

**FACT SHEET AND STATEMENT OF BASIS
UTAH IRON, LLC – IRON MOUNTAIN MINE
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)
NEW INDIVIDUAL DISCHARGE PERMIT
UPDES PERMIT NUMBER: UT0026298
MINOR INDUSTRIAL FACILITY**

FACILITY CONTACTS

Person Name: Kary Jensen
Position: Mine Manager & Signatory Authority
Phone Number: 435-522-8504

Permittee: Utah Iron, LLC
Facility Name: Iron Mountain Mine
Mailing Address: PO Box 747
Cedar City, Utah 84721
Facility Location: 2708 South Comstock Rd.
Cedar City, Utah 84721

DESCRIPTION OF FACILITY

The Utah Iron, LLC – Iron Mountain Mine (Mine) is an active open-pit iron mine facility and associated iron ore mill with standard industrial classification (SIC) code 1011 for iron ores and SIC code 1081 for active and inactive metal mining and ore dressing facilities. The Mine first began operations in 1851 and has continued at various production levels since that time. Iron ore production is currently estimated at 2-4 million metric tons annually. Historically, groundwater encountered during mining operations as stored in the mine pit is either diverted onsite as the primary water source for iron ore processing, or if not diverted, is either infiltrated back into the ground and/or evaporated during the warmer months of the year. However, more recently, the Mine has anticipated encountering increasing amounts of groundwater that may need to be discharged off-site on an intermittent or seasonal basis. Therefore, the Mine has applied for a UPDES Permit (Permit) to account for any future off-site discharges as required.

The effluent discharges as proposed will consist of groundwater pumped directly from a dewatering well adjacent to the mining pit and will not be used in the iron ore mill process and will not be in direct contact with any process material or any ore processing facilities. A process flow diagram, which was included as part of the Permit application information, has been included as an attachment to this Fact Sheet. The proposed discharge is designed to have a maximum average flow rate of 280 gallons per minute, or 0.4 million gallons per day (MGD), which will be diverted through a four-inch delivery pipe to either Outfall 001 or Outfall 002 as needed during operations. The Outfall locations will also include an energy dissipation structure to reduce erosion in the receiving water streambed. This Permit will authorize the discharge of groundwater from the Mine during the next five years as appropriate.

DISCHARGE INFORMATION

DESCRIPTION OF DISCHARGE

Effluent discharges will be from the mine dewatering well pumped directly through a four-inch HDPE pipeline discharging to an unnamed tributary of Iron Springs Creek.

<u>Outfall Number</u>	<u>Description of Discharge Outfall</u>
001	Located at latitude 37° 39' 7.39" N and longitude 113° 21' 5.70" W. Current mine dewatering location pumped through a four-inch pipeline discharging to an unnamed tributary of Iron Spring Creek.
002	Located at latitude 37° 38' 2.53" N and longitude 113° 20' 3.61" W. Future mine dewatering location pumped through a four-inch pipeline discharging to an unnamed tributary of Iron Spring Creek.

RECEIVING WATERS AND STREAM CLASSIFICATION

Discharges from the Mine will be to unnamed tributaries within the Iron Springs Creek Drainage of the West Desert Region of the Lower Sevier River Basin, which is not specifically defined according to Utah Administrative Code (UAC) R317-2-13, but which defaults to the following beneficial uses:

- 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 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

PARAMETERS OF CONCERN

The primary water quality parameters of concern (POCs) identified for the Mine facility discharge and receiving water are total suspended solids (TSS), pH and total iron, as determined by the Division of Water Quality (DWQ) during the development of this Permit as derived from Title 40 of Code of Federal Regulations (CFR) Chapter 1, Subchapter N, Part 440, Subpart A, as applicable for iron ore mining facilities (40 CFR Part 440). Additional potential POCs, such as sulfate, ammonia, selenium or other metals which are believed to be present in the future effluent discharges are based upon a limited water quality data set as provided with the permit application information. These potential POCs are being included in the Permit as monitoring requirements so that additional data can be collected to determine their presence or absence, as well as any additional permit effluent limitations as appropriate.

TOTAL MAXIMUM DAILY LOAD REQUIREMENTS (TMDL)

According to the Utah's 2022 303(d) Water Quality Assessment Report, there are no defined assessment units and no listed impairments for the watershed proximal to the Mine, which is part of the West Desert Region of the Lower Sevier River Basin. There have been no TMDL studies completed for this watershed and therefore, no TMDL implementation requirements at this time.

