Sampling Plan for Seeps and Springs In the Vicinity of the White Mesa Uranium Mill

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March, 2009

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1.0 Introduction and Objectives

This work plan describes the procedures for sampling seeps and springs in the area around the White Mesa Uranium Mill site near Blanding, Utah. The work plan is a part of the requirements of Groundwater Discharge Permit ("GWDP") No. UGW370004, initially issued to International Uranium (USA) Corporation (now Denison Mines (USA) Corp., "DUSA") on March 8, 2005. The current GWPD, issued on March 17, 2008, lists the requirements for Seeps and Springs at Part 1.H.9.

2.0 Seeps and Springs Sampling Locations

The sampling locations were selected to correspond with those seeps and springs sampled for the initial site characterization performed for the Environmental Assessment and as shown on Plate 2.6-10 of the 1978 Environmental Report (the "ER, Dames & Moore, January 30, 1978), plus additional sites located by IUSA (now DUSA), the BLM and Ute Mountain Tribal representatives. Each location was initially surveyed with a hand held Global Positioning System (GPS). In order to confirm these locations, a formal land survey will be conducted under the direction of, and be certified by, either a Utah licensed Professional Engineer or Land Surveyor. The Survey will be in accordance to the commonly accepted professional standards and methods for land surveyors. The survey will include State plan Coordinates (northings and eastings) and vertical elevations. The surveyed coordinates and elevations of the seeps and springs shall be within 1 foot of the highest point of the saturated seepage face on the day of the survey. This seep/spring survey data shall be included in the 3rd quarter Routine Groundwater Monitoring Report due on December 1, of each year. The locations are listed below in Table 1 and are shown on Figure 1 attached.

Table 1

Seeps and Springs Sampling Locations

Name	Location	Elevation, feet above MSL
Corral Canyon Seep	**N37° 33.119' W109° 29.211'**	**5417**
Corrals Seep	**N37° 29.609' W109° 29.600'**	**5166**
Ruin Springs	**N37° 30.100' W109° 31.397'**	**5172**
Cottonwood Seep	**N37° 31.351' W109° 32.276'**	**5014**
Westwater Seep	**N37° 31.978' W109° 31.394'**	**5272**

Name	Location	Elevation, feet above MSL
Entrance Seep	**N37° 32.031' W109° 29.555'**	**5344**

3.0 Frequency and Timing of Sampling

Seeps and spring sampling will be conducted on an annual basis and will be scheduled between May 1 and July 15 of each year. This sampling period is aimed at maximizing the opportunity for flow but excludes the potential for surface water influence occasioned by late summer "monsoon" conditions. Denison representatives conducted a reconnaissance visit to the locations listed in Table 1 on June 25, 2008 in order to determine the status of the listed springs and seeps and to evaluate the feasibility of physical development of these locations in order to better accommodate sampling at dry locations. It was observed at that time that water flow was available for sampling at Ruin Springs, Cottonwood Seep and the location named "Entrance". Alternatively, locations known as Corral Canyon Seep and Corrals Seep were entirely dry and the Westwater Seep exhibited only barely moist soil (largely due to its shaded location beneath a rock outcrop). It is Denison's observation that physical development is infeasible at Corral Canyon Seep, Corrals Seep and Westwater Seep. These locations were so dry that flowing water would not be available for sampling even if these locations were to be excavated for location development and sampling purposes. However, for each annual sampling period, these sites will b visited a minimum of three times in order o attempt a sampling. Should a visit reveal a change in conditions at any of these dry locations which would warrant development opportunities, Denison will proceed with limited hand tool excavation to develop the sampling location. Should three annual visits at seeps and springs locations reveal only dry conditions, and a continued absence of physical development opportunities, a sample will not be collected and such conditions (and the inability to sample) will be recorded on the sampling field sheet and reported along with the results of collected samples for that annual sampling event.

DUSA will provide at least 15 days notice of site visits for sampling purposes during periods of time when actively flowing locations are likely in order to allow the Executive Secretary to collect split water quality samples of the seeps and springs.

