

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES) PERMITS

Minor Industrial Permit No. **UT0026298**

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code* (the "Act"),

UTAH IRON, LLC

is hereby authorized to discharge from

IRON MOUNTAIN MINE

to receiving waters named **Iron Spring Creek Unnamed Tributaries,**

in accordance with specific limitations, outfalls, and other conditions set forth herein.

This permit shall become effective on April 1, 2024.

This permit expires at midnight on March 31, 2029.

Signed this nineteenth day of March, 2024.



John K. Mackey, P.E.
Director

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I. DISCHARGE LIMITATIONS AND REPORTING REQUIREMENTS

- A. Description of Discharge Points. The authorization to discharge wastewater provided under this part is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit are violations of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

<u>Outfall Number</u>	<u>Location 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.

- B. Narrative Standard. It shall be unlawful, and a violation of this permit, for the Permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum, or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by a bioassay or other tests performed in accordance with standard procedures.

C. Specific Limitations and Self-Monitoring Requirements.

1. Effective immediately and lasting through the life of this permit, there shall be no acute or chronic toxicity in Outfalls 001 and 002 as defined in *Part VII*, and determined by test procedures described in this permit.
2. Effective immediately and lasting through the life of this permit, the Permittee is authorized to discharge from Outfalls 001 and 002. Such discharges shall be limited and monitored by the Permittee as specified below:

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 *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.

3. Samples collected in compliance with the monitoring requirements specified above shall be collected at Outfalls 001 and 002 prior to mixing with the receiving water.

D. Reporting of Monitoring Results.

1. Reporting of Wastewater Monitoring Results Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge

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Monitoring Report Form (EPA No. 3320-1) * or by NetDMR, post-marked or entered into NetDMR no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, “no discharge” shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part VI.G)*, and submitted by NetDMR, or to the Division of Water Quality at the following address:

Department of Environmental Quality
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

* Starting January 1, 2017 monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception.

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PRETREATMENT

II. PRETREATMENT REQUIREMENTS

This section is only applicable when the permittee discharges to a POTW.

A. Definitions. For this section, the following definitions shall apply:

1. *Indirect Discharge* means the introduction of pollutants into a publicly-owned treatment works (POTW) from any non-domestic source regulated under section 307 (b), (c) or (d) of the CWA.
2. *Interference* means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
 - a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
 - b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
3. *Pass Through means* a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
4. *Publicly Owned Treatment Works or POTW* means a treatment works, as defined by section 212 of the CWA, which is owned by a State or municipality (as defined by section 502(4) of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality, as defined in section 502(4) of the CWA, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.
5. *Significant Industrial User (SIU)* is defined as an Industrial User discharging to a POTW that satisfies any of the following:
 - a. Has a process wastewater flow of 25,000 gallons or more per average work day;
 - b. Has a flow greater than five percent of the flow carried by the municipal system receiving the waste;
 - c. Is subject to Categorical Pretreatment Standards, or
 - d. Has a reasonable potential for adversely affecting the operation of the POTW or violating any pretreatment standard or requirement.

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6. *User or Industrial User (IU)* means a source of Indirect Discharge.
- B. Discharge to POTW. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of The Water Quality Act of 1987, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at 40 CFR 403, the State Pretreatment Requirements at UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters. At a minimum, the discharge into a POTW must meet the requirements of Part II. D. and E. of the permit.
- C. Hazardous Waste Notification. The permittee must notify the POTW, the EPA Regional Waste Management Director, the Director and the State hazardous waste authorities in writing if they discharge 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).
- D. General and Specific Prohibitions.
1. General Prohibitions. The permittee may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph 2. of this section apply to the introducing pollutants into a POTW whether or not the permittee is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.
 2. Specific Prohibitions. The following pollutants shall not be introduced into a POTW:
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140°F (60°C);
 - b. Pollutants, which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;
 - d. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at such volume or strength as to cause Interference in the POTW;
 - e. Heat in amounts, which will inhibit biological activity in the POTW, resulting in Interference, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104°F (40°C));
 - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
 - g. Pollutants, which result in the presence of toxic gases, vapor, or fumes within the POTW in a quantity that may cause worker health or safety problems;
 - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW;
or

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- i. Any pollutant that causes Pass Through or Interference at the POTW.
 - j. Any specific pollutant which exceeds any Local Limitation established by the POTW.
- E. Categorical Standards. In addition to the general and specific limitations expressed in *Part II. D.* of this section, applicable National Categorical Pretreatment Standards must be met by all Industrial Users discharging into a POTW. These standards are published in the federal regulations at *40 CFR 405 through 471*.

PART III
STORM WATER PERMITS

III. STORM WATER REQUIREMENTS.

- A. Industrial Storm Water Permit. Based on the type of industrial activities at the facility, the permittee may be required to maintain separate coverage or an appropriate exclusion under the Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (UTR000000). If the facility has not already determined if separate MSGP coverage is required, the permittee has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation.

- B. Construction Storm Water Permit. Any construction at the facility that disturbs an acre or more of land, including less than an acre if it is part of a common plan of development or sale, and that is not part of active mining activities is required to obtain coverage under the UPDES Construction General Storm Water Permit (UTRC000000). Permit coverage must be obtained prior to land disturbance. If the site qualifies, a Low Erosivity Waiver (LEW) Certification may be submitted instead of permit coverage.

IV. MONITORING, RECORDING & GENERAL REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Samples of biosolids shall be collected at a location representative of the quality of biosolids immediately prior to the use-disposal practice.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under Utah Administrative Code ("UAC") *R317-2-10*, *UAC R317-8-4.1(10)(d)*, and/or *40 CFR 503* utilizing sufficiently sensitive test methods unless other test procedures have been specified in this permit. Monitoring must be conducted according to the test procedures listed above unless another method is required under 40 CFR subchapters N or O. Sufficiently sensitive test method means: (1) The method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or (2) The method has the lowest ML of the analytical methods approved under *40 CFR part 136* or required under *40 CFR chapter I, subchapter N or O* for the measured pollutant or pollutant parameter as per *40 CFR 122.44(i)(1)(iv)(A)*.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.
- E. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under Permit Part V.B., the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or the Biosolids Report Form.
- F. Records Contents. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) and time(s) analyses were performed;
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and,
 6. The results of such analyses.
- G. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location.
- H. Twenty-four Hour Notice of Noncompliance Reporting.
1. The permittee shall (orally) report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may

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seriously endanger health or environment, as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality (DWQ) via the 24-hour answering service (801) 536-4123.

