From: Sent:

Mike Thomas [mthomas@uranerz.com] Wednesday, December 29, 2010 2:02 PM

To:

Linton, Ron

Cc:

Cohen, Stephen; Mandeville, Douglas

Subject:

URZ/NRC 20Dec2010 Meeting Summary Letter

Attachments:

URZ-NRC Mtg Summary 20Dec2010.pdf

## Ron,

Attached is a copy of the Meeting Summary/Action Items letter from the Uranerz/NRC meeting that was held on 20-December-2010. Most of the license conditions that we discussed in the meeting have been addressed in the letter with only a couple that are open. A hard copy of the attached letter has also been sent to you. Please contact me if you have any questions in regard to the letter. I will be out of the office all of next week, but can be contacted via email or my cell phone.

Thanks,

#### Mike

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December 29, 2010

Ron Linton
Project Manager
Uranium Recovery Licensing Branch
Division of Waste Management and
Environmental Protection
Office of Federal and State Materials and
Environmental Management Programs
U.S. Nuclear Regulatory Commission
Two White Flint North, MS T8F5
11545 Rockville Pike
Rockville, MD 20852

Re: Uranerz Nichols Ranch ISR Project 20-December-2010 Draft License Meeting Summary

Dear Mr. Linton,

On December 20, 2010 a meeting was held between the Nuclear Regulatory Commission (NRC) and Uranerz Energy Corporation (Uranerz) to discuss the Draft Combined Source and 11e.(2) Byproduct Material License. The following information details the discussion and action items that resulted from the meeting for each of the license conditions (LC) that were discussed.

#### Action Items:

LC 9.8 – The NRC will discuss with the Office of General Counsel on whether or not a date is needed for the listed MOA.

### LC 10.1 – The LC should be worded as follows:

The licensee shall use a lixiviant composed of native ground water and a combination of one or more of the following: carbon dioxide gas, sodium carbonate, dissolved oxygen, or hydrogen peroxide, as specified in the licensee's approved license application. For the Hank Unit, hydrogen peroxide will not be used.

#### LC 10.2 – The LC should be worded as follows:

The Nichols Ranch Unit plant throughput shall not exceed an average flow rate of 3,500 gallons per minute, excluding restoration flow. Annual dried yellowcake production shall not exceed 2.0 million pounds. The Hank Unit satellite plant shall not exceed an average flow rate of 2,500 gallons per minute, excluding restoration flow.

## Hank Unit Hydrologic Test

A. Prior to lixiviant injection at the Hank Unit, the licensee will conduct a hydrologic test and report the results to the NRC for review and approval. The hydrologic test must demonstrate that an inward hydraulic gradient can be maintained that prevents excursions beyond the perimeter production zone monitoring well ring.

B. The licensee will update or confirm the restoration schedule for Hank Unit PA #1 and #2 at the completion of the hydrologic test in the Hank Unit as required by this license and provide a basis for any delay in restoration after production is complete.

#### LC 10.10 – The LC should be worded as follows:

The licensee will provide the Production Area Pump Test document for the first production areas at the Nichols Ranch and Hank Units for NRC review and approval. These documents will prodvide all background ground water data, restoration target values, and upper control limits as well as the information outlined in Section 5.7.8.4 of the license application.

## LC 10.11 – The second paragraph of the LC should be worded as follows:

The licensee will install "trend" monitoring wells on the upgradient (eastern) side of Hank Unit PA #1 and #2 approximately every 500 ft apart and approximately 300 ft from the injection wells. The licensee will collect water level measurements twice monthly and at least 10 days apart from the trend wells and monthly water level measurements from the production zone monitoring well ring. If water level measurements indicate that an outward gradient exists, the licensee will inform the NRC within 7 days and adjust operations until the outward gradient is eliminated.

## LC 10.12 – The second paragraph of LC 10.12 should be worded as follows:

The licensee will construct two deep disposal wells prior to the commencement of operations of the Nichols Ranch ISR Project. The disposal wells shall have enough capacity to handle the disposal of the total liquid effluent generation as stated in Section 3.2.6 of the license application. The licensee will notify the NRC within 24 hours if a disposal well is shut down and becomes inoperable, with the exception of routine maintenance or required testing that is completed within 48 hours of shutdown. If necessary, the licensee will use additional deep well capacity, surge tanks, or cease injection activities until the disposal well is restored to use as written in Section 3.2.6 of the application. The licensee will notify the NRC when the disposal well is placed back into service and report any repairs or service completed on the well that is not associated with routine maintenance.

LC 10.15 – This LC and LC 11.7 will be combined.

LC 11.3 – The LC should be reworded as follows:

<u>Establishment of Background Water Quality.</u> Prior to injection of lixiviant for each production area, the licensee shall establish background pre-operational ground water quality data for the overlying and underlying aquifers and restoration target values (RTVs) for the ore zone aquifers. Background water quality sampling shall provide representative pre-operational ground water quality data and restoration criteria as described in the approved license application.

