

**FACT SHEET STATEMENT OF BASIS (FSSOB)  
ENERGY WEST COTTONWOOD/WILBERG MINE  
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)  
PERMIT NUMBER: UT0022896  
MINOR INDUSTRIAL RENEWAL**

**FACILITY CONTACTS**

Facility Contact:	Guy Davis	Responsible Official:	Ken Fleck
Position:	Mine Analyst	Position:	Manager of Geo. and Env. Affairs
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**DESCRIPTION OF FACILITY**

Facility Name: Energy West Cottonwood/Wilberg Mine  
Mailing Address: 15 North Main  
Huntington, Utah 84528  
Physical Location: Approximately twelve miles northwest of Orangeville, Utah in Emery County.  
Coordinates: Latitude: 39°19'07", Longitude: 111°07'13".  
Classification (SIC): 1222 - *Bituminous Coal Underground Mining (NAICS 212112)*

Energy West (a subsidiary of PacifiCorp) Cottonwood/Wilberg is an underground coal mine which ceased operation in 2001. The portals have been sealed and there has been no mining activity since that time. There is one active discharge point as a result of a continuous low flow discharge of groundwater. All of the other discharge points have been no discharge as reported on the DMRs. It is not known exactly when the mine will resume operation, but a permit is necessary to cover the discharge of groundwater at Outfall 001 and in case the mine does begin operation in the next five years. The permit would also cover any discharge from sedimentation ponds that may be necessary as a result of precipitation.

**DESCRIPTION OF DISCHARGE**

<u>Outfall</u>	<u>Description</u>
001	Continuous low flow of groundwater which discharges into Cottonwood Canyon Creek Drainage. This discharge is located at latitude 39°19'05" and longitude 111°11'19.
003	Sedimentation pond to contain surface water runoff with discharge to Grimes Wash. This discharge is located at latitude 39°19'07" and longitude 111°07'13".

005 Waste rock sedimentation pond for surface water runoff with discharge to Grimes Wash. The discharge is located at latitude 39°17'43" and longitude 111°07'18".

Even though the mine is inactive there is a small continuous flow from Outfall 001 which goes to Cottonwood Canyon Creek, a tributary of Cottonwood Creek. Outfalls 003 and 005 have not discharged for many years and it is not known when discharge will occur again.

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

As taken from *Utah Administrative Code (UAC) R317-2-12.7*, Cottonwood Canyon Creek is classified as 1C, 2B, 3A and 4. Grimes wash is classified as 2B, 3C and 4.

- Class 1C - Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.
- Class 2B -Protected for secondary contact recreation such as boating, wading, or similar uses.
- Class 3A -Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
- 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 was completed and is included as Appendix I of this FSSOB. In cases where multiple limits have been developed, those that are more stringent apply. In some cases (such as for TSS) multiple limits have been used. In cases where no limits are applicable, Best Professional Judgment (BPJ) may be used. "Best Professional Judgment" refers to a discretionary, best professional decision made by the permit writer based upon precedent, prevailing regulatory standards or other relevant information.

1. Cottonwood/Wilberg 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 (70 mg/L) applies to the sedimentation pond discharges (Outfalls 003 and 005).

- b. For discharges composed of surface water or mine water commingled with surface water, *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. Cottonwood/Wilberg has the burden of proof that the described runoff events occurred.
- i. For runoff events (rainfall or snowmelt) less than or equal to a 10-year 24-hour precipitation event, settleable solids may 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.
  - ii. Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitation instead of the otherwise applicable limitations:

Pollutant or pollutant property	Effluent limitations
pH	6.5-9.0 at all times.

- 2) TSS 30-day (25 mg/L) and 7-day (35 mg/L) averages are based on Utah Secondary Treatment Standards and apply to the sedimentation pond discharges only (Outfalls 003 and 005).
- 3) For mine water discharge only, Outfall 001, the TSS 30-day average (20 mg/L) and 7-day average (30 mg/L) are taken from the final Antidegradation II Review for Cottonwood/Wilberg.
- 4) Daily minimum and daily maximum limitations on pH are derived from Utah Secondary Treatment Standards and Water Quality Standards.
- 5) Total dissolved solids (TDS) are limited according to Water Quality Standards (which are subject to TMDL requirements) and policies established by the Colorado River Basin Salinity Control Forum. TDS is limited by both mass loading and concentration requirements as described below:
  - a. Since discharges from Cottonwood/Wilberg eventually reach the Colorado River, 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 2011. Based on Forum Policy, provisions can be made to remove TDS by treatment, salinity off-set projects, or whatever mechanism(s) the Company can develop to address any TDS loading in excess of the permit requirement. The TDS loading required by the salinity forum and the proposed permit, is one ton per day as a sum from all discharge points, unless the average concentration of TDS is 500 mg/L or less. If the concentration of TDS at an Outfall is less than 500 mg/L as a thirty day average, no loading limit applies for that Outfall. The one ton per day loading limit applies only to those Outfalls exceeding 500 mg/L as a thirty day average. Those Outfalls exceeding 500 mg/L as a thirty day average, collectively, need to meet the one ton per day limit. If one ton per day cannot be achieved the permittee will be required to remove salinity/TDS in excess of one ton per day by developing a treatment process, participating in a salinity off-set program, or developing some type of mechanism to remove the salinity/TDS. The selection of a salinity control program must be approved by the Director of the Division of Water Quality and implemented within one year of the effective date of the permit.