2. The following occurrences of noncompliance shall initially be reported by telephone to the DWQ via the 24-hour answering service as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:
 - a. Any noncompliance which may endanger health or the environment;
 - b. Any unanticipated bypass, which exceeds any effluent limitation in the permit (See *Part V.G, Bypass of Treatment Facilities.*);
 - c. Any upset which exceeds any effluent limitation in the permit (See *Part V.H, Upset Conditions.*);
 - d. Violation of a daily discharge limitation for any of the pollutants listed in the permit. For other permit violations which will not endanger health or the environment, DWQ may otherwise be notified during business hours (801) 536-4300; or,
 - e. Violation of any of the Table 3 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been sold or given away.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected;
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and,
 - e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.
4. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 536-4300.
5. Reports shall be submitted to the addresses in *Part I.D, Reporting of Monitoring Results.*
- I. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part I.D* are submitted. The reports shall contain the information listed in *Part IV.H.3*
- J. Inspection and Entry The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

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2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including but not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites;
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites or biosolids, soils, or vegetation on the land application sites; and,
5. The permittee shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, the Director, or authorized representative, upon the presentation of credentials and other documents as may be required by law, will be permitted to enter without delay for the purposes of performing their responsibilities.

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V. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of *the Act* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed \$10,000 per day of such violation. Except as provided at *Part V.G, Bypass of Treatment Facilities* and *Part V.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment. The permittee shall also take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Collected screening, grit, solids, sludge, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.
- G. Bypass of Treatment Facilities.
1. Bypass Not Exceeding Limitations. The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to paragraph 2 and 3 of this section.
 2. Prohibition of Bypass.
 - a. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;

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- (2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - (3) The Permittee submitted notices as required under *Part V.G.3*.
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed in *Parts V.G.2.a (1), (2) and (3)*.
3. Notice.
- a. *Anticipated bypass.* Except as provided above in *Part V.G.2* and below in *Part V.G.3.b*, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Director:
 - (1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages;
 - (2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Director in advance of any changes to the bypass schedule;
 - (3) Description of specific measures to be taken to minimize environmental and public health impacts;
 - (4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;
 - (5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and,
 - (6) Any additional information requested by the Director.
 - b. *Emergency Bypass.* Where ninety days advance notice is not possible, the permittee must notify the Director, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Director the information in *Part V.G.3.a.(1) through (6)* to the extent practicable.
 - c. *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass to the Director as required under *Part V.H*, Twenty-Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

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1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of paragraph 2 of this section are met. Director's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.
 2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under *Part IV.H, Twenty-four Hour Notice of Noncompliance Reporting*; and,
 - d. The permittee complied with any remedial measures required under *Part V.D, Duty to Mitigate*.
 3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:
1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 ug/L);
 - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,
 - d. The level established by the Director in accordance with *UAC R317-8-4.2(6)*.
 2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 ug/L);

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- b. One milligram per liter (1 mg/L) for antimony:
- c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,
- d. The level established by the Director in accordance with *UAC R317-8-4.2(6)*.

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VI. GENERAL REQUIREMENTS

- A. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 122.29(b); or
 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit nor to notification requirements under Subsection R317-8-4.1(15).
 3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. The permittee shall give notice to the Director of any planned changes at least 30 days prior to their implementation.
- B. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.
1. All permit applications shall be signed by either a principal executive officer or ranking elected official. A person is a duly authorized representative only if:

PART VI
DISCHARGE PERMIT NO. UT0026298

- a. The authorization is made in writing by a person described above and submitted to the Director, and,
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
 - (1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - (2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or
 - (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person.
 3. Changes to authorization. If an authorization under *paragraph VI.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of *paragraph VI.G.2.* must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
 4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of

PART VI
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the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.
- I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Director. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
 - 1. The current permittee notifies the Director at least 20 days in advance of the proposed transfer date;
 - 2. The notice includes a written agreement between the existing and new permittee's containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
 - 3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Sections 19-5-117 and 510 of the Clean Water Act or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.

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- O. Water Quality - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:
1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
 2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.
 3. Revisions to the current CWA § 208 areawide treatment management plans or promulgations/revisions to TMDLs (40 CFR 130.7) approved by the EPA and adopted by DWQ which calls for different effluent limitations than contained in this permit.
- P. Toxicity Limitation - Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include WET testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

VII. DEFINITIONS

A. Wastewater.

1. The "7-day (and weekly) average", other than for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria, and total coliform bacteria. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains Saturday.
2. The "30-day (and monthly) average," other than for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria, is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. Geometric means shall be calculated for *E. coli* bacteria, fecal coliform bacteria and total coliform bacteria. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.
3. "Act," means the *Utah Water Quality Act*.
4. "Acute toxicity" occurs when 50 percent or more mortality is observed for either test species at any effluent concentration (lethal concentration or "LC₅₀").
5. "Bypass," means the diversion of waste streams from any portion of a treatment facility.
6. "Chronic toxicity" occurs when the IC₂₅ < XX% effluent. The XX% effluent is the concentration of the effluent in the receiving water, at the end of the mixing zone expressed as per cent effluent.
7. "IC₂₅" is the concentration of toxicant (given in % effluent) that would cause a 25% reduction in mean young per female, or a 25% reduction in overall growth for the test population.
8. "Composite Samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:
 - a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
 - b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

PART VII
DISCHARGE PERMIT NO. UT0026298

- c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every “X” gallons of flow); and,
 - d. Continuous sample volume, with sample collection rate proportional to flow rate.
9. “CWA” means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.
10. “Daily Maximum” (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.
11. “EPA,” means the United States Environmental Protection Agency.
12. “Director,” means Director of the Division of Water Quality.
13. A “grab” sample, for monitoring requirements, is defined as a single “dip and take” sample collected at a representative point in the discharge stream.
14. An “instantaneous” measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.
15. “Severe Property Damage,” means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
16. “Upset,” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

**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 (updated March 4, 2024)

Began: February 1, 2024
Ended: March 1, 2024

The Public Noticed of the draft permit was 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. No comments or requests for a hearing were received during the public notice period. Staff recommend issuance of the UPDES Permit as drafted.

ADDENDUM TO FSSOB

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

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)*

**Utah Division of Water Quality
Statement of Basis
ADDENDUM
Wasteload Analysis and Antidegradation Level I Review**

Date: November 21, 2023

Prepared by: Suzan Tahir
Standards and Technical Services

Facility: Utah Iron, LLC - Iron Mountain Mine
UPDES No. UT0026298

Receiving water: Unnamed Tributary of Iron Spring Creek (2B, 3D)

This addendum summarizes the wasteload analysis that was performed to determine water quality based effluent limits (WQBEL) for this discharge. Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also considers downstream designated uses (UAC R317-2-8). Projected concentrations are compared to numeric water quality standards to determine acceptability. The numeric criteria in this wasteload analysis may be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

Discharge

Outfall 001: Unnamed tributary → Iron Spring Creek

Outfall 002: Unnamed tributary → Iron Spring Creek

The total design capacity for the proposed discharges is 0.4 MGD.

Receiving Water

The receiving water for Outfalls 001 & 002 is an unnamed tributary to Iron Spring Creek.

The beneficial uses for the West Desert region are not defined but this region is defaulted to the 2B and 3D designated 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.*

Utah Division of Water Quality
Wasteload Analysis

Iron Mountain Mine
UPDES No. UT0026298

Flow

Typically, the critical flow for the wasteload analysis is considered the lowest stream flow for seven consecutive days with a ten-year return frequency (7Q10). The facility discharges to a dry wash and no flow records are available. Therefore, critical flow was assumed to be zero.

