

**FACT SHEET AND STATEMENT OF BASIS
PACIFICORP COTTONWOOD-WILBERG MINE
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)
DISCHARGE RENEWAL PERMIT
UPDES PERMIT NUMBER: UT0022896
MINOR INDUSTRIAL FACILITY**

FACILITY CONTACTS

Person Name: Brett Shakespear
Position: Signatory Authority

Person Name: Peter Brinton
Position: Senior Reclamation Engineer

Phone Number: 801-220-2737

Permittee: PacifiCorp
Facility Name: Cottonwood-Wilberg Mine

Mailing Address: PacifiCorp Environmental Remediation & Reclamation
1407 West North Temple, Suite 110
Salt Lake City, Utah 84116

Facility Location: ~10 miles northwest of Orangeville, Utah

DESCRIPTION OF FACILITY

The PacifiCorp Cottonwood-Wilberg Mine (Mine) is a former underground coal mine with standard industrial classification code 1222 for bituminous coal underground mining which ceased operations in 2001. The Mine portals have since been sealed and there has been no mining activity other than reclamation of the former mining areas. There is one remaining active discharge point as a result of a continuous low-flow discharge of groundwater from the former mine portal pipeline located in Emery County, Utah at latitude 39°19'03"N and longitude 111°11'22"W (Outfall 001). Outfall 001 has had an average daily flow rate of 0.042 million gallons per day (MGD) discharging to a culvert into Cottonwood Canyon Creek since the Mine operations ceased in 2001. Since then, all other previously permitted discharge points have been removed from service upon final reclamation as completed in 2019. This renewal permit will authorize the discharge of groundwater from Outfall 001 during the next five years as appropriate.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

There are only two proposed changes with this permit renewal. The first change is regarding the Stormwater permit provisions, which have been removed as part of a Division of Water Quality (DWQ) programmatic separation of the previously combined UPDES permits. The Mine may now be required to apply for and obtain separate UPDES Industrial Storm Water Permit coverage under the UPDES MSGP No. UTR000000, or an applicable exemption, as described further in the **STORMWATER** section of this Fact Sheet.

The second permit change is the additional field monitoring for temperature to be conducted and reported monthly along with the existing monitoring requirements. Temperature monitoring is now being included to provide additional water quality data in support of any future Total Maximum Daily Load (TMDL) study to address the impairment for the receiving waters within the watershed. See the **TOTAL MAXIMUM DAILY LOAD REQUIREMENTS** section of this Fact Sheet for more information.

All other permit conditions remain unchanged.

DISCHARGE INFORMATION

DESCRIPTION OF DISCHARGE

Even though the Mine site is inactive and has been reclaimed, there is a continuous low-flow of groundwater through Outfall 001, which discharges to Cottonwood Canyon Creek, a tributary of Cottonwood Creek in Emery County, Utah. The Mine has been reporting self-monitoring results on Discharge Monitoring Reports through NetDMR on a monthly basis as appropriate. There have been no permit effluent concentration limit violations during the past 5-year permit cycle as all monitoring results have been consistently below the respective permit discharge concentration limits. A summary of the effluent discharge data is included as an attachment to this Fact Sheet.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 39°19'03"N and longitude 111°11'22"W. Continuous groundwater discharge from reclaimed mine site to culvert in Cottonwood Canyon Creek drainage.

RECEIVING WATERS AND STREAM CLASSIFICATION

Discharge through Outfall 001 is to a culvert in Cottonwood Canyon Creek Drainage, which then flows into Cottonwood Creek, which is classified as follows according to Utah Administrative Code (UAC) R317-2-13:

- 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 infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.
- 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 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

TOTAL MAXIMUM DAILY LOAD REQUIREMENTS

According to the DWQ 2022 Integrated Report and 303(d) Assessment, Cottonwood Creek Upper (Cottonwood Creek and tributaries from USFS boundary to headwaters and Joes Valley Reservoir, UT14060009-007_00) is listed as impaired for pH (1C, 2B and 3A use classes), temperature (3A use class), and total dissolved solids (TDS) (4 use class). Since temperature monitoring has not been included in previous permits, it has now been added to provide additional water quality data in support of any future TMDL study to address the impairment. The parameters of concern remain the same as the previous permit with the addition of the temperature monitoring.