The data for each production area shall consist, at a minimum, of the following sampling and analyses:

- A. Ore Zone. Samples shall be collected from ore zone monitoring production (MP) wells at a minimum density of one MP well per 4 acres of production area. These samples shall be analyzed for the parameters listed in Table D6-6a of the licensee's approved application. Samples shall also be collected from all ore zone perimeter monitoring wells.
- B. Overlying and Underlying Aquifers. Samples shall be collected from all monitoring wells in the first overlying and first underlying aquifer at a minimum density of one well per 4 acres of production area. The samples shall be analyzed for those parameters listed in Table D6-6a of the approved license application.
- C. Surficial Aquifer. One surficial well shall be located and sampled in each production area. The samples shall be analyzed for those parameters listed in Table D6-6a of the approved license application.
- D. Four samples shall be collected from each well. Consecutive sampling events shall be at least 14 days apart. The third and four sample events can be analyzed for a reduced list of parameters. The parameters that can be deleted from analysis are those that were not detected during the first and second sampling events.
- E. Ground water RTVs for the ore zone aquifer shall be established by a parameter-by-parameter basis using either a production area or well-specific basis for all constituents.

# LC 11.5 – The 3<sup>rd</sup> and 4<sup>th</sup> paragraphs should be reworded as follows:

If an excursion is not corrected within 60 days of confirmation, the licensee shall either: (a) terminate injection of lixiviant into the production area until the excursion is retrieved; or (b) increase the surety in an amount to cover the full third-party cost of correcting and cleaning up the excursion. The surety increase shall remain in force until the NRC has verified that the excursion has been corrected and cleaned up. The written 60-day excursion report shall identify which course of action the licensee is taking. Under no circumstances does this condition eliminate the requirement that the licensee must remediate the excursion to meet ground water protection standards as required by LC 10.8 for all constituents established per LC 11.3.

The licensee shall notify the NRC Project Manager (PM) by telephone or email within 24 hrs of confirming a lixiviant excursion, and by letter within 7 days from the time the excursion is

confirmed, pursuant to LC 11.6. A written report describing the excursion event, corrective actions taken, and the corrective action results shall be submitted to the NRC within 60 days of the excursion confirmation. For all wells that remain on excursion after 60 days, the licensee shall submit a report as discussed in LC 11.1(A).

LC 11.7 – This license condition is currently under review.

LC 12.4 – This license condition is an operational license condition and not a pre-operational license condition. The LC should be worded as follows:

The licensee shall identify the location, screen depth, and estimated pumping rate of any new ground water wells or new use of an existing well within the license area, annually, after the commencement of operations. The licensee shall evaluate the impact of ISR operations to potential ground water users and recommend any additional monitoring or other measures to protect ground water users. The evaluation shall be submitted as part of the annual reporting to the NRC for review.

LC 12.7 – The NRC will revisit the license condition and get back to the licensee after taking into consideration the data and responses presented in the Open Issue RAI Responses.

LC 12.8 – This license condition will be removed. The original intent of the LC has been added to LC 11.3 as bullet item C.

LC 12.9 – This license condition will be removed. Four quarters of air particulate sampling has been conducted with the results presented in Section 2.9.6 of the Technical Report.

LC 12.10 – The NRC will revisit this license condition to determine if this condition is necessary.

LC 12.12 – The LC should be reworded as follows:

Prior to commencement of uranium recovery operations, the licensee will submit monitoring results to the NRC for review and approval that includes sampling of domestic and livestock wells that are located in the ore zone aquifer within 2 km of the well field boundaries of the Nichols Ranch and Hank Units. Samples shall be collected, at a minimum, quarterly prior to operations and annually thereafter until the end of uranium recovery operations. Samples shall also be analyzed for the parameters in Table 5-1 of the licensee's approved application.

If you have any questions regarding the Action Items, please contact me at 307-265-8900 or by email at: <a href="mailto:mthomas@uranerz.com">mthomas@uranerz.com</a>.

Sincerely.

Mike Thomas

Environmental, Safety, and Health Manager

**Uranerz Energy Corporation** 

cc: Steven Cohen, NRC, by email Doug Mandeville, NRC, by email

Received: from mail2.nrc.gov (148.184.176.43) by TWMS01.nrc.gov

(148.184.200.145) with Microsoft SMTP Server id 8.2.247.2; Wed, 29 Dec 2010

14:02:02 -0500 X-Ironport-ID: mail2

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Received: from tetonvillage.mcmurry.net (HELO mail.mcmurry.net)

([72.166.85.10]) by mail2.nrc.gov with ESMTP; 29 Dec 2010 14:01:53 -0500

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Subject: URZ/NRC 20Dec2010 Meeting Summary Letter

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Thread-Topic: URZ/NRC 20Dec2010 Meeting Summary Letter Thread-Index: AcunitZ1LAIEM99mSSeJUSJXhXdMGg==

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Return-Path: mthomas@uranerz.com

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