

**FACT SHEET STATEMENT OF BASIS  
VELVET MINE  
UPDES PERMIT NUMBER: UT0025810  
NEW PERMIT  
MINOR INDUSTRIAL**

**FACILITY CONTACTS**

Toby Wright, Environmental Manager  
11850 South Highway 191, Unit A-5  
Moab, UT 84532  
(970) 231-1160

**DESCRIPTION OF FACILITY**

Uranium One Exploration, Inc. owns and operates the Velvet Mine, which is an underground uranium and vanadium mine. The discharge treatment system for this facility consists of a chemical precipitation process with barium chloride. The intercepted mine water is pumped and mixed with barium chloride and then up to an initial treatment tank where the barium chloride assists in Radium reduction. The mine is located at T31S, R25E Section 3 in Lisbon Valley, which is in San Juan County, UT at latitude 38°07'10" and longitude 109°09'23". The facility has a Standard Industrial Classification (SIC) code 1094, for Uranium mining.

**NARRATIVE**

Discharges from the Velvet Mine facility could potentially reach the Colorado River, which places it under the requirements of the Colorado River Basin Salinity Control Forum (CRBSCF). Total dissolved solids (TDS) loading is limited by the CRBSCF pursuant to the February 1977 "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program" (Policy). In accordance with the CRBSCF, the effluent will be limited to a maximum discharge of 1.0 ton per day or 366 tons per year.

**DISCHARGE**

**DESCRIPTION OF DISCHARGE**

The Velvet Mine is a new discharger of an existing mine, which has not had a discharge for many years..

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 38°07'10" and longitude 109°09'23". The discharge is to an unnamed dry wash then to Big Indian Wash to Hatch Wash to Kane Creek and into the Colorado River.

**RECEIVING WATERS AND STREAM CLASSIFICATION**

The final discharge is to a dry wash, which is classified as 2B and 3D according to *Utah Administrative Code (UAC) R317-2-13*.

- Class 2B -Protected for secondary contact recreation such as boating, wading, or similar uses.  
 Class 3D -Protected for waterfowl, shore birds and other water oriented wildlife not included in Class 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

**BASIS FOR EFFLUENT LIMITATIONS**

Effluent limits for total suspended solids (TSS), total uranium, total radium 226, dissolved radium 226, chemical oxygen demand (COD), and total zinc are technology based standards for uranium ore mines found in 40 CFR 440.32 and 440.33. The pH limit is based on current Utah Secondary Treatment standards. The total dissolved solids (TDS) concentration limit is the same as similar uranium mining facilities in the immediate area; is based on Best Professional Judgment (BPJ) and is more stringent than the Utah Water Quality Standards for TDS. The oil & grease limit is based on best professional judgment. Discharges from the Velvet Mine facility could potentially reach the Colorado River, which places it under the requirements of the CRBSCF. In accordance with the CRBSCF the effluent will be limited to a maximum discharge of 1.0 ton per day or 366 tons per year. The permit limitations are:

Effluent Limitations			
Parameter	Monthly Average	Daily Minimum	Daily Maximum
TSS, mg/L	20	NA	30
Total Uranium, mg/L	2.0	NA	4.0
Total Radium 226, pCi/L	10	NA	30
Dissolved Radium 226, pCi/L	3	NA	10
COD, mg/L	100	NA	200
Total Zinc, mg/L	0.5	NA	1.0
Total Dissolved Solids, mg/L	NA	NA	1000
Total Dissolved Solids, tons/day a/	NA	NA	1.0
Oil & Grease, mg/L	NA	NA	10
pH, standard units	NA	6.5	9.0

NA – Not Applicable

- a/ TDS will be limited to a maximum discharge of 1.0 ton per day or 366 tons per year, with daily maximum tonnages reported monthly. It is the permittee's responsibility to monitor and report the actual discharge of TDS for each monitoring period.

**SELF-MONITORING AND REPORTING REQUIREMENTS**

The following self-monitoring and reporting requirements are listed in the table below. The permit will require reports to be submitted monthly on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period.

Self-Monitoring and Reporting Requirements				
Parameter	Frequency	Sample Type	Units	Reporting Frequency
Total Flow	Continuous	Recorder	GPM	Monthly
TSS	Monthly	Grab	mg/L	Monthly
Total Uranium	Monthly	Grab	mg/L	Monthly
Total Radium 226	Monthly	Grab	pCi/L	Monthly
Dissolved Radium 226	Monthly	Grab	pCi/L	Monthly
COD	Quarterly	Grab	mg/L	Quarterly
Total Zinc	Quarterly	Grab	mg/L	Quarterly
TDS	Quarterly	Grab	mg/L	Quarterly
TDS	Quarterly	Grab	ton/day	Quarterly
Oil & Grease	Quarterly	Grab	mg/L	Quarterly
pH	Monthly	Grab	SU	Monthly

The permittee is required to sample and submit the analysis of the pollutants listed in 40 CFR Part 122 Appendix D Table III (Other Toxic Pollutants (Metals and Cyanide) and Total Phenols) occurring from the first discharge of the facility.

### **STORM WATER REQUIREMENTS**

According to Utah Administrative Code (UAC) R317-8-3.9 this facility will be required to maintain coverage under the UPDES multi-sector general permit for discharges associated with industrial activity, permit number UTR000000, sector G (Mineral Industry, SIC Major Group 10).

### **PRETREATMENT REQUIREMENTS**

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

### **BIOMONITORING REQUIREMENTS**

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (WET) Control (Biomonitoring (2/1991)). Authority to require effluent biomonitoring is provided in UAC R317-8, Utah Pollutant Discharge Elimination System and UAC

R317-2, Water Quality Standards. The result of the wasteload analysis was a finding of no significant impact. Based on these considerations, and that the facility is not classified as a major or a significant minor facility, there is no reasonable potential for toxicity in the Velvet Mine's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

### **PERMIT DURATION**

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by  
Matthew Garn  
Environmental Engineer  
Utah Division of Water Quality  
Drafted on October 8, 2008

### **PUBLIC NOTICE**

Began:

Ended:

Public Noticed in The San Juan Record

, 2008