The effluent limits revert to the water quality standards.

TMDL

According to 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 facility, which is the West Desert Region of the Lower Sevier River Basin. The West Desert region does not have identified beneficial uses. There have been no TMDL studies completed for this watershed and therefore, no TMDL implementation requirements at this time.

Protection of Downstream Uses

Per UAC R317-2-8, *all actions to control waste discharges under these rules shall be modified as necessary to protect downstream designated uses.* For this discharge, 3D numeric aquatic life use criteria apply to the immediate receiving water (Iron Spring Creek).

Ambient Water Quality Data and Mixing Zone

The maximum allowable mixing zone is 15 minutes of travel time for acute conditions, not to exceed 50% of stream width, and 2,500 feet for chronic conditions, per UAC R317-2-5. Since there is no ambient stream flow data, no mixing zone is allowed and therefore, end of pipe water quality standards must be met.

Parameters of Concern

The primary parameters of concern identified for the discharge/receiving water are pH, TSS, and Total Iron as determined from 40 CFR 440 Subpart N in consultation with the UPDES Permit Writer. Additional potential parameters of concern, such as sulfate, ammonia, selenium or other metals may become apparent as a result of reasonable potential analysis, technology-based standards, or other factors as determined by the UPDES Permit Writer.

Effluent Limitation for Total Ammonia based upon Water Quality Standards

In-stream criteria of downstream segments for Total Ammonia will be met with an effluent limitation (expressed as Total Ammonia as N) as follows:

<u>Season</u>	<u>Concentration</u>	<u>Load</u>
Summer	4 Day Avg. – Chronic 5.1 mg/l as N	17.0 lbs/day
	1 Hour Avg. – Acute 15.4 mg/l as	51.5 lbs/day
Fall	4 Day Avg. – Chronic 4.3 mg/l as N	14.3 lbs/day

**Utah Division of Water Quality
Wasteload Analysis**

**Iron Mountain Mine
UPDES No. UT0026298**

Winter	1 Hour Avg. – Acute 11.2 mg/l as N	37.2 lbs/day
	4 Day Avg. – Chronic 4.0 mg/l as N	13.4 lbs/day
Spring	1 Hour Avg. – Acute 12.8 mg/l as N	42.5 lbs/day
	4 Day Avg. – Chronic 4.3 mg/l as N	14.3 lbs/day
	1 Hour Avg. – Acute 11.2 mg/l as N	37.2 lbs/day

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100.%.

WET Limits

Typically, the percent of effluent in the receiving water in a fully mixed condition, and acute and chronic dilution in a not fully mixed condition are calculated in the WLA in order to generate WET limits. The LC₅₀ (lethal concentration, 50%) percent effluent for acute toxicity and the IC₂₅ (inhibition concentration, 25%) percent effluent for chronic toxicity, as determined by the WET test, needs to be below the WET limits, as determined by the WLA. When applicable, the WET limit for LC₅₀ is typically 100% effluent and does not need to be determined by the WLA.

Antidegradation Level I Review

The objective of the Level I ADR is to ensure the protection of existing uses, defined as the beneficial uses attained in the receiving water on or after November 28, 1975. No evidence is known that the existing uses deviate from the designated beneficial uses for the receiving water. Therefore, the beneficial uses will be protected if the discharge remains below the WQBELs presented in this wasteload.

A Level II Antidegradation Review (ADR) is required for this discharge since the facility is a new discharge and the pollutant concentration and load is increasing from ambient conditions under this permit.

WLA Documents:

IronMt_WLA_Summary_2023.docx
IronMt-Memo-2023.docx

References:

Utah Division of Water Quality. 2021. *Utah Wasteload Analysis Procedures Version 2.0.*



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF WATER QUALITY
John K. Mackey, P.E.
Director

M E M O R A N D U M

**TO: UPDES File for Utah Iron, LLC - Iron Mountain Mine
UPDES Permit No. UT0026298**

THROUGH: Jeffrey Studenka

FROM: Suzan Tahir

DATE: 11-21-2023

SUBJECT: Iron Mountain Mine WLA

I am writing in response to your request for a wasteload allocation for the permit request for the Iron Mountain Mine UPDES UT0026298. It is my understanding that the receiving water for Outfall 001 is an unnamed canal, which is a dry wash or an ephemeral or intermittent tributary which ends in Iron Spring Creek. Iron Spring Creek is located in the West Desert region and the beneficial uses for the West Desert region are not defined but this region is defaulted to the 2B and 3D designated beneficial uses.

I accessed the AWQMS Water Quality Database, to check if any records for flow and ambient water quality data were available to be able to run a wasteload model. No flow and ambient water quality data was available. This being the case, the effluent limits revert to the water quality standards.

A Level 2 Antidegradation review is required for this proposed new discharge.

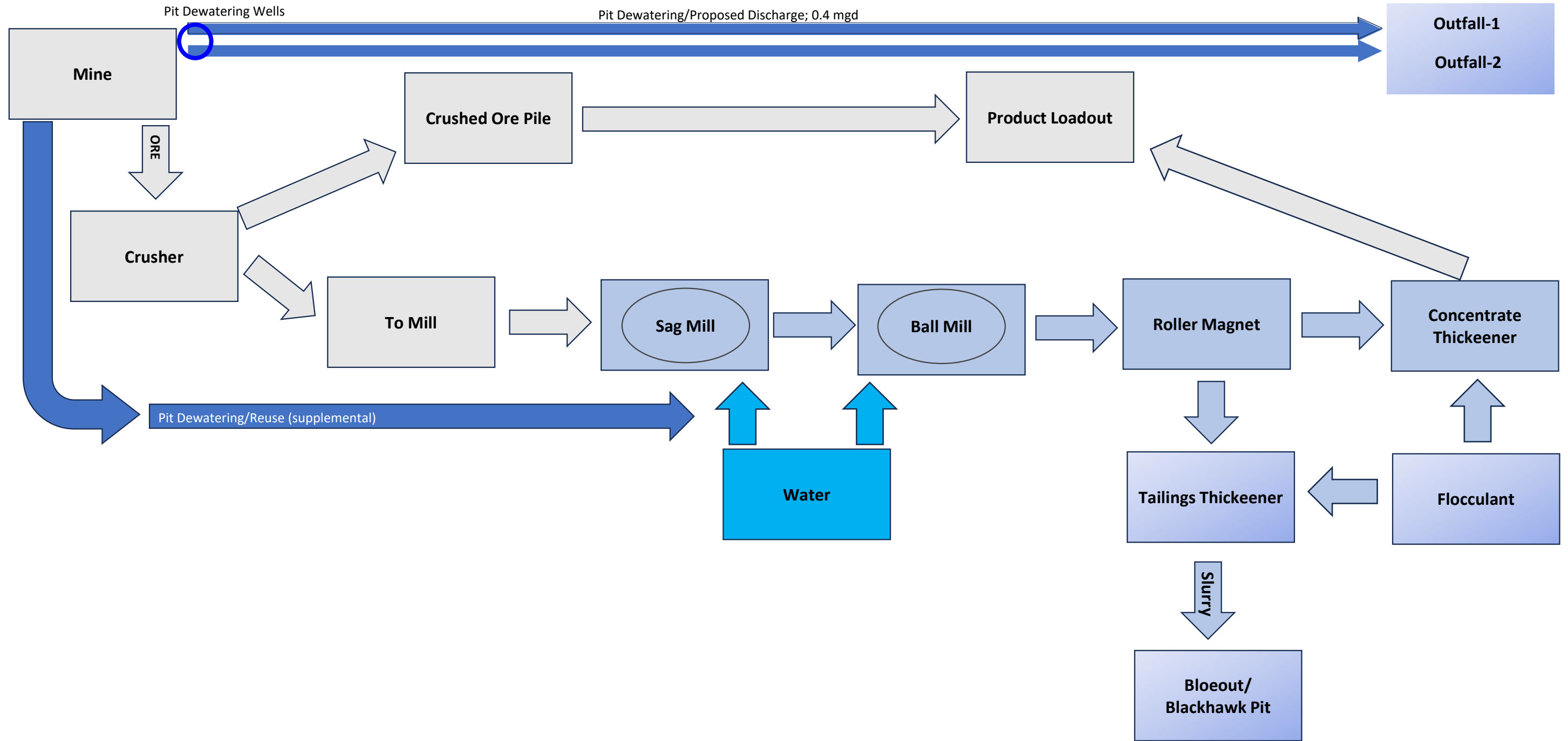
Let me know if you need any further information or clarification.

