

**FACT SHEET STATEMENT OF BASIS  
CANYON FUEL COMPANY, SOLDIER CANYON MINE  
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)  
PERMIT NUMBER: UT0023680  
MINOR INDUSTRIAL RENEWAL**

**FACILITY CONTACTS**

Facility Contact:	David G. Spillman	Responsible Official:	Erwin Sass
Position:	Senior Engineer	Position:	General Manager
Phone:	(435) 636-2872	Phone:	(435) 636-2895
Facility Contact:	Vicky Miller		
Position:	Environmental Engineer		
Phone:	(435) 636-2869		

**DESCRIPTION OF FACILITY**

Facility Name: Canyon Fuel Company, Soldier Canyon Mine  
Mailing Address: Soldier/Dugout Canyon Mines  
P.O. Box 1029  
Wellington, Utah 84542  
Physical Location: The Soldier Canyon Mine facility is located in Carbon County, Utah, Section 18, Township 13 South, Range 12 East, 13 miles northeast of the City of Wellington.  
Coordinates: Approximately, Latitude: 39° 42' 02", Longitude: 110° 36' 39"  
Standard Industrial Classification (SIC): 1222 - *Bituminous Coal Underground Mining (NAICS 212112)*

The Canyon Fuel Company, LLC Soldier Canyon Mine (SCM) facility consists of an underground coal mine operation, which at the present time is inactive. There was no discharge from any Outfall over the last permit period; therefore no effluent/DMR data was generated. Canyon Fuel Company considers the SCM facility as temporally idled and sealed. No in-mine treatment units (sumps w/pump stations) are currently active. The surface facilities are used on a limited basis in support of the Dugout Canyon Mine. The only potential for discharge is the surface sedimentation pond 002 which could discharge if there was enough runoff. It is not known when the mine will be re-activated, but SCM officials desire continuation of the UPDES permit, so that if the mine is re-activated in the next five years it can discharge without delay. Also, any discharge at Outfall 002 from excessive precipitation would be covered whether the mine was active or not.

### **DESCRIPTION OF DISCHARGE**

<u>Outfall</u>	<u>Description</u>
001	Discharge of mine water at Latitude 39° 42' 02" Longitude 110° 36' 39"
002	Discharge from a surface sedimentation pond at Latitude 39° 41' 52" Longitude 110° 36' 46"
003	Discharge of mine water at Latitude 39° 42' 09" Longitude 110° 36' 38"

### **RECEIVING WATERS AND STREAM CLASSIFICATION**

The discharges flow into Soldier Creek, a tributary of the Price River which is in the Colorado River drainage. The receiving waters are designated according to *Utah Administrative Code (UAC) R317-2-13* as indicated below:

- Class 2B -protected for secondary contact recreation such as boating, wading, or similar uses.
- Class 3C -protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.
- Class 4 -protected for agricultural uses including irrigation of crops and stock watering.

### **BASIS FOR EFFLUENT LIMITATIONS**

In accordance with regulations promulgated in *40 Code of Federal Regulations (CFR) Part 122.44* and in *UAC R317-8-4.2*, effluent limitations are derived from technology-based effluent limitations guidelines, Utah Secondary Treatment Standards (*UAC R317-1-3.2*) or Utah Water Quality Standards (*UAC R317-2*). A waste load analysis is not necessary (see Addendum I) because background flow in Soldier Creek is zero. Therefore, the effluent limits are the water quality standards. In cases where multiple limits have been developed, those that are more stringent apply. In cases where no underlying standards have been developed, Best Professional Judgment (BPJ) may be used where applicable to set effluent limits.

- 1) SCM's discharge meets the EPA definition of "alkaline mine drainage." As such, it is subject to the technology based effluent limitations in *40 CFR Part 434.45*. Technology based limits used in the permit are listed below.
  - a. Total suspended solids (TSS) daily maximum limit.
  - b. For discharges composed of surface water or mine water commingled with surface water (Outfall 002), *40 CFR Part 434.63* allows alternate effluent limits to be

applied when discharges result from specific runoff events, detailed below and in the permit. SCM has the burden of proof that the described runoff event occurred.

