

Public Participation Summary  
Ground Water Discharge Permit (Permit)  
For the  
Denison Mines (USA) Corp. (DUSA)  
Uranium Milling Facility  
South of Blanding, Utah  
March 14, 2008

## **Introduction**

No written comments were received from the public by the Utah Division of Radiation Control (DRC) regarding the Denison Mines (USA) Corp. (DUSA) Uranium Mill facility south of Blanding, Utah during the comment period that ended on Tuesday, November 27, 2007. In addition, there were no verbal public comments received during a public meeting held on November 27, 2007 in Blanding, Utah. A copy of the minutes for the public meeting is included in Attachment 1.

After the public comment period DRC made additional modifications to the Permit and corrected an oversight of modifications that were discussed in the October 24, 2007 Statement of Basis (SOB) but not included in the Permit released for public comment. These modifications were considered minor or more protective to human health and the environment therefore, no new public comment period was necessary. The modifications are discussed below. A red-line strikeout version of the Permit is found in Attachment 2 to show these most recent changes.

## **Additional Permit Modifications**

### Best Available Technology (BAT) Performance Standard Monitoring Requirements for Tailings Cell 4A (Parts I.D.6, I.E.8, and I.F.3)

Unfortunately, the BAT performance standard monitoring requirements for Tailing Cell 4A proposed by the Permittee and discussed in the October 24, 2007 DRC SOB (pp. 4-5) were omitted from the October 25, 2007 draft Permit. This omission has been corrected by adding: 1) Cell 4A BAT performance standards to Part I.D.6 for the leak detection system, slimes drain layer, and maximum wastewater level, 2) Cell 4A BAT Monitoring Requirements to Part I.E.8, and 3) Cell 4A BAT Reporting Requirements to Part I.F.3. These performance, monitoring, and reporting requirements for tailings Cell 4A were based of the following sources of information:

1. Leak Detection System (LDS) Maximum Operation Head [Part I.D.6(a)] – The maximum 1-foot head limit in the LDS is based on action leakage rate calculations provided by Geosyntec Consultants dated October 26, 2006. This Geosyntec Consultants calculation worksheet states that the calculations were done in accordance with Part 254.302 of the USEPA Code of Federal Regulations and based on an assumption that would not allow the maximum fluid head on the

bottom liner to exceed 1 foot. Therefore, a performance standard was set in the Permit such that the fluid in the leak detection system for tailings Cell 4A shall not exceed 1 foot level above the lowest point in the lower membrane liner.

2. LDS Maximum Allowable Daily Leak Rate [Part I.D.6(b)] - was calculated in the 26, 2006 Geosyntec Consultants worksheet using the surface area of the Cell 4A of 40 acres multiplied by leakage rate through the geomembrane liner of 604 gallons/day/acre (gda) which equates to 24,160 gallons/day. This maximum allowable leak rate was also based on other key assumptions, including but not limited to: 1) a 37 foot liquid head on the primary flexible membrane liner (FML), and 2) a maximum hole frequency in the upper FML of 1-60 mil diameter hole (1.524 mm or 0.06 inch) for every 2,500 m<sup>2</sup> of primary FML area (26,912 ft<sup>2</sup> or 0.617 acres).
3. Slimes Drain Monthly and Annual Average Recovery Head Criteria [Part I.D.6(c)] – this requirement was added to help prevent the possibility of a release of wastewater from Tailing Cell 4A into groundwater after closure of this cell. Therefore, after the Permittee initiates pumping conditions in the slimes drain layer in Cell 4A, the Permittee will provide continuous declining fluid heads in the slimes drain layer, in a manner equivalent to the Discharge Minimization Technology requirements found in Part I.D.3(b) of the Permit.
4. Maximum Weekly Wastewater Levels [Part.D.6(d)] – this requirement was added to require DUSA to maintain at least 3-feet of vertical freeboard to prevent discharge of wastewaters via overtopping. The 3-foot freeboard is required by Utah Water Quality Regulations for wastewater impoundments that treat 50,000 gallons or more per day [UAC R317-10-3(C)]. In a report by DUSA, it was reported that the tailings disposal system is expected to receive on average 335 gal/min, which equates to a daily rate of 482,400 gal/day (5/28/99 IUC Groundwater Information Report, p.A-9). This daily rate is above 50,000 gal/day limit established by State rule. This is equivalent to an existing requirement for Cells 1, 2, and 3, found in Part I.D.2.

#### Gross Alpha Counting Variance [Part I.1.(d)(3)]

To resolve gross alpha error term issues identified by the DRC in a letter of January 15, 2008, Part I.1.(d)(3) was modified to require: 1) that all gross alpha analysis shall be reported with an error term, 2) All gross alpha analysis reported with an activity equal to or greater than the GWCL, shall have a counting variance that is equal to or less than 20% of the reported activity concentration, and 3) An error term may be greater than 20% of the reported activity concentration when the sum of the activity concentration and error term is less than or equal to the GWCL.

Compliance Schedule Reset for the Monitoring Well Remedial Action Report (MWRA) [Part I.H.6]

In the October 24, 2007 DRC SOB the compliance schedule for the MWRA was reset for December 31, 2007. This compliance date has passed before this Permit modification was finalized. In order to bring a timely resolution this section (Part I.H.6) has been revised to require DUSA to complete and submit the MWRA for Executive Secretary approval on or before May 1, 2008.