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ATTACHMENT 2

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

Iron Mountain Mine -Process Diagram





UPDES Industrial Permit Application

Part I. General Information (40 CFR 122.21(j)(1) and (9))

Permit Status: Renewal New Permit

UPDES Permit No.: _____ New Permit; UPDES Permit # Not Available

Facility Name: _____

Facility Location: _____

City _____ State _____ Zip _____

Facility Mailing Address: _____

City _____ State _____ Zip _____

Facility Contact: _____ **Title:** _____

Phone Number: _____ **Email Address:** _____

Name of Signatory: _____ **Title:** _____

Is the applicant the facility owner, operator or both? (check only one response.)

Owner Operator Both

Indicate below any existing environmental permits. (Check all that apply and type the corresponding permit number for each.)

RCRA (hazardous waste) UIC (underground injection control) PSD (air emissions)

Nonattainment program (CAA) NESHAPs (CAA) Dredge or fill (CWA Section 404)

Other (specify) _____

Nature of Business CFR (40 CFR 122.21(f)(8))

Describe the nature of your business



Division of Water Quality (DWQ) UPDES Program

UPDES Industrial Permit Application

Part II. Facility Information

Design and Actual Flow Rates

Provide design and actual flow rates in designated spaces.

Design Flow Rate	
	mgd

Annual Average Flow Rates (Actual)					
Five Years Ago		Four Years Ago		Three Years Ago	
	mgd		mgd		mgd
Two Years Ago		Last Year		Current Year	
	mgd		mgd		mgd

Maximum Daily Flow Rates (Actual)					
Five Years Ago		Four Years Ago		Three Years Ago	
	mgd		mgd		mgd
Two Years Ago		Last Year		Current Year	
	mgd		mgd		mgd

Describe the treatment for each outfall*

	Outfall Number		Outfall Number		Outfall Number	
Level of Treatment						
Primary	Treatment Unit		Treatment Unit		Treatment Unit	
	Size		Size		Size	
	Flow rate		Flow rate		Flow rate	
	Retention time		Retention time		Retention time	
	Other		Other		Other	
Equivalent to secondary	Treatment Unit		Treatment Unit		Treatment Unit	
	Size		Size		Size	
	Flow rate		Flow rate		Flow rate	
	Retention time		Retention time		Retention time	
	Other		Other		Other	

UPDES Industrial Permit Application

Part II. Facility Information *continued*

Describe the treatment for each outfall* *continued*

	Outfall #		Outfall #		Outfall #	
Secondary	Treatment Unit		Treatment Unit		Treatment Unit	
	Size		Size		Size	
	Flow rate		Flow rate		Flow rate	
	Retention time		Retention time		Retention time	
	Other		Other		Other	
Advanced	Treatment Unit		Treatment Unit		Treatment Unit	
	Size		Size		Size	
	Flow rate		Flow rate		Flow rate	
	Retention time		Retention time		Retention time	
	Other		Other		Other	
Other (specify)	Treatment Unit		Treatment Unit		Treatment Unit	
	Size		Size		Size	
	Flow rate		Flow rate		Flow rate	
	Retention time		Retention time		Retention time	
	Other		Other		Other	

* The data can be entered in the section above or an excel spreadsheet. Attached additional sheets if needed.

Production

Outfall Number	Operation, Product, or Material	Quantity per Day	Unit of Measure



UPDES Industrial Permit Application

Part II. Facility Information *continued*

BLUEPRINT: Attach a line drawing that shows the water flow through your facility with a water balance.

Blueprint Attached

MAP: Attach a USGS topographic map or aerial photo extending one mile beyond the property boundaries of the site, the facility or activity boundaries, any treatment area(s), outfall(s), major drainage patterns, and the receiving surface waters stated above.

Map Attached

Are improvements to the facility scheduled?

YES If YES, explain below.

NO If NO, Skip to Part III

Briefly list and describe the schedule improvements.

1.	
2.	
3.	
4.	

Provide scheduled or actual dates of completion for improvements.

Scheduled or Actual Dates of Completion for Improvements

Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
1.					
2.					
3.					
4.					



UPDES Industrial Permit Application

Part III. Sampling Information

Provide all parameter sampling data with analytical results, reporting limit and any laboratory flags on an Excel spreadsheet. *An Excel Spreadsheet will be provided upon request.*

Has WET testing been conducted during the last 5 years? YES NO

Indicate the acute and chronic WET tests (PASS or FAIL) results for the past 5 years. If no WET testing for the quarter, then leave blank (e.g., for semi-annual or annual testing or missed testing events).

Year	Outfall No. _____		Outfall No. _____		Outfall No. _____		Outfall No. _____		Outfall No. _____		Outfall No. _____	
	Acute		Chronic		Acute		Chronic		Acute		Chronic	
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Describe any cause(s) of toxicity:

Were the above WET analysis submitted to Utah DWQ? YES NO



UPDES Industrial Permit Application

Part IV. Compliance Information

Has the facility had and parameter exceedances over the past five years? YES NO

If Yes, provide the below information:

Parameter	Exceedance	Month/Year	Cause



UPDES Industrial Permit Application

Part IV. Compliance Information *continued*

Facility monitoring data.

Please provide the past **five years** of all parameters required to be monitored in the UPDES permit. The data can be entered in the section below or an excel spreadsheet. Attached additional sheets if needed.

Month	Year	Parameter	Min	Max	Avg	MDL/RL*

*MDL/RL is the analysis method detection limit or reporting limit located on the laboratory analysis report.