- i. For runoff events (rainfall or snowmelt) less than or equal to a 10-year 24-hour precipitation event, settleable solids shall be substituted for TSS and shall be limited to 0.5 milliliters per liter (ml/L). All other effluent limitations must be achieved concurrently, as described in the permit.
- 2) TSS 30-day and 7-day averages are based on Utah Secondary Treatment Standards.
- 3) Daily minimum and daily maximum limitations on pH are derived from Utah Secondary Treatment Standards and Water Quality Standards.
- 4) Total dissolved solids (TDS) are limited according to Water Quality Standards and policies established by the Colorado River Basin Salinity Control Forum. TDS are limited by both mass loading and concentration requirements as described below:
  - a. Since discharges from SCM may eventually reach the Colorado River (if the mine became active), TDS mass loading is limited according to policies established by the Colorado River Basin Salinity Control Forum (Forum), as authorized in *UAC R317-2-4* to further control salinity in the Utah portion of the Colorado River Basin. On February 28, 1977 the Forum produced the “*Policy For Implementation of Colorado River Salinity Standards Through the NPDES Permit Program*” (Policy), with the most current subsequent triennial revision dated October 2008. Based on Forum Policy, provisions can be made for salinity-offset projects to account for any TDS loading in excess of the permit requirement.

On October 20, 1982 the Forum produced the “*Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program for Intercepted Ground Water*”. The permit issued to the SCM facility in 1991 increased the TDS loading limit from 1-ton/day to 5-tons/day, as a sum from all outfalls. This increase in TDS loading was based on mining activities resulting in increased mine water flows that were determined to be from intercepted ground water based on the Forum intercepted ground water policy. This permit will retain the 5-tons/day effluent TDS loading limit. However, if the mine is reactivated and the portals unplugged a new intercepted groundwater study must be completed within the first year of the mine being reactivated and the portals opened. This new study will determine if the five tons of TDS per day is appropriate or the quantity needs to be changed.

- b. The permit limit for TDS concentration in the previous permit was 1200 mg/L. This was based on Water Quality Standards. A total maximum daily load (*Price River, San Rafael River and Muddy Creek TMDLs for Dissolved Solids – West Colorado Watershed Management Unit, Utah April 2004*) has established a TDS standard of 3000 mg/L for the Price River and associated tributaries in the area

where Soldier Creek enters the Price River. Since SCM has been idle and sealed for the last two permit cycles no samples of the water in the mine could be taken and the quality of the water is unknown. Dugout Canyon Mine, owned by the same Company and in the next canyon to the east of Soldier Canyon, has, under normal operating conditions, averaged 1195 mg/L TDS from all of their discharge points (inclusive of mine water and sedimentation ponds). Dugout has a TDS limit of 2400 mg/L as a daily maximum. Since the quality of the water in SCM is unknown, based on BPJ a TDS limit of 2400 mg/L as a daily maximum concentration will be included in the renewal permit.

- 5) Limitation on total iron is based upon the State Water Quality Standards. Total iron will be limited to 1.00 mg/L total iron. This limit will apply to all discharge points.
- 6) Oil and Grease are limited to 10 mg/L by BPJ, as this is consistent with other industrial facilities statewide.
- 7) A Level I Anti-Degradation review was completed. Based on the Level I review, a Level II review is not required.

**EFFLUENT LIMITATIONS, SELF-MONITORING, AND REPORTING REQUIREMENTS**

The effluent limitations and monitoring requirements for Outfalls 001, 002 and 003 shall be completed as outlined below. Effluent self-monitoring requirements are developed in the *Utah Monitoring, Recording and Reporting Frequency Guidelines* as effective December 1, 1991. Reports shall be made via NetDMR or on Discharge Monitoring Report (DMR) forms and are due 28 days after the end of the monitoring period (month, quarter, year, etc.).