A Total Maximum Daily Load (TMDL) addressing the TDS impairment for the San Rafael River and tributaries was completed as part of the West Colorado River Watershed TMDL in 2004. As part of the TMDL, site specific standards were developed for several stream segments in the watershed. A site-specific standard of 3,500 mg/l TDS was developed for Cottonwood Creek (and has since been incorporated into the Utah Water Quality Standards) from the confluence with Huntington Creek to Highway 57. The Fossil Rock Mine (formerly known as the Trail Mountain Mine), as well as the Cottonwood-Wilberg reclaimed mine site with existing Outfall 001, discharge to Cottonwood Canyon Creek approximately 8 miles above this stream segment. The TMDL indicated a TDS permit limit of 1,136 mg/l for the nearby and adjacent Trail Mountain Mine in order to be protective of downstream uses. The approved TMDL is silent on the Cottonwood-Wilberg Mine's Outfall 001 discharge, but because the Mine discharges to the same location and stream segment as the Trail Mountain Mine, a 1,136 mg/l TDS permit limit has been previously recommended and also included once again for this discharge permit to be consistent with protecting the downstream water uses. For more detailed information, the TMDL can be found in full at <https://documents.deq.utah.gov/water-quality/watershed-protection/total-maximum-daily-loads/DWQ-2015-006611.pdf>.

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in 40 Code of Federal Regulations (CFR) Part 122.44 and in Utah Administrative Code (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 R317-2-14) as applicable. In cases where multiple limits have been developed, those that are more stringent apply. In cases where no limits or multiple limits have been developed, Best Professional Judgment (BPJ) of the permitting authority may be used where applicable. Best Professional Judgment or BPJ, refers to a discretionary, best professional decision made by the permit writer based upon precedent, prevailing regulatory standards or other relevant information.

Permit limits can also be derived from the Wasteload Analysis (WLA), which incorporates Secondary Treatment Standards, Water Quality Standards (WQS), including any applicable TMDL impairments as appropriate, Antidegradation Reviews (ADR) and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. During this UPDES renewal permit development, a WLA and ADR were completed as appropriate. An ADR Level I review was performed and concluded that an ADR Level II review was not required at this time since there are no proposed increases in flow or concentrations from the existing discharge operations. The WLA indicates that the effluent limitations will be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. The WLA and ADR are included as attachments to this Fact Sheet.

The following list is the basis of the effluent limitations for the permit parameters:

1. Effluent limitations for pH are based on current Utah WQS found in UAC R317-2-14.
2. Limitations on total suspended solids (TSS) at coal mines are typically derived from technology-based effluent limitations found in 40 CFR Part 434.45 and/or Utah Secondary Treatment Standards, but in this case the TSS limitations are carried over from the previous permit requirements based upon a Level II ADR that was completed and approved by DWQ on November 19, 2013, which included more protective TSS limitations than either the applicable 40 CFR or Utah WQS effluent limitations. Therefore, the more stringent TSS limitations as a result of the

previous ADR will apply once again based upon BPJ of the permitting authority and to avoid any anti-backsliding as per U.S. EPA policy.

3. The total iron limitation is based upon the Utah WQS of 1.0 mg/L for dissolved iron (UAC R317-2 Table 2.14.2) and will once again be included in this renewal permit as 1.0 mg/L for total iron. Total iron includes the dissolved iron component and is therefore considered a more protective permit provision and is consistent with other industrial permits in Utah.
4. The oil & grease limitation is based on BPJ of the permitting authority and is consistent with other industrial permits in Utah.
5. TDS limitations are based upon the existing TMDL for effluent concentration values as mentioned previously, and are also based the Colorado River Basin Salinity Control Forum (CRBSCF) for mass loading values as authorized in UAC R317-2-4 to further control salinity in the Utah portion of the Colorado River Basin. Regarding TDS loading, the CRBSCF Policy entitled "NPDES Permit Program Policy for Implementation of Colorado River Salinity Standards" (Policy), with the most current version dated October 2023, requires the TDS loading limitation of one-ton (or 2000 lbs) per day, or 366 tons per year 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 any Outfall is less than or equal to 500 mg/L as a thirty-day average, then no loading limit applies for that Outfall. The one-ton per day (or 366 tons per year) 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 (2000 lbs) per day, or 366 tons per year limit. If one-ton (2000 lbs) per day, or 366 tons per year TDS cannot be achieved, then the permittee will be required to remove salinity/TDS in excess of one-ton (2000 lbs) per day, or 366 tons per year 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 DWQ.
6. The effluent flow limitation remains unchanged and is based upon the design flow of the discharging outfall as provided previously by the Mine.

Reasonable Potential Analysis

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). There are four outcomes as defined in the RP Guidance: Outcomes A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required.

