

June 14, 2007

Mr. Joseph Vranka, Program Manager  
Radiation Management Program  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530

Dear Mr. Vranka:

We have completed review of your March 22, 2007 submittal, regarding the license termination of the Maybell heap leach site (Colorado Radioactive Materials License #660-01). The license covered the Umetco Maybell facility, a heap leach uranium extraction facility, located near Maybell, Colorado. Our review was done to carry out the Section 274c requirement that the U.S. Nuclear Regulatory Commission (NRC) make a determination that all applicable standards and requirements pertaining to reclamation of the Maybell Site have been met.

The process that we used to make the determination is set out in the former Office of State and Tribal Programs Procedure SA-900. Our determination is based on two supporting bases: review of a Completion Review Report (CRR) documenting the Colorado Department of Public Health and Environment (CDPHE) staff's bases for its conclusion that all requirements have been met; and review of Colorado's Agreement State uranium recovery program, conducted under the Integrated Materials Performance Evaluation Program (IMPEP).

First, the information you have submitted in the final CRR, dated March 22, 2007, documents that the CDPHE has performed a complete review of the Maybell Site for compliance with regulatory and license requirements. CDPHE's review covered all necessary technical areas and regulatory requirements relating to reclamation of the Maybell Site including geotechnical engineering, surface water hydrology and erosion protection, radiation cleanup and control, and groundwater protection. CDPHE also conducted appropriate inspections of site reclamation activities at the Maybell Site. Based on the review findings documented in the CRR, CDPHE concluded that the Maybell Site has met all regulatory and license requirements.

Second, the most recent IMPEP review of the Colorado Agreement State Program, conducted in March 2006, concluded that the Colorado program is adequate to protect public health and safety, and compatible with NRC's regulatory program. This finding is consistent with previous Colorado program evaluation findings.

Based on our review of the above information and in accordance with the provisions at 10 CFR 150.15a(a) and Section 274c of the Atomic Energy Act of 1954, as amended, we concur with Colorado's determination that all applicable standards and requirements for the protection of the public health, safety and the environment have been met for the Radioactive Material License, #660-1 and the license may be terminated. The actual license termination will need to be coordinated with the Department of Energy and continued coordination with NRC to ensure that the other requirements for establishment of the general license under 10 CFR 40.28 have been met. A copy of our evaluation report, without associated attachments, entitled

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“Documentation of NRC Review on the Termination Findings of the Umetco Minerals Corporation’s Maybell Facility Uranium Milling License Submitted by the Colorado Department of Public Health and Environment,” is enclosed.

If you have any questions, or we can be of further assistance, please contact me or William Rautzen at (301) 415-7206.

Sincerely,

***/RA By Scott Moore Acting for/***

Janet R. Schlueter, Director

Division of Materials Safety and

State Agreements

Office of Federal and State Materials and

Environmental Management Programs

Enclosure:

As stated

J. Vranka

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As stated

Distribution: DCD (SP08)  
DMSSA rf  
RErickson/RIV RSAO  
DSollenberger

**Response to Incoming Document: ML070890537**

**ML071490193**

OFC	FSME/DMSSA	FSME/DMSSA	FSME/DMSSA	FSME/DWMEP	OGC	FSME/DMSSA
NAME	WRautzen	DSollenberger (WRautzen for)	SWMoore	LCamper	FCameron	JRSchlueter
DATE	5/30/07	5/30/07	6/4/07	6/7/07	6/13/07	6/14/07

**OFFICIAL RECORD COPY**

**Documentation of NRC Review on the Termination Findings of the  
Umetco Minerals Corporation's Maybell Facility Uranium Milling License  
Submitted by the Colorado Department of Public Health and Environment**

Licensee: Umetco Minerals Corporation (Umetco) Licensee No.: 660-01 Location: Umetco Maybell Facility Area: 180 acres Type of License: Conventional Uranium Milling License (Heap Leach Facility) Full/Partial License Termination: Full License Termination
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**A. Documentation of major events/activities related to the review of the Completion Review Report (CRR) for the Umetco Maybell Facility site**

1. On April 4, 2006, NRC staff received the draft CRR from the Colorado Department of Public Health and Environment (CDPHE) for Umetco's Maybell site. A letter dated March 30, 2006 with CDPHE's draft CRR can be found in Agencywide Documents Access and Management System (ADAMS) ML060950088.
3. The review of the draft CRR was conducted by an NRC staff team. A list of NRC staff technical and legal reviewers can be found in the Attachment.
4. On July 10, 2006, NRC staff conducted a visit to the Maybell site and discussed the review process and status of NRC's review of the draft CRR with CDPHE, Department of Energy, and Umetco representatives.
5. By letter dated August 11, 2006, the NRC staff provided comments on the draft CRR to CDPHE. The cover letter and attached comments can be found in ADAMS #ML062230396.
6. On September 15, 2006, NRC received additional information submitted by the CDPHE. This information can be found in ADAMS #ML062700264 and #ML062700266.
7. On November 21, 2006, NRC staff responded to the CDPHE regarding the submittal received on September 15, 2006. Most of the NRC comments made on August 11, 2006 were resolved, except two remaining areas (one geotechnical engineering, one health physics).
8. On November 30, 2006, NRC received the revised draft CRR through e-mail. The geotechnical comments were resolved and found acceptable on January 3, 2007. On February 8, 2007, the NRC staff held a telephone conference with CDPHE staff and Umetco staff to resolve the health physics questions. Revised pages of the radiological section were submitted by e-mail on February 9, 2007. The NRC staff determined that all questions had been addressed.
9. CDPHE submitted the final CRR on March 22, 2007.