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in 40 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 a 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 permit development, the WLA and ADR processes were completed as appropriate. An ADR Level I review was performed and concluded that an ADR Level II review was required since this is a proposed new discharge being introduced to the watershed. The ADR Level II information as provided in the permit application concluded that the selection of the preferred treatment option is also the least polluting feasible alternative. The WLA and ADR information are included as an attachment to this Fact Sheet.

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

1. Effluent limitations for TSS, pH and dissolved iron are derived from technology-based effluent limitations found in 40 CFR Part 440 for iron ore mines as mentioned previously. Effluent limitations for pH are further controlled based on the Utah WQS found in UAC R317-2-14. Effluent limitations for dissolved iron are further controlled by including the more stringent dissolved iron daily maximum limitation Utah WQS found UAC R317-2 Table 2.14.2.
2. The oil & grease limitation is based on BPJ of the permitting authority and is consistent with other industrial permits in Utah.
3. Ammonia limitations are derived from including the most conservative seasonal concentration values for both acute (daily maximum) and chronic (monthly average) effluent limits based upon the WLA model output as included in the attached WLA information.
4. The effluent flow limitation is based upon the design flow of the discharging outfalls as provided by the Mine and included in the Permit application information.

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. Because this is a new discharging facility, there is insufficient data to perform RP for this Permit development. As a result, monitoring for the appropriate metals parameters will be included in the Permit in addition to the initial POCs as mentioned previously. The additional metals monitoring will help establish a record of presence or absence of each parameter and will allow for RP to be conducted in the future once at least ten data points are collected.

The Mine is expected to be able to comply with the permit limitations as follows:

Parameter, Units	Effluent Limitations *a		
	Maximum Monthly Avg	Daily Minimum	Daily Maximum
Total Flow, MGD *b, *c	0.4	--	Report
Total Suspended Solids (TSS), mg/L	20	--	30
Total Iron, mg/L	--	--	Report
Dissolved Iron, mg/L	1.0	--	1.0
pH, Standard Units	--	6.5	9.0
Total Ammonia (as N), mg/L	4.0	--	11.2
Sulfate, mg/L	--	--	Report
Oil & Grease, mg/L *d	--	--	10.0
Total Metals, mg/L *e	--	--	Report

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements and sampling frequency are based on the Mine being a minor industrial permit with a maximum design effluent flow <1 MGD and is consistent with other similar UPDES permits. The permit will 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			
Parameter	Frequency	Sample Type	Units
Total Flow *b, *c	Monthly	Measured	MGD
TSS	Monthly	Grab	mg/L
Total Iron	Monthly	Grab	mg/L
Dissolved Iron	Monthly	Grab	mg/L
pH	Monthly	Grab	SU
Total Ammonia (as N)	Monthly	Grab	mg/L
Sulfate	Monthly	Grab	mg/L
Oil & Grease *d	Monthly	Visual/Grab	mg/L
Total Metals *e	Monthly	Grab	mg/L

- *a See Definitions, *Part VII*, for definition of terms.
- *b Flow measurements of effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained.
- *c If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
- *d 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.

- *e Starting on the effective date of this permit, the following total metals analyses shall be monitored monthly from all discharging outfalls; Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver and Zinc. The permittee is required to utilize the lowest detection limit possible using sufficiently sensitive standard test methods and certified laboratories.

STORMWATER

Permit coverage under the Multi Sector General Permit (MSGP) for Storm Water Discharges from Industrial Activities may be required based on the Standard Industrial Classification (SIC) code for the facility and the types of industrial activities occurring. 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, and which is not part of active mining activities. 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 (WET policy). 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 will intermittently or seasonally discharge effluent into a typically dry streambed, which at this time toxicity is neither an existing concern, nor likely

to be present based on the previous monitoring data as provided with the Permit application information. 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 to include WET testing 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
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
January 2, 2024

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 to Comments Summary (to be included after if applicable)

ATTACHMENTS: 1. Wasteload Analysis Information
2. Process Flow Diagram & Antidegradation Review Application Information

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ATTACHMENT 1

*Wasteload Analysis Information
(DWQ-2023-200008 & DWQ-2023-200010)*

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ATTACHMENT 2

*Process Flow Diagram &
Antidegradation Review Application Information
(DWQ-2023-200015 & DWQ-2023-126820)*

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