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, <sup>1</sup> MGD	0.5	<sup>2</sup> NA	NA	Report	2/Month	Measured
TSS, mg/L	25	35	NA	70	2/Month	Grab
Total Iron, mg/L	NA	NA	NA	1.00	2/Month	Grab
Oil & Grease, mg/L a/	NA	NA	NA	10	weekly	Visual/Grab
TDS, mg/L b/	Report	NA	NA	2400	2/Month	Grab
pH, standard units	NA	NA	6.5	9.0	2/Month	Grab
Sanitary Waste	NA	NA	NA	None	Monthly	Visual

<sup>1</sup> MGD: million gallons per day      <sup>2</sup> NA: not applicable

- a/ There shall be no sheen, floating solids, or visible foam in other than trace amounts. If a sheen is observed, a sample of the effluent shall be collected immediately thereafter and oil and grease shall not exceed 10 mg/L in concentration.
- b/ The TDS concentration from each of the outfalls shall not exceed 2400 mg/L as a daily maximum limit. No tons per day loading limit will be applied if the concentration of TDS in the discharge is equal to or less than 500 mg/L as a thirty-day average. However, if the 30-day average concentration exceeds 500 mg/L, then the permittee cannot discharge more than 5 ton per day as a sum from all discharge points. If the permittee cannot meet the 500 mg/L 30-day average or the 5 ton per day loading limit, the permittee is required to participate in and/or fund a salinity offset project to include the TDS offset credits as appropriate (*See permit provisions for further details*).

If the mine becomes active and the seals removed, the permittee is required to complete an intercepted groundwater study within one year of activation and the seals being removed. This new study will determine if the five tons of TDS per day is appropriate or the quantity needs to be changed. If the five ton per day quantity needs to be changed, this permit will be reopened and modified following proper administrative procedures.

### **SIGNIFICANT CHANGES FROM PREVIOUS PERMIT**

This permit will require a new intercepted groundwater study within one year of the mine becoming active and the seals being removed. Storm water requirements are included in this renewal permit. There were no other significant changes made.

### **STORM WATER REQUIREMENTS**

The storm water requirements are based on the UPDES Multi-Sector General Permit (MSGP) for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000. All sections of the MSGP that pertain to discharges from wastewater treatment plants have been included and sections which are redundant or do not pertain have been deleted.

The permit requires the preparation and implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Required elements of this plan are:

- 1) Development of a pollution prevention team,
- 2) Development of drainage maps and material stockpiles,
- 3) An inventory of exposed material,
- 4) Spill reporting and response procedures,
- 5) A preventative maintenance program,
- 6) Employee training,
- 7) Certification that storm water discharges are not mixed with non-storm water discharges,

- 8) Compliance site evaluations and potential pollutant source identification, and
- 9) Visual examinations of storm water discharges.

This plan is required to be maintained on-site to reflect current site conditions and made available for review upon request and/or inspections.

### **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 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*.

SCM is a minor industrial facility, which historically discharges only intercepted groundwater that has neither been considered to be toxic, nor to be a potential concern. As indicated previously, the mine facility has been inactive for several years, but when active the facility's discharge was significantly less than one (1) MGD with no observable ill-effects on the receiving waters. Based on these considerations, the SCM facility does not have reasonable potential to discharge toxics, nor is it a "significant minor" according to the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control*. As such, there will be no numerical whole effluent toxicity (WET) limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision. This provision allows for modification of the permit to include WET limitations and/or WET monitoring, should additional information indicate the presence of toxicity in the discharge.

### **PERMIT DURATION**

As stated in *UAC R317-8-5.1(1)*, UPDES permits shall be effective for a fixed term not to exceed five (5) years.

Drafted by Mike Herkimer  
Environmental Scientist  
Utah Division of Water Quality  
February 14, 2011

### **ADDENDUM**

#### I. Waste Load Analysis Memo and Anti-Degradation Review (ADR)

The public notice for this renewal permit will start sometime in the second week of April 2011.

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## **ADDENDUM I**

Wasteload Analysis Memo and Anti-degradation Review