4.0 Analytical Parameters

Samples will be analyzed for all ground water compliance parameters found on Table 2 of the GWDP, including analysis of the volatile compounds included in the Table and with the addition of semi-volatile organic compounds which are not included in Table 2. The lab procedures utilized to conduct the analyses of parameters listed in Table 2 will be those utilized for groundwater sampling and as shown in Section 8.2 in the Ground Water Monitoring Quality Assurance Plan (QAP). For semi-volatile compounds (not listed in Table 2), the analytical procedures will be those indentified in EPA Method 8270. Reporting limits utilized by the laboratory will be required to not exceed the Ground Water Standards. In addition to these laboratory parameters, the pH, temperature and conductivity of each sample will be measured and recorded in the field. Laboratories

selected by DUSA to perform analyses of seeps and springs samples will be required to be certified by the State of Utah in accordance with Utah Administrative Code (UAC) R317-6.6.12.A.

5.0 Sample Collection Methodology

The seeps and springs in the vicinity of the White Mesa Mill generally originate form a perched groundwater zone located in a low-yield formation. As noted above, during any sampling event some or all of the seeps or springs may have either no flow, very limited flow, or insufficient flow to provide the necessary sample volume for all of the required sample analysis. Toward this end, the sampling period and repeat visit protocol outlined in Section 3.0 above have been selected by Denison so as to maximize the ability to collect any groundwater available for sampling at these locations. Such limited flow, and seep or spring environment in general, may impact the quality of any samples that are obtained. Samples will be collected and containerized in the order of the Parameters listed in Table 2 of the GWDP. Should flow be limited to where all containers can not be filled on the initial sampling attempt then repeated sampling attempts will be made at least one time per day until sufficient volume of water is collected to fill all the required containers, or until instructed otherwise in writing by the Executive Secretary. .

Whenever possible, sample bottles, particularly those for VOC's and SVOC's shall be filled directly from the seep or spring as a means of limiting volatilization of these parameters during sample collection and handling. If the flow environment is such that this is not possible, then a clean stainless steel ladle shall be used to collect water until a sufficient volume is contained in the ladle for transfer to the sample bottle. Similarly, larger volume samples for metals analyses will be collected using the ladle. The stainless steel ladle and any other sampling equipment will be subjected to decontamination procedures for sampling equipment between seep and springs sample locations as outlined in Section 6.2.5 of the QAP. .

The seep and springs sample events will be subject to the currently approved White Mesa Mill Ground water monitoring Quality Assurance Plan (QAP). Water quality QC samples will be in accordance with Section 4.3 of the QAP and any corrective actions identified will follow the requirements as outlined in Section 10 of the QAP. In addition, samples analyzed for heavy metals, all other non-radiologics (i.e. fluoride, general inorganics, TDS, total cations and anions) and gross alpha activity will be filtered with a 0.45 micron filter and preserved by the addition of appropriate preservative for the analytical technique the samples will be subjected to and stored at 4^0 C or less prior to laboratory analysis. These data will be reported as dissolved concentrations by the laboratory.

6.0 Reporting

DUSA will collect seeps and springs samples during the first available sampling period (see section 3.0 above) subsequent to approval of this plan. Each report will: 1) document the sampling event by means of providing the field sheets recorded at the time of sampling; 2) transmit copies of all field measurements and laboratory results; 3) provide a water table contour map that includes water table elevation of all groundwater monitoring wells at the facility and the elevations of the phreatic surfaces observed at each of the seeps and springs sampled; and 4) provide an evaluation and interpretation of the groundwater quality data collected.

- The annual seeps and springs monitoring report that will be included with the 3rd quarter Routine Groundwater Monitoring Report due on December 1, of each year.

- The seeps and springs water table contour map will include all water level data measurements from all monitoring wells at the site from the 3rd quarter groundwater monitoring event for each year.

- The seeps and springs water table contour map shall be at the map scale such that all seeps and springs listed in the Plan and monitor wells at the site may be seen on one map.

Attachment A
Field Data Record-Seeps and Springs Sampling

Time and Date of Sample Event: _____
Seep or Spring Location: _____
Sampling Personnel: _____
Weather Conditions at time of Sampling: _____
Sampling Equipment Utilized: _____
Sampling Method Utilized: _____
Estimated Seep of Spring Flow Rate: _____
Parameters to be Analyzed at the Laboratory:

_____
_____
_____
_____

Field Parameter Measurements:
-pH _____
-Temperature _____
-Conductivity _____