UPDES Industrial Permit Application

Part V. Outfalls and Receiving Water(s)

Provide the latitude and longitude to the nearest second for each dewatering outfall. The specified location should be after all treatment and before release to the receiving water. Provide the name of the initial receiving water. If the initial receiving water is unnamed, please also indicate the closed named drainage the receiving water flows into (i.e. unnamed tributary of City Creek). Attach additional sheets if necessary for more outfalls.

Each outfall to a different receiving water segment is subject to additional application fees and annual fees.

Outfall No.	Average daily flow rate	Latitude	Longitude	Receiving Surface Waters (Name)
	mgd	O ° ‘ “	O ° ‘ “	
	mgd	O ° ‘ “	O ° ‘ “	
	mgd	O ° ‘ “	O ° ‘ “	

Do any of the outfalls described above have a season or periodic discharges?

YES NO

If so, provide the following information for each applicable outfall.

	Outfall No.	Outfall No.	Outfall No.
Number of times per year discharges occurs			
Average duration of each discharge (specify units)			
Average flow of each discharge	mgd	mgd	mgd
Months in which discharge occurs			

The discharge to outfall #1 and outfall #2 is anticipated to be intermittent, however the timing and duration of the discharges cannot be determined at this time due to frequent changes in the rate of recharge in the pit.



UPDES Industrial Permit Application

Part VI. Effluent and Intake Characteristics

**Table A.
 Conventional and Non-Conventional Pollutants**

Are you requesting a waiver for one or more pollutants listed Table A for any of your outfalls? YES NO

If yes, indicate the applicable outfalls below. Attach the waiver request and other required information to the application.

Outfall Number		Outfall Number		Outfall Number	
----------------	--	----------------	--	----------------	--

Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application?
 YES NO; a waiver has been requested for all pollutants at all outfalls

**Table B.
 Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants**

Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Appendix A?
 YES NO Not applicable

Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?
 YES NO

List the applicable primary industry categories and check the boxes indicating the required Gas Chromatography/Mass Spectrometry (GS/MS) Fraction(s) identified in Appendix A.

Primary Industry Category	Required Gas Chromatography/Mass Spectrometry (GS/MS) Fraction(s)
	<input type="checkbox"/> Volatile <input type="checkbox"/> Acid <input type="checkbox"/> Base/Neutral <input type="checkbox"/> Pesticide
	<input type="checkbox"/> Volatile <input type="checkbox"/> Acid <input type="checkbox"/> Base/Neutral <input type="checkbox"/> Pesticide
	<input type="checkbox"/> Volatile <input type="checkbox"/> Acid <input type="checkbox"/> Base/Neutral <input type="checkbox"/> Pesticide

Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions?
 YES NO NA - none required

Have you checked "Believe Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required?
 YES NO

Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believe Present" in your discharge?
 YES NO

Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge?
 YES NO NA - none required



UPDES Industrial Permit Application

Part VI. Effluent and Intake Characteristics *continued*

**Table C.
 Certain Conventional and Non-Conventional Pollutants**

Have you indicated whether pollutants are “Believed Present” or “Believed Absent” for all pollutants listed on Table C for all outfalls?
 YES NO

Have you completed Table C by providing (1) quantitative data for those pollutants that are limited either directly or indirectly in an Effluent Limitation Guidelines and/or (2) quantitative data or an explanation for those pollutants for which you have indicated “Believe Present”?
 YES NO

No ELG promulgated by EPA under Section 304 of the CWA applies to the facility YES NO

**Table D.
 Certain Hazardous Substances and Asbestos**

Have you indicated whether pollutants are “Believed Present” or “Believed Absent” for all pollutants listed on Table D for all outfalls?
 YES NO

Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) by providing quantitative data, if available?
 YES NO

**Table E.
 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)**

Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed below:
 2,4,5-trichlorophenoxy acetic acid (2,4,5-T)
 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP)
 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloro-propionate (Erbon)
 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel)
 2,4,5,-trichlorophenol (TCP)
 hexachlorophene (HCP).
 Or do you know of have reason to believe that TCDD is or may be present in the effluent?
 YES, Complete Table E NO, Skip to Part VII

Have you completed Table E by reporting qualitative data for TCDD?
 YES NO

Were any of the analyses reported in this section performed by a contract laboratory or consulting firm?
 YES NO, Skip to Part VII

Provide information for each contract laboratory or consulting firm below.

	Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
Name of laboratory/firm			
Laboratory address			
Phone Number			
Pollutant(s) analyzed			



UPDES Industrial Permit Application

Part VII. Used or Manufactured Toxics

Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct?

YES NO, Skip to Part VIII

List the pollutants below.

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |



UPDES Industrial Permit Application

Part IX. Biosolids Information

Was the Biosolids Annual Report submitted? YES NO
 Attach a Biosolids Management Plan with application
 Serve Connections?

Part IX is not applicable - the facility does not treat sanitary waste and does not have regular sludge production

Provide the total dry metric tons per the latest 365-day period of sewage sludge generated, treated, used and disposed of:

Practice	Dry Metric Tons per 365-day Period
Amount generated at the facility	
Amount treated at the facility	
Amount used (i.e., received from offsite) at the facility	
Amount disposed of at the facility	

Treatment Provided at Your Facility

Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge

- | | |
|--|---|
| <input type="checkbox"/> Preliminary operations (e.g., sludge grinding and degritting) | <input type="checkbox"/> Thickening (concentration) |
| <input type="checkbox"/> Stabilization | <input type="checkbox"/> Anaerobic digestion |
| <input type="checkbox"/> Composting | <input type="checkbox"/> Conditioning |
| <input type="checkbox"/> Disinfection | <input type="checkbox"/> Dewatering (e.g. centrifugation, sludge drying beds, sludge lagoons) |
| <input type="checkbox"/> Heat drying | <input type="checkbox"/> Thermal reduction |
| <input type="checkbox"/> Methane or biogas capture and recovery | |

Sewage Sludge Disposal Method

Land Application of Bulk Sewage Sludge

Is sewage sludge from your facility applied to the land? YES NO If No, Skip to next section
 Total dry metric tons per 365-day period of sewage sludge applied to all land sites: _____

Surface Disposal

Is sewage sludge from your facility placed on a surface disposal site?
 YES NO If No, Skip to next section
 Total dry metric tons of sewage sludge from your facility placed on all surface disposal sites per 365-day period: _____
 Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
 YES NO If No, complete the below information
 Surface disposal site *you do not operate*
 Site name _____
 Mailing address _____
 City _____ State _____ Zip _____
 Contact Name _____ Title _____
 Phone Number _____ Email Address _____



UPDES Industrial Permit Application

Part IX. Bisolids Information *continued*

Incineration

Is sewage sludge from your facility fired in a sewage sludge incinerator?
 YES NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period: _____

Do you own or operate all sewage sludge incinerators in which sewage sludge from facility is fired?
 YES NO If No, complete the below information

Incinerator location *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip _____

Contact Name _____ Title _____

Phone Number _____ Email Address _____

Disposal in a Municipal Solid Waste Landfill

Is sewage sludge from your facility placed on a municipal solid waste landfill?
 YES NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period: _____

Do you own or operate the municipal solid waste landfill in which sewage sludge is disposed?
 YES NO If No, complete the below information

Municipal Solid Waste Landfill *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip _____

Contact Name _____ Title _____

Phone Number _____ Email Address _____



UPDES Industrial Permit Application

Part X. Reuse Information

Is wastewater applied to land?

