the radiation protection program content and implementation performed in accordance with 10 CFR 20.1101(c). These results shall include an analysis of dose to individual members of the public consistent with 10 CFR 20.1301 and 10 CFR 20.1302." Since operations have not commenced, there is little changed from information provided in license application documents. This review was done to describe actions taken to prepare for operations.

If you have any questions regarding this matter, please contact me at 307-265-8900 or by email at: [mthomas@uranerz.com](mailto:mthomas@uranerz.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Thomas", is written over a horizontal line.

Mike Thomas  
Vice President Environmental, Safety, and Health  
Uranerz Energy Corporation

MT/kw

Attachment  
Annual Radiation Protection and ALARA Program Review

cc: Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate  
Ron Linton, NRC Project Manager  
Mark Rogaczewski, District III Supervisor, WDEQ-LQD

FSME20

# Annual Radiation Protection and ALARA Program Review

## **1.0 INTRODUCTION**

This review was done per License Condition 11.2. Although most sections are not yet applicable to the site, paragraph 2.3.3 from NRC Regulatory Guide 8.31, was used as a guide for this review. It was not done as a formal audit because uranium recovery (UR) operations have not commenced thus most programmatic items and, in particular, exposure and dose measurements are not yet applicable. This review provides an informational update of the ongoing development of the radiation protection program.

## **2.0 PROGRAM ELEMENT REVIEW**

### **2.1 EMPLOYEE EXPOSURE RECORDS (EXTERNAL AND TIME-WEIGHTED CALCULATIONS)**

Employee exposure monitoring is not applicable since UR operations have not commenced.

### **2.2 BIOASSAY RESULTS**

Pre-operational baseline bioassays were analyzed for uranium for 49 employees and contractors. All results for uranium were less than the reporting limit of 5 micrograms per liter. Blanks and blind spiked controls were submitted and were within 30% of spiked concentrations per NRC Regulatory Guide 8.22, Bioassay at Uranium Mills. Pre-operational bioassays will continue to ensure everyone has a baseline bioassay prior to UR operations commencing. No routine or termination bioassays were performed since UR operations have not commenced.

### **2.3 INSPECTION LOG ENTRIES AND SUMMARY REPORTS OF DAILY, WEEKLY, AND MONTHLY INSPECTIONS**

Inspection logs and summary reports are not applicable since UR operations and accompanying inspections have not commenced.

### **2.4 DOCUMENTED TRAINING PROGRAM ACTIVITIES**

New hire radiation training and testing was done for 42 employees and contractors per NRC Regulatory Guide 8.31. Training will continue to ensure everyone is trained prior to UR operations commencing.

### **2.5 RADIATION SAFETY MEETING REPORTS**

The status of development of the radiation program is incorporated into weekly mine site meetings. Reports for each meeting are done by the Mine Superintendent and provided to corporate management, the RSO and site supervisors. Radiation safety meetings are planned when the site is closer to operational.

## **2.6 RADIOLOGICAL SURVEY AND SAMPLING DATA**

Occupational surveys and sampling are not applicable since UR operations have not commenced. Environmental radiation surveys continue per NRC License requirements and NRC Regulatory Guide 4.14, Radiological Effluent and Environmental Monitoring at Uranium Mills. Results are considered representative of background radiation and were submitted to the NRC in semi-annual reports in January 2012 and July 2012.

## **2.7 REPORTS ON OVEREXPOSURE OF WORKERS SUBMITTED TO THE NRC, MINE SAFETY AND HEALTH ADMINISTRATION (MSHA), OR STATES**

No reports were submitted as there were no overexposures and the site is not operational. Future reviews will refer to the Occupational Safety and Health Administration (OSHA) rather than MSHA as OSHA now has purview over in situ recovery (ISR) mines.

## **2.8 OPERATING PROCEDURES THAT WERE REVIEWED DURING THIS TIME PERIOD**

Standard operating procedures (SOPs) are being prepared and are in various states of preparation and review. The RSO has written 4 radiation SOPs, one of which is final. That SOP, the Bioassay Program, has been submitted to the NRC per License Condition 10.4C. A total of 16 radiation-specific SOPs are planned. For other program areas, the RSO has reviewed 16 SOPs specific to safety, 3 SOPs specific to the environment, 6 SOPs specific to production, and 15 SOPs specific to exploration. All SOPs listed under License Condition 10.4 are required to be in place prior to operations commencing.

## **2.9 TRENDS IN PERSONNEL EXPOSURES FOR IDENTIFIABLE CATEGORIES OF WORKERS AND TYPES OF OPERATIONAL ACTIVITIES**

Exposure monitoring and trend analysis are not applicable since UR operations have not commenced.

## **2.10 WHETHER EQUIPMENT FOR EXPOSURE CONTROL IS BEING PROPERLY USED, MAINTAINED, AND INSPECTED**

This section is not applicable since UR operations have not commenced.

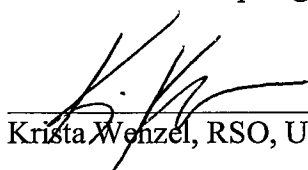
## **2.11 RECOMMENDATIONS ON WAYS TO FURTHER REDUCE PERSONNEL EXPOSURES FROM URANIUM AND ITS DAUGHTERS**

This section is not applicable since UR has not commenced and exposures are not yet known. Recommendations to reduce exposures are being incorporated into SOPs.

## **2.12 AN ANALYSIS OF DOSE TO INDIVIDUAL MEMBERS OF THE PUBLIC CONSISTENT WITH 10 CFR 20.1301 AND 10 CFR 20.1302 [LICENSE CONDITION 11.2]**

This section remains the same as provided in license application documents. Environmental sampling continues as described in paragraph 2.6 above.

Review done by:

  
Krista Wenzel, RSO, Uranerz Energy Corporation

Date: July 20, 2012