A qualitative RP analysis was performed on the applicable metals constituents from all available Mine discharge data. Initial screening for metals values that were submitted through both the discharge self-monitoring reports and the permit renewal application information showed that a closer look at any of the metals is not needed since all of the metals results were either below the appropriate method detection limits and/or below the applicable water quality standards, or simply believed to be absent based upon historical use and existing data. Therefore, no RP currently exists at the Mine and a more quantitative RP analysis was not necessary at this time. The result of the RP was; Outcome C: No new effluent limitation, routine monitoring requirements maintained as they are in the permit. A copy of the RP summary is included as an attachment to this Fact Sheet.

The Mine is expected to be able to continue meeting the permit limitations as follows:

Parameter, Units	Effluent Limitations *a			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Total Flow, MGD	0.54	--	--	--
TSS, mg/L	20	30	--	--
Total Iron, mg/L	--	--	--	1.0
TDS, mg/L	1136	--	--	Report
TDS, lbs/day *b	--	--	--	2000
pH, Standard Units	--	--	6.5	9
Temperature, °C	--	--	--	Report
Oil & Grease, mg/L *c	--	--	--	10.0

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous permit for Outfall 001 with the addition of temperature monitoring as mentioned previously. Sampling frequency is based on the Mine being a minor industrial permit with a maximum design effluent flow of <1 MGD and is consistent with other similar coal mine UPDES permits. The permit will once again require reports to be submitted monthly on Discharge Monitoring Report (DMR) forms via NetDMR due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception.

Self-Monitoring and Reporting Requirements *a*d			
Parameter	Frequency	Sample Type	Units
Total Flow	Monthly	Measured	MGD
TSS	Monthly	Grab	mg/L
Total Iron	Monthly	Grab	mg/L
TDS	Monthly	Grab	mg/L
TDS *b	Monthly	Grab	lbs/day
pH	Monthly	Grab	SU
Temperature	Monthly	Grab	°C
Oil & Grease *c	Monthly	Visual/Grab	mg/L

*a See Definitions, *Part VI*, for definition of terms.

*b No lbs/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 thirty-day average TDS concentration exceeds 500 mg/L at any Outfall, then the permittee cannot discharge more than 1 ton per day (or 366 tons per year) 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 (or 366 tons per year) as a sum from all applicable Outfalls, the permittee will be required to account for the excess salinity/TDS tonnage by developing a treatment process, participating in a salinity off-set program, or other type of mechanism to remove or offset the excess salinity/TDS. The selection of a salinity control program, or

other type of treatment process, must be approved by the Director of the Division of Water Quality.

- *c Oil & Grease shall be sampled when sheen is present or observed. If no sheen is present or visible, report NA. In addition to monthly monitoring for oil and grease, a visual inspection for 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.
- *d Samples collected in compliance with the monitoring requirements specified above shall be collected at outfall 001 prior to mixing with the receiving water.

STORMWATER

Previously, stormwater discharge requirements and coverage were combined in this individual permit. These have now been separated to provide consistency among permittees, electronic reporting for storm water discharge monitoring reports, and increased flexibility to changing site conditions. Permit coverage under the Multi Sector General Permit (MSGP) for Storm Water Discharges from Industrial Activities may or may not still be required based on the Standard Industrial Classification (SIC) code for the facility and the types of industrial activities occurring, if any. If the facility has not already determined if separate MSGP coverage is required, it has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the facility which disturb an acre or more, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water permit prior to the period of construction. Information on storm water permit requirements can be found at <http://stormwater.utah.gov>

PRETREATMENT REQUIREMENTS

The Mine does not discharge process wastewater to a Publicly Owned Treatment Works (POTW). Any process wastewater that the Mine may discharge to a POTW, 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 Mine shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the POTW accepting the waste.

In addition, in accordance with 40 CFR 403.12(p)(1), the Mine must notify the POTW, the EPA Regional Waste Management Director, the DWQ Director and the State hazardous waste authorities in writing if the Mine discharges any substance into a POTW that if otherwise disposed of would be considered a hazardous waste under 40 CFR 261. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2.

The permittee is categorized as a minor industrial facility that discharges a low-flow amount of effluent into a typically dry streambed, in which toxicity is neither an existing concern, nor likely to be present based on previous monitoring data that includes past WET testing. Based on these considerations and following the WET policy, there is no reasonable potential for toxicity in the permittee's discharge. 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 at any time in the future 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 & Reviewed by
Jeff Studenka, Discharge Permit Writer & Colorado River Basin Salinity Control
Lonnie Shull, Biomonitoring
Jordan Bryant, Stormwater
Jen Robinson, Pretreatment
Amy Dickey, Watershed Protection/TMDL
Suzan Tahir, Wasteload Analysis & ADR
Utah Division of Water Quality (801) 536-4300
November 16, 2023

PUBLIC NOTICE INFORMATION (to be updated after)

Began: Month Day, Year
Ended: Month Day, Year

Comments will be received at: 195 North 1950 West
 PO Box 144870
 Salt Lake City, UT 84114-4870

The Public Noticed of the draft permit will be published on the Division of Water quality website for at least 30 days as required.