YES NO If YES, complete the below information.

Land Application Site and Discharge Data			
Location	Size	Average Daily Volume Applied	How often
	acres	gpd	<input type="checkbox"/> Seasonal <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Seasonal <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent
	acres	gpd	<input type="checkbox"/> Seasonal <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent

Seasonal land application.

Indicate months of seasonal land application

- | | | | |
|-----------------------------------|--------------------------------|------------------------------------|-----------------------------------|
| <input type="checkbox"/> January | <input type="checkbox"/> April | <input type="checkbox"/> July | <input type="checkbox"/> October |
| <input type="checkbox"/> February | <input type="checkbox"/> May | <input type="checkbox"/> August | <input type="checkbox"/> November |
| <input type="checkbox"/> March | <input type="checkbox"/> June | <input type="checkbox"/> September | <input type="checkbox"/> December |

Where is the Reuse water distributed

- Residential irrigation
- Urban uses
 - Non-residential landscape irrigation
 - Golf course irrigation
 - Toilet flushing
 - Fire protection
- Irrigation of food crops (direct contact with edible part) – spray irrigation
- Irrigation of food crops (*Non direct contact with edible part*) – no spray irrigation
- Irrigation
 - Sod farms
 - Silviculture
 - Limited access highway rights of way
 - Other areas where human access is restrict or unlikely to occur
- Irrigation of animal feed crops other than pasture for milking animals
- Impoundment of wastewater where direct human contact is not allowed or is unlikely to occur
- Cooling water
- Soil compaction or duct control in construction areas
- Other

Attached an updated Reuse Project Plan

An updated Reuse Project Plan is required during every permit renewal.



Division of Water Quality (DWQ) UPDES Program

UPDES Industrial Permit Application

Part X. Antidegradation Review

The objective of antidegradation rules and policies is to protect existing high quality waters and set forth a process for determining where and how much degradation is allowable for socially and/or economically important reasons. In accordance with Utah Administrative Code (UAC R317-2-3), an antidegradation review (ADR) is a permit requirement for any project that will increase the level of pollutants in waters of the state. The rule outlines requirements for both Level I and Level II ADRs, as well as public comment procedures. This review form is intended to assist the applicant and Division of Water Quality (DWQ) staff in complying with the rule but is not a substitute for the complete rule in R317-2-3.5. Additional details can be found in the *Utah Antidegradation Implementation Guidance* and relevant sections of the guidance are cited in this review form.

ADRs should be among the first steps of an application for a UPDES permit because the review helps establish treatment expectations. The level of effort and amount of information required for the ADR depends on the nature of the project and the characteristics of the receiving water. To avoid unnecessary delays in permit issuance, DWQ recommends that the process be initiated at least one year prior to the date a final approved permit is required.

DWQ will determine if the project will impair beneficial uses (Level I ADR) using information provided by the applicant and whether a Level II ADR is required. The applicant is responsible for conducting the Level II ADR. For the permit to be approved, the Level II ADR must document that all feasible measures have been undertaken to minimize pollution for socially, environmentally or economically beneficial projects resulting in an increase in pollution to waters of the state.

For permit requiring a Level II ADR, this antidegradation form must be completed and approved by DWQ before any UPDES permit can be issued. Typically, the ADR form is completed in an iterative manner in consultation with DWQ. The applicant should first complete the statement of social, environmental and economic importance (SEEI) in Section C and determine the parameters of concern (POC) in Section D. Once the POCs' are agreed upon by DWQ, the alternatives analysis and selection of preferred alternative Section E can be conducted based on minimizing degradation resulting from discharge of the POCs. Once the applicant and DWQ agree upon the preferred alternative, the review is considered complete, and the form is submitted to DWQ.

What are the designated uses of the receiving water (R317-2-6)?

- Domestic Water Supply
- Recreation
- Aquatic Life
- Agricultural Water Supply
- Great Salt Lake

Antidegradation Category 1, 2 or 3 of receiving water (R317-2-3.2, -3.3, and -3.4):



UPDES Industrial Permit Application

Part X. Antidegradation Review *continued*

Effluent flow reviewed: *typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.*

What is the application for? (Check all that apply)

- A UPDES permit for a new facility, project, or outfall.
- A UPDES permit renewal with an expansion or modification of an existing wastewater treatment works.
- A UPDES permit renewal requiring limits for a pollutant not covered by the previous permit and/or an increase to existing permit limits.
- A UPDES permit renewal with no changes in facility operations.

Section B. Is a Level II ADR required?

This section of the form is intended to help applicants determine if a Level II ADR is required for specific permitted activities. In addition, the Executive Secretary may require a Level II ADR for an activity with the potential for major impact on the quality of waters of the state (R317-2-3.5a.1).

B1. The UPDES permit is new or is being renewed and the proposed effluent concentration and loading limits are higher than the concentration and loading limits in the previous permit and any previous antidegradation review(s).

- YES – (Proceed to B2 of the Form)
- NO – No Level II ADR is required and there is no need to proceed further with the review questions. Continue to the Certification Statement and Signature page.

B2. Will any pollutants use assimilative capacity of the receiving water, i.e. do the pollutant concentrations in the effluent exceed those in the receiving waters at critical conditions? For most pollutants, effluent concentrations that are higher than the ambient concentrations require an antidegradation review? For a few pollutants such as dissolved oxygen, and antidegradation review is required if the effluent concentrations are less than the ambient concentrations in the receiving water. (Section 3.3.3 of Implementation Guidance)

- YES – (Proceed to B3 of the Form)
- NO – No Level II ADR is required and there is no need to proceed further with the review questions. Continue to the Certification Statement and Signature page.



UPDES Industrial Permit Application

Part X. Antidegradation Review *continued*

B3. Are water quality impacts of the proposed project temporary and limited (Section 3.3.4 of Implementation Guidance)? Proposed projects that will have temporary and limited effects on water quality can be exempted from a Level II ADR.

- YES – Identify the reason used to justify this determination if B4.1 and proceed to Section G. No Level II ADR is required.
- NO – A Level II ADR is required (Proceed to Section C)

B3.1 Complete this question only if the applicant is requesting a Level II review exclusion for temporary and limited projects (See R317-2-3.5(b)(3) and R317-2-3.5(b)(4)). For projects requesting a temporary and limited exclusion please indicate the factor(s) used to justify this determination (check all that apply and provide details as appropriate) (Section 3.3.4 of Implementation Guidance):

- Water quality impacts will be temporary and related exclusively to sediment or turbidity and fish spawning will not be impaired.