- b. The West Colorado River Watershed TMDL limits TDS at Trail Mountain to 1136 mg/L. Outfall 001 for Cottonwood /Wilberg discharges into the same segment of stream as the Trail Mountain Mine. As a result Outfall 001 at Cottonwood/Wilberg is limited to a TDS concentration of 1136 mg/l. Outfalls 003 and 005 both discharge to Grimes Wash and based on the wasteload analysis for Outfalls 003 and 005 the TDS concentration shall be limited to 1200 mg/L.
- 6) Oil and Grease are limited to 10 mg/L by BPJ, as this is consistent with other industrial facilities statewide.
- 7) The iron limitation is based upon the State Water Quality Standard of 1.0 mg/L for dissolved iron (*UAC R317-2 Table 2.14.2*) and will be included in the permit as 1.0 mg/L as total iron, and shall apply to each of the discharge points.
- 8) Based on the fact that Cottonwood/Wilberg has one Outfall (001) which discharges to a Class 1C stream a level II ADR is required for that discharge point. The Level II review was completed and received by the Division of Water Quality on November 18, 2013. The Level II submission received DWQ certification and approval on November 19, 2013 and is attached to this FSSOB.

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

The effluent limitations and monitoring requirements for Outfalls 001, 003 and 005 shall be as outlined below. Effluent self-monitoring requirements are based on BPJ. Reports shall be made via NetDMR or on Discharge Monitoring Report (DMR) forms and are due 28 days after the end of the monthly monitoring period.

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 a/	0.5/0.054	<sup>2</sup> NA	NA	NA	Monthly	Measured
TSS, mg/L b/	25	35	NA	70	Monthly	Grab
TSS, mg/L c/	20	30	NA	NA	Monthly	Grab
Total Iron, mg/L	NA	NA	NA	1.00	Monthly	Grab
Oil & Grease, mg/L d/	NA	NA	NA	10	Monthly	Grab
TDS, mg/L b/	NA	NA	NA	1200	Monthly	Grab
TDS, mg/L c/	NA	NA	NA	1136	Monthly	Grab
TDS, lbs./day e/	NA	NA	NA	2000	Monthly	Grab
pH, standard units	NA	NA	6.5	9.0	Monthly	Grab
Sanitary Waste f/	NA	NA	NA	None	Monthly	Visual
Oil and Grease, floating solids, visible foam, d/	NA	NA	NA	None	Monthly	Visual

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

- a/ The 30-day average flow rate shall not exceed 0.5 MGD at Outfalls 003 and 005, and 0.054 MGD at Outfall 001.
- b/ These limitation(s) apply only to Outfalls 003 and 005.
- c/ These limitation(s) apply only to Outfall 001.
- d/ In addition to monthly sampling for oil and grease, a visual inspection for oil and grease, floating solids, and visible foam shall be performed monthly at all Outfalls. There shall be no sheen, floating solids, or visible foam in other than trace amounts.
- e/ No tons per day loading limit will be applied at a specific Outfall, 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 at any Outfall, then the permittee cannot discharge more than 1 ton per day as a sum from all discharge points exceeding 500 mg/L as a thirty day average. If the permittee cannot achieve one ton per day as a sum from all applicable Outfalls, the permittee will be required to remove salinity/TDS in excess of one ton per day by developing a treatment process, participating in a salinity off-set program, or developing some type of mechanism to remove the salinity/TDS. The selection of a salinity control program must be approved by the Director of the Division of Water Quality and implemented within one year of the effective date of the permit.
- f/ There shall be no discharge of sanitary waste and visual observations performed at least monthly shall be conducted.

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

There are some changes from the previous permit. The previous permit did not contain a flow limit while this renewal permit does contain a flow limit for each Outfall. This permit contains different total suspended solids effluent limitations for sedimentation ponds versus mine water discharge based on the results of the ADR II review. A concentration limitation for TDS at each Outfall is included in this permit.

### **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 coal mining facilities 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 coal facility. 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 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*.

Cottonwood/Wilberg is categorized as a minor industrial facility, whose discharge is neither considered to be toxic, nor is likely to be toxic. Therefore, a reasonable potential for toxicity does not exist and biomonitoring of the effluent will not be required. However, a toxicity reopener provision remains included in the permit so that WET testing and WET limitation requirements can be incorporated at any time if determined to be appropriate in the future.

## **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  
December 5, 2012  
November 25, 2013

## **ADDENDUMS** (included separately in public notice package)

- I. Waste Load Analysis for Outfall 001
- II. Waste Load Analysis for Outfalls 003 and 005
- III. ADR II application and review and certification by DWQ personnel

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