During the public comment period provided under R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be

raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in R317-8-6.12.

ADDENDUM TO FSSOB

During finalization of the Permit certain dates, spelling edits and minor language corrections were completed. Due to the nature of these changes they were not considered Major and the permit is not required to be re Public Noticed.

Responsiveness Summary

(Explain any comments received and response sent)

- ATTACHMENTS (3):** I. Wasteload Analysis and Antidegradation Review
II. Effluent Monitoring Data
III. Reasonable Potential Analysis

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ATTACHMENT 1

*Wasteload Analysis and
Antidegradation Review*

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ATTACHMENT 2

Effluent Monitoring Data

Historic Effluent Monitoring Data Summary Table Since 2001 (Outfall 001)

TDS, mg/L		Effluent Flow, MGD		pH, S.U.		Total Iron, mg/L		TSS, mg/L	
Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
830	1,110	0.042	0.117	7.35	8.08	0.035	0.40	3.1	14.0

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ATTACHEMNT 3

Reasonable Potential Analysis

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REASONABLE POTENTIAL ANALYSIS

The Division of Water Quality has worked to improve our reasonable potential analysis (RP) for the inclusion of limits for parameters in the permit by using an EPA provided model. As a result of the model, more parameters may be included in the renewal permit. A Copy of the Reasonable Potential Analysis Guidance (RP Guidance) is available at the Division of Water Quality. As listed below, there are four outcomes from the RP Analysis¹ that provide a frame work for what routine monitoring or effluent limitations are required.

- Outcome A: A new effluent limitation will be placed in the permit.
Outcome B: No new effluent limitation. Routine monitoring requirements will be placed or increased from what they are in the permit,
Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit,
Outcome D: No limitation or routine monitoring requirements are in the permit.

The Initial RP Screening Table is included below for all metals parameters of concern. Note that the full RP analysis model was not necessary at this time due to the results of the initial screening results below.

RP Initial Screening Table for Wilberg Mine Outfall 001 (UT0022896)

Parameters of Concern	No. of Samples	MEC* mg/L	Water Quality Standard MAC**		Outcome/Result
			Acute mg/L	Chronic mg/L	
Total Aluminum	13	0.10	0.751	NA	MEC < MAC***
Total Arsenic	12	<MDL	0.05	0.19	MEC < MAC***
Total Cadmium	12	<MDL	0.0087	0.0008	MEC < MAC***
Total Chromium	10	<MDL	0.016	0.011	MEC < MAC***
Total Copper	12	<MDL	0.0517	0.031	MEC < MAC***
Total Iron	120	0.4	0.836	NA	MEC < MAC***
Total Lead	10	<MDL	0.1	0.0186	MEC < MAC***
Total Manganese	121	0.02	NA	NA	NA
Total Mercury	10	<MDL	0.00014	0.000012	MEC < MAC***
Total Nickel	10	<MDL	0.611	0.169	MEC < MAC***
Total Selenium	10	<MDL	0.02	0.0046	MEC < MAC***
Total Silver	10	<MDL	0.0411	NA	MEC < MAC***
Total Zinc	13	0.027	0.388	0.388	MEC < MAC***

Notes:

NA – not applicable, no current Water Quality Standard.

<MDL – less than applicable laboratory method detection levels.

*MEC – Maximum expected effluent concentration as determined from existing data set and initial metals screening.

**MAC – Maximum allowable concentration, UPDES permit effluent limits derived from the current wasteload allocation analysis (WLA).

***MEC < (less than) MAC. No Acute or Chronic limits required.

¹ See Reasonable Potential Analysis Guidance for definitions of terms

Result: From the table above, the RP analysis results for the listed metals is: $MEC < MAC$, therefore no additional Acute or Chronic limits are required regarding the listed metals parameters. This equates to ***RP Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit.***

Summary: Similar to the previous permit renewal efforts in 2019, a qualitative RP analysis was performed on the applicable metals constituents using all available mine discharge data since 2001. Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at any of the metals that are believed to be present is not needed since all of the metals concentration results were either below the applicable method detection limits and/or below the applicable water quality standards. Therefore, no RP currently exists at mine and a more quantitative RP analysis using the RP Model was not necessary at this time. Based upon the RP Guidance, no additional metal effluent limits have been included in this renewal permit. The result of the RP analysis was; Outcome C: No new effluent limitation, routine monitoring requirements maintained as they are in the permit. This will be re-evaluated during the next permit cycle as appropriate.