Factors to be considered in determining whether water quality impacts will be temporary and limited:

- a) The length of time during which water quality will be lowered:
- b) The perfect change in ambient concentrations of pollutants:
- c) Pollutants affected:
- d) Likelihood for long-term water quality benefits:
- e) Potential for any residual long-term influences on existing uses:
- f) Impairment of fish spawning, survival and development of aquatic fauna excluding fish removal efforts:

Additional justification, as needed:



UPDES Industrial Permit Application

Level II ADR (Sections C-F) was completed using the DWQ review form and is attached to the application

Part X. Antidegradation Review *continued*

Level II ADR

Section C, D, E, and F of the form constitute the Level II ADR Review. The applicant must provide as much detail as necessary for DWQ to perform the antidegradation review. Questions are provided for the convenience of applicants; however, for more complex permits it may be more effective to provide the required information in a separate report. Applicants that prefer a separate report should record the report name here and proceed to Section G of the form.

Option Report Name: _____

Section C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located? *The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in the section. More information is available in Section 6.2 of the Implementation Guidance.*

C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated tax revenues.

C2. Describe any environmental benefits to be realized through implementation of the proposed project.

C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.

C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.



UPDES Industrial Permit Application

Part X. Antidegradation Review *continued*

C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving water.

C6. Will the discharge potentially impact a drinking water source, e.g., Class 1C waters? Depending upon the locations of the discharge and its proximity to downstream drinking water diversions, additional treatment or more stringent effluent limits or additional monitoring, beyond that which may otherwise be required to meet minimum technology standards or in stream water quality standards, may be required by the Director in order to adequately protect public health and the environment (R317-2-3.5 d.).

- YES
- NO

Section D. Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern. Parameters of concern are parameters in the effluent at concentrations greater than ambient concentrations in the receiving water. The applicant is responsible for identifying parameter concentrations in the effluent and DWQ will provide parameter concentrations for the receiving water. More information is available in Section 3.3.3 of the Implementation Guidance.

Parameters of Concern:			
Rank	Pollutant	Ambient Concentration	Effluent Concentration
1.			
2.			
3.			
4.			
5.			



UPDES Industrial Permit Application

Part X. Antidegradation Review *continued*

Pollutants Evaluated that are not Considered Parameters of Concern:			
Pollutant	Ambient Concentration	Effluent Concentration	Justification
1.			
2.			
3.			
4.			
5.			

Section E. Alternative Analysis Requirements of Level II Antidegradation Review. *Level II ADRs require the applicant to determine whether there are feasible less-degrading alternatives to the proposed project. More information is available in Section 5.5 and 5.6 of the Implementation Guidance.*

E1. The UPDES permit is being renewed without any changes to flow or concentrations. Alternative treatment and discharge options including changes to operations and maintenance were considered and compared to the current processes. NO economically feasible treatment or discharge alternatives were identified that were not previously considered for any previous antidegradation review(s).

- YES – (Proceed to Section F)
- NO or Does Not Apply (Proceed to E2)

E2. Attach as an appendix to this form a report that describes that following factors for all alternative treatment options (see 1) a technical descriptions of the treatment process, including construction costs and continued operation and maintenance expenses, 2) the mass and concentration of discharge constituents, and 3) a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants. Most of this information is typically available from a Facility Plan, if available.

Report Name: _____

E3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum treatment required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLC) and any secondary or categorical effluent limits.



UPDES Industrial Permit Application

Part X. Antidegradation Review *continued*

E4. Were any of the following alternatives feasible and affordable?

Alternative	Feasible	Reason Not Feasible/Affordable
Pollutant Trading	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Water Recycling/Reuse	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Land Application	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Connection to Other Facilities	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Upgrade to Existing Facility	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Total Containment	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Improved O&M of Existing Systems	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Seasonal or Controlled Discharge	<input type="checkbox"/> YES <input type="checkbox"/> NO	
New Construction	<input type="checkbox"/> YES <input type="checkbox"/> NO	
No Discharge	<input type="checkbox"/> YES <input type="checkbox"/> NO	

E5. From the applicant's perspective, what is the preferred treatment option?



UPDES Industrial Permit Application

Part X. Antidegradation Review *continued*

E6. Is the preferred option also the least polluting feasible alternative?

YES NO

If No, what were less degrading feasible alternative(s)?

[Empty text box for less degrading feasible alternative(s)]

If No, provide a summary of the justification for not selecting the least polluting feasible alternative and if appropriate, provide a more detailed justification as an attachment.

[Empty text box for justification]

Section F. Optional Information

F1. Does the applicant want to conduct optional public review(s) in addition to the mandatory public review? Level II ADRs are public noticed for a thirty day comment period. More information is available in Section 3.7.1 of the Implementation Guidance.

YES NO

F2. Does the project include an optional mitigation plan to compensate for the proposed water quality degradation?

YES NO

Report Name: _____

Level II ADR

Part C, D, E, and F of the form constitute the Level II ADR Review. The applicant must provide as much detail as necessary for DWQ to perform the antidegradation review. Questions are provided for the convenience of applicants; however, for more complex permits it may be more effective to provide the required information in a separate report. Applicants that prefer a separate report should record the report name here and proceed to Part G of the form.

Optional Report Name:

Part C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located? *The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in this section. More information is available in Section 6.2 of the Implementation Guidance.*

C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated tax revenues.

1. The total tax revenue Utah Iron has paid to the State for 2020 through 2023 for revenues associated with iron ore mining is approximately \$750,000

2. Approximately 175 direct employee jobs are created from the mine being open. About ten percent of these new jobs are entry level; 90% are considered some of the highest paying jobs in Iron County, and even the State of Utah. These jobs generate approximately \$350,000 State income tax revenue, annually. An additional estimated \$150,000 Utah State sales tax is generated through disposable income paid to the employees, annually.

3. Approximately 150 vendors or independent contracting firms from which Utah Iron purchase millions of dollars of goods and services annually in the State of Utah alone. The estimated State income tax generated from these activities is approximately \$300,000 (assuming 15% profit margin resulting in \$5M taxable income).

C2. Describe any environmental benefits to be realized through implementation of the proposed project.

Discharge water is of good quality. the discharge provides an additional ground and surface water into the Escalante Valley drainage.

C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.

No known losses have been identified that would occur because of the implementation of this project.

C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.

N/A

C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving water.

Water will be discharged through delivery pipe. Outfall will consist of an energy dissipation structure to reduce erosion.

Part D. Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern. *Parameters of concern are parameters in the effluent at concentrations greater than ambient concentrations in the receiving water. The applicant is responsible for identifying parameter concentrations in the effluent and DWQ will provide parameter concentrations for the receiving water. More information is available in Section 3.3.3 of the Implementation Guidance.*

Parameters of Concern:

Rank	Pollutant	Ambient		Effluent	
		Concentration / Units	Basis	Concentration / Units	Basis
1	Total suspended solids (TSS)			mg/L	8.0
2	Total Iron			mg/L	0.13
3	pH			s.u.	7.8
4	Ammonia			mg/L	0.21
5					
6					
7					
8					
9					
10					

Pollutants Evaluated that are not Considered Parameters of Concern:

Pollutant	Ambient Concentration	Effluent Concentration	Justification

Part E. Alternative Analysis Requirements of a Level II

Antidegradation Review. *Level II ADRs require the applicant to determine whether there are feasible less-degrading alternatives to the proposed project. For new and expanded discharges, the Alternatives Analysis must be prepared under the supervision of and stamped by a Professional Engineer registered with the State of Utah. DWQ may grant an exception from this requirement under certain circumstances, such as the alternatives considered potentially feasible do not include engineered treatment alternatives. More information regarding the requirements for the Alternatives Analysis is available in Section 5 of the Implementation Guidance.*

E1. The UPDES permit is being renewed without any changes to flow or concentrations. Alternative treatment and discharge options including changes to operations and maintenance were considered and compared to the current processes. No economically feasible treatment or discharge alternatives were identified that were not previously considered for any previous antidegradation review(s).