Monitoring Well MW-3 Verification, Retrofit, or Reconstruction Report (MVRR) [Part I.H.7]

In order to help determine if the well screen for MW-3 has been adequately constructed the Permittee must report that well MW-3A is constructed with a protective surface casing and report an elevation survey of the water level measuring point. Therefore, the wording in Part I.H.7(1) and (2) has been revised to reflect these needs.

Compliance Schedule Reset for the Infiltration and Contaminant Transport Modeling Work Plan and Report (ICTM) [Part I.H.10]

In the October 24, 2007 DRC SOB the compliance schedule for the ICTM was reset for October 31, 2007. In a October 31, 2007 letter DUSA asked for an extension to November 23, 2007. Later, DUSA submitted the required report on November 26, 2007. Therefore, the wording in Part I.H.10 has been revised in the last paragraph of the section to require that in the event the Executive Secretary requires additional information, the Permittee will provide all requested information by a schedule approved by the Executive Secretary.

Plan for Evaluation of Deep Supply Well WW-2 [Part I.H.11]

The second sentence of this section was modified by adding the wording, "Prior to *Executive Secretary* approval of this plan the Permittee shall resolve all issue within a timeframe approved by the Executive Secretary."

Compliance Schedule Reset for the Revised Stormwater Best Management Practices Plan (RSBMPP) [Part I.H.16]

In the October 24, 2007 DRC SOB the compliance schedule for the RSBMPP was reset for December 31, 2007. This compliance date has passed before this Permit modification was finalized. In order to bring a timely resolution this section (Part I.H.16) of Permit has been revised with the compliance schedule reset to submit the RSBMPP for Executive Secretary approval on or before May 15, 2008.

#### Tetrahydrofuran (THF) Demonstration Report [TDR](Part I.H.17)

The October 24, 2007 DRC SOB explained how the TDR had been submitted by DUSA, and was in process of agency review. Since then the DRC sent a letter to DUSA dated December 12, 2007 that concluded that: 1) the results of the June 26, 2007 DUSA TDR were inconclusive, and 2) therefore the source of the THF detected in the wells is currently undetermined, and the Executive Secretary is unable to remove THF as a compliance monitoring parameter in Table 2 of the Permit. Therefore, this compliance schedule item was removed from the Permit. As a result of the existing requirements for THF groundwater monitoring, reporting, and compliance will be in force as per Parts I.C.1, I.E.1, and I.F.1 of the Permit.

#### Compliance Schedule Reset for the Repair of Monitor Well MW-5 (RMW) [Part I.H.18]

In the October 24, 2007 DRC SOB the compliance schedule for the RMW was reset for December 31, 2007. This compliance date has passed before this Permit modification was finalized. In order to bring a timely resolution this section the Permit has been revised to require DUSA submit the RMW for Executive Secretary approval on or before May 1, 2008.

#### Cell 4A BAT Monitoring, Operations and Maintenance Plan [Part I.H.19]

Removed typographical errors.

#### Groundwater Purging and Sampling Equipment [Part I.H.20]

In the currently approved QAP the DRC neglected to specify that the purging and sampling equipment must be made of inert materials. However, the Permit has been modified in Part I.E.1(e)(4) to require that all purging and sampling equipment must be made of inert materials. Therefore Part I.H.20 is not needed and was removed.

#### Feedstock Material Stored Outside the Feedstock Storage Area Management Plan (GPSE) [Part I.H.21]

Part I.H.21 of the October 25, 2007 draft Permit made a circular reference to Part I.D.11 and is not needed. Therefore, the circular reference was removed

### **Corrected Oversight of Modifications**

#### Non-Conformance with the Quality Assurance Plan (QAP) [Part I.E.1(a), Part I.F.1(f), and Part I.H.22]

On page 6 of the October 24, 2007 DRC SOB in a Section titled "*Ground Water Monitoring Quality Assurance Plan [QAP] (Part I.E.1(a) and (e), and Part I.F.1(e))*" (second paragraph) the agency addressed the need for 1) a schedule to complete all

corrective action for non-conformance with QAP [as proposed in Part I.e.1(a)] and 2) to fully disclose all non-conformance with the QAP Requirements in each quarterly Report [as proposed in Part I.F.1(e)]. Unfortunately the DRC did not modify the Permit [at Part I.E.1(a) and I.F.1(e)] that was released for public comment. Since that time we have corrected this oversight. In addition, a compliance item in Part I.H.22 of the Permit was added that requires the Permittee to modify the QAP to meet requirements originally proposed in the SOB for Parts I.E.1(a) and I.F.1(e).

## References

Geosyntec Consultants, October 26, 2006, "Calculation of Action Leakage Rate Through the Leakage Detection System Underlying A Geomembrane Liner", found in December 8, 2006, Denison Mines (USA) Corp. letter from Harold Roberts to Dane Finerfrock, Attachment D

International Uranium Corporation, May 28, 1999, "Ground Water Report White Mesa Uranium Mill Blanding, Utah".

Utah Administrative Code (UAC) Rule R317-3, As in effect on February 1, 2008, Design Requirements for Wastewater Collection, Treatment and Disposal Systems,

**ATTACHMENT 1**

Minutes  
For The  
Public Hearing

## **ATTACHMENT 2**

A red-line strikeout version of the Permit  
showing additional changes After the  
Public Comment Period