**Enclosure**

**B. Documentation of review comments on items specified in the former Office of State and Tribal Programs Procedure SA-900 “Termination of Uranium Milling Licenses in Agreement States.”**

1. A brief description of licensee’s activities associated with decommissioning, tailings remediation and groundwater cleanup, if necessary.

Comment: This information is provided in section 1 of the final CRR. The submitted information was found to be complete.

2. Documentation that the completed surface remedial actions were performed in accordance with applicable standards and requirements.

Comment: This information is provided in sections 2 and 3 of the final CRR. CHPHE staff reviewed geotechnical stability, surface water hydrology and erosion protection, and radon emanation aspects of the reclamation of the Umetco Maybell site. Based on its evaluation, CDPHE concluded that reclamation of the site has met all applicable standards and conformed with the site specific design specifications. The submitted information was found to be acceptable.

3. Documentation that the completed site decommissioning actions were performed in accordance with applicable standards and requirements.

Comment: This information is provided in section 4 of the final CRR. Umetco’s measurements indicated that all gamma and soil sample grids were below the radium regulatory limit. CDPHE data confirm that Umetco’s sampling process was valid. CDPHE concluded that residual radioactive material in all the areas potentially impacted by the heap leach operation was cleaned up to the site specific standard established by the State. The submitted information was found to be acceptable.

4. Documentation that the completed groundwater corrective actions, if necessary, were performed in accordance with applicable standards and requirements.

Comment: This information is provided in section 4 of the final CRR. CDPHE’s review of all groundwater quality data has determined that the key indicator parameters in the tailings impoundment (uranium, Th-230, Ra-226, calcium, magnesium, potassium, sodium, bicarbonate, carbonate, chloride, sulfate, and total dissolved solids) were not detected above background in groundwater. From this, CDPHE authorized the closing of the wells and concluded that the closure of Umetco’s Maybell site is in compliance with Colorado’s groundwater regulations associated with uranium mill closure. The submitted information was found to be acceptable.

5. Discussion of results of State's site closure inspection(s).

Comment: This information is provided in section 6 of the final CRR. CDPHE staff performed appropriate site reclamation inspections over the years as site remediation moved from one phase to the next. CDPHE employed inspection staff or provided specialized consultants to review and verify all important aspects of site closure. CDPHE staff site inspections have provided a presence to ensure that site reclamation activities were performed as required by regulations and license conditions. The submitted information was found to be acceptable.

6. For partial terminations, documentation that release of a portion of the site will not negatively impact the remainder of the site to be closed at a later date.

Comment: Not applicable. This is a full license termination.

7. Integrated Materials Performance Evaluation Program (IMPEP) review of the CDPHE uranium recovery regulatory program.

Comment: Based on the 2006 IMPEP review, the CDPHE uranium recovery program was found to be satisfactory based on the IMPEP evaluation criteria. (A satisfactory rating is the highest rating possible for each IMPEP common and non-common performance indicator.) The overall Colorado Agreement State Program was found to be adequate to protect public health and safety and compatible with NRC's program. The IMPEP team had one recommendation in the Uranium Recovery area that the State develop additional specialized inspection procedures.

Based on review of the above information, as specified in the former Office of State and Tribal Programs Procedure SA-900, and in accordance with the provisions at 10 CFR 150.15a(a) and Section 274c of the Atomic Energy Act of 1954, as amended, staff determines that all applicable standards and requirements have been met for the termination of the Colorado Radioactive Material License, #660-01.

Project Manager: Dennis M. Sollenberger /RA/ Date: **6/14/07**  
Senior Health Physicist  
Division of Materials Safety and  
State Agreements  
Office of Federal and State Materials and  
Environmental Management Programs

Division Director: Janet R. Schlueter, Director **/RA By S. Moore Acting for/** Date: **6/14/07**  
Division of Materials Safety and  
State Agreements  
Office of Federal and State Materials and  
Environmental Management Programs

Attachment:

As stated

Maybell Completion Review Report Team Membership

Team Leader:

Dennis Sollenberger, DMSSA, FSME  
Sandra Lai, DMSSA, FSME (original team leader, transferred to RES)  
William Rautzen (backup), DMSSA, FSME

Erosion Protection/Surface Water Hydrology:

Terry (Ted) Johnson, Consultant DWMEP, FSME

Geotechnical Engineering/Stability:

Dan Gillen, Consultant DWMEP, FSME  
(originally Dan Rom, DHLW, NMSS)

Groundwater Hydrology:

Paul Michalak, DWMEP, FSME

Health Physics/Radiological Compliance:

Dennis Sollenberger, DMSSA, FSME  
William Rautzen, DMSSA, FSME  
(originally Sandra Lai), DMSSA, FSME

Legal Review:

John Hull, OGC

**Attachment**