UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

May 18, 2012

Mike Thomas, Vice President
Environmental, Safety, and Health
Uranerz Energy Corporation
1701 East "E" Street
P.O. Box 50850
Casper, Wyoming 82605

SUBJECT: NRC INSPECTION REPORT 040-09067/12-001

Dear Mr. Thomas:

This refers to the announced, preoperational inspection conducted on April 19, 2012, at the Uranerz Nichols Ranch uranium recovery facility in Johnson and Campbell Counties, Wyoming. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. The inspection findings were discussed with you at the exit briefing conducted at the conclusion of the onsite inspection.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to make one, 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's 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 that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Ms. Linda M. Gersey at 817-200-1299 or the undersigned at 817-200-1191.

Sincerely,

***/RA/ by JEWhitten for***

D. Blair Spitzberg, PhD, Chief
Repository and Spent Fuel Safety Branch

Docket: 040-09067
License: SUA-1597

Enclosure:
NRC Inspection Report 040-09067/12-001

cc w/enclosure:
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| ADAMS | ☐ No | ■ Yes | ■ SUNSI Review Complete | Reviewer Initials: LMG |
| | ■ Publicly Available | | ■ Non-sensitive | |
| | ☐ Non-publicly Available | | ☐ Sensitive | |

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**U.S. NUCLEAR REGULATORY COMMISSION**
**REGION IV**

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|---|---|
| Docket: | 040-09067 |
| License: | SUA-1597 |
| Report: | 040-09067/12-001 |
| Licensee: | Uranerz Energy Corporation |
| Facility: | Nichols Ranch In-Situ Recovery Facility |
| Location: | Johnson and Campbell Counties, Wyoming |
| Date: | April 19, 2012 |
| Inspector: | Linda M. Gersey, Health Physicist<br>Repository and Spent Fuel Safety Branch |
| Accompanied by: | Ron Linton, Hydrogeologist<br>Decommissioning and Uranium Recovery Licensing Directorate<br>Division of Waste Management and Environmental Protection<br>Office of Federal and State Materials and Environmental Management Programs<br><br>Haimanot Yilma, Project Manager<br>Environmental Protection and Performance Assessment Directorate<br>Division of Waste Management and Environmental Protection<br>Office of Federal and State Materials and Environmental Management Programs |
| Approved by: | D. Blair Spitzberg, PhD, Chief<br>Repository and Spent Fuel Safety Branch |
| Attachment: | Supplemental Inspection Information |

Enclosure

## EXECUTIVE SUMMARY

Uranerz Energy Corp., Nichols Ranch In-Situ Recovery Facility
NRC Inspection Report 040-09067/12-001

This inspection included a review of site status and site tours.

- The licensee was in the process of constructing the Central Processing Plant, maintenance building, and office and lab building.

- The licensee had begun installation of a monitor well ring, production zone, and underlying and overlying monitor wells for Production Area Number 1.

## Report Details

### 1. Site Status

Uranerz Energy Corporation was issued an NRC license on July 19, 2011. The licensee is authorized to operate an in-situ uranium recovery facility with a Central Processing Plant (CPP) at the Nichols Ranch property and a satellite plant to load uranium resins at the Hank Unit property. The licensee is also authorized for the installation of a yellowcake dryer at the CPP, although the licensee indicated to the inspectors that they will not install the dryer until a future date. The licensee plans to load uranium onto resins at the CPP and transfer the resins to a licensed facility authorized by the NRC or an Agreement State to dry and package yellowcake. No work or construction activities have been conducted at the Hank Unit property.

Since July 2011, the licensee has been constructing the CPP, a maintenance building, and the office and lab building. The inspectors toured the CPP and observed that six ion exchange transfer columns, four waste water tanks, and resin transfer water tanks had been installed. The licensee will be using waste water tanks to hold waste water prior to disposal into deep disposal wells. At the time of the inspection, the inspectors noted that the maintenance building had only the outer construction completed. The office building that also houses the licensee's analytical laboratory was in the beginning stages of construction. The inspectors also viewed the onsite meteorological station installed near the CPP.

During the site tour, the inspectors noted that the licensee had begun installation of a monitor well ring, production zone, and underlying and overlying monitor wells for Production Area Number 1 (PA#1). As of the date of this inspection, the licensee had drilled 123 production/injection wells and 72 monitoring wells. Mechanical integrity tests (MITs) have been conducted on these wells, with a total of seven failures. The wells that failed the MITs had been plugged and abandoned and new wells had been drilled. When the hydrologic pump tests are completed in PA#1, all monitoring wells will be sampled for baseline quality data and submitted to the NRC for review.

The licensee is currently using contractors for site construction, well drilling, design work, plumbing, and electrical work. The licensee's Vice President for Production, Mine Superintendent, and Site Construction Manager oversee the daily work performed by the contractors. The inspectors reviewed the licensee's organizational chart and noted that 19 of 41 positions had been filled. At the time of the inspection, the licensee had not hired a Radiation Safety Officer or Health Physics Technician.

The inspectors reviewed the licensee's semiannual report dated January 10, 2012, for the reporting period of July through January 2011, as required by License Condition 11.1(B). The report included the status of construction, a summary of MITs conducted, and water levels for wells located near the Nichols Ranch and Hank Unit properties.

License Condition 12.3 requires the licensee to notify the NRC a minimum of 90 days prior to expected commencement of operations to allow sufficient time for the NRC to perform a preoperational inspection. Also, the licensee has several other license conditions related to preoperational requirements, including obtaining permits for Class I and Class III underground injection wells.

## 2. Conclusions

The inspectors did not identify any construction activities, well placement, or existing equipment contrary to the commitments in the license or regulatory requirements.

## 3. Exit Meeting Summary

An exit briefing was conducted at the conclusion of the inspection on April 19, 2012, with licensee management, staff, and contractors. Licensee representatives acknowledged the inspector's findings. During the inspection, the licensee did not identify any information reviewed by the NRC inspectors as proprietary that was included in the report.

## SUPPLEMENTAL INSPECTION INFORMATION

### PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Thomas, Vice President, Environmental, Safety, and Health
G. Thomas, Vice President, Production
B. Pile, Construction Manager
J. Mote, Mine Superintendent

### INSPECTION PROCEDURES USED

| | |
|---|---|
| IP 88005 | Management Organization and Controls |
| IP 89001 | In-Situ Leach Facilities |

### ITEMS OPENED, CLOSED, AND DISCUSSED

Open

none

Closed

none

Discussed

none

### LIST OF ACRONYMS USED

| | |
|---|---|
| CPP | Cental Processing Plant |
| PA#1 | Production Area Number 1 |
| MIT | Mechanical Integrity Test |