Yes (Proceed to Part F)

No or Does Not Apply (Proceed to E2)

E2. Attach as an appendix to this form a report that describes the following factors for all alternative treatment options 1) a technical description of the treatment process, including construction costs and continued operation and maintenance expenses, 2) the mass and concentration of discharge constituents, and 3) a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants. Most of this information is typically available from a Facility Plan, if available.

Report Name:

E3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum treatment required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLA) and any secondary or categorical effluent limits.

E4. Were any of the following alternatives feasible and affordable?

Alternative	Feasible	Reason Not Feasible/Affordable
Pollutant Trading	No	Need to remove water from pit
Water Recycling/Reuse	Yes	Partially feasible. Due to technical limitation, only limited amount of water from the iron mine can be recycled by using in the mill process.
Land Application	Yes	Partially feasible. Not feasible during the winter due to ice build up and frost damage to equipment.
Connection to Other Facilities	No	There are no other commercial or industrial users within a reasonable distance of the facility.
Upgrade to Existing Facility	No	Utah Iron has recently completed a number of significant upgrades that maximize the use of the water and other resources at the mine. In particular, filter presses have largely replaced antiquated evaporation equipment and have also improved the efficie
Total Containment	No	Intercepted water volume exceeds the capability to use the water in the existing infrastructure.
Improved O&M of Existing Systems	No	Intercepted water volume exceeds the capability to use the water in the existing infrastructure.
Seasonal or Controlled Discharge	Yes	Partially feasible. The most difficult time of the year to manage discharges is in winter through early spring. This is due to a) lower temperatures resulting in less evaporation, b) increased precipitation in the surrounding geographic region, resultng in higher flows and c), freezing temperatures limit the ability to use all of the infrastructure at its maximum capacity.
New Construction	No	Some future additions to the iron ore processing capacity of the mine are currently being evaluated, but these are at least 5 or more years out from implementation.
No Discharge	No	Water consistently appears in the mine pits as excavation of material occurs. While the volumes vary based on geological and climate conditions, there is a long history of water intercept that has to be addressed to allow economic extraction of Iron Ore.

E5. From the applicant’s perspective, what is the preferred treatment option?

During the times of the year when discharge is warranted, no treatment is proposed because the water meets all discharge standards and there are no known technologies to improve the water quality for this water resource.

E6. Is the preferred option also the least polluting feasible alternative?

Yes

No

If no, what were less degrading feasible alternative(s)?

If no, provide a summary of the justification for not selecting the least polluting feasible alternative and if appropriate, provide a more detailed justification as an attachment.

Part F. Optional Information

F1. Does the applicant want to conduct optional public review(s) in addition to the mandatory public review? Level II ADRs are public noticed for a thirty day comment period. More information is available in Section 3.7.1 of the Implementation Guidance.

No

Yes

F2. Does the project include an optional mitigation plan to compensate for the proposed water quality degradation?

No

Yes

Report Name:



UPDES Industrial Permit Application

Part XI. Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with system designed to assure that quailed personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations.

KARY JENSEN
PRINT Signatory
Authority

Signature

G.M.
Title

8-31-23
Date

The Division of Water Quality may request addition information.

Important: The UPDES Permit Application will not be considered complete unless you answer every question. If an item does not apply to you, enter "Not Applicable" to show that you considered the question.

The UPDES Permit Application, must be signed as follows:

- 1) For a corporation, a responsible corporate officer shall sign the NOT, a responsible corporate officer means:
 - a. A President, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - b. The manager of one or more manufacturing, production, or operating facilities, if
 - i. The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;
 - ii. The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
 - iii. Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- 2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or
- 3) For a municipality, state or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of any agency means;
 - a. The chief executive officer of the agency; or
 - b. A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Where to File the UPDES Permit Application form:

Please submit the original form with a signature in ink to the below address. Remember to retain a copy for your records.

UPDES sent by mail:

Division of Water Quality
195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

OFFICE USE ONLY

Date received: _____ / _____ / _____ Received by: _____ Document No: _____

via: Email Fax Webportal Mail Hand Delivery



Division of Water Quality (DWQ) UPDES Program

UPDES Industrial Permit Application

Appendix A. Testing Requirements for Organic Toxic Pollutants Industry Categories*

Industry Category		Volatile	Gas Chromatography/Mass Spectrometry (GS/MS) Fraction(s)†		Pesticide
			Acid	Base/Neutral	
1.	Adhesives and sealants	X	X	X	<input type="checkbox"/>
2.	Aluminum forming	X	X	X	<input type="checkbox"/>
3.	Auto and other laundries	X	X	X	X
4.	Battery manufacturing	X	<input type="checkbox"/>	X	<input type="checkbox"/>
5.	Coal mining	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Coil coating	X	X	X	<input type="checkbox"/>
7.	Copper forming	X	X	X	<input type="checkbox"/>
8.	Electric and electronic compounds	X	X	X	X
9.	Electroplating	X	X	X	<input type="checkbox"/>
10.	Explosives manufacturing	<input type="checkbox"/>	X	X	<input type="checkbox"/>
11.	Foundries	X	X	X	<input type="checkbox"/>
12.	Gum and wood chemicals (all subparts except D and F)	X	X	<input type="checkbox"/>	<input type="checkbox"/>
13.	Gum and wood chemicals, Subpart D (tall oil rosin)	X	X	X	<input type="checkbox"/>
14.	Gum and wood chemicals, Subpart F (rosin-based derivatives)	X	X	X	<input type="checkbox"/>
15.	Inorganic chemicals manufacturing	X	X	X	<input type="checkbox"/>
16.	Iron and steel manufacturing	X	X	X	<input type="checkbox"/>
17.	Leather tanning and finishing	X	X	X	<input type="checkbox"/>
18.	Mechanical products manufacturing	X	X	X	<input type="checkbox"/>
19.	Nonferrous metals manufacturing	X	X	X	X
20.	Ore mining, Subpart B (base and precious metals)	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
21.	Organic chemicals manufacturing	X	X	X	X
22.	Paint and ink formulation	X	X	X	<input type="checkbox"/>
23.	Pesticides	X	X	X	X
24.	Petroleum refining	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	Pharmaceutical preparations	X	X	X	<input type="checkbox"/>
26.	Photographic equipment and supplies	X	X	X	<input type="checkbox"/>
27.	Plastic and synthetic materials manufacturing	X	X	X	X
28.	Plastic processing	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	Printing and publishing	X	X	X	X
30.	Pulp and paperboard mills	X	X	X	X
31.	Rubber processing	X	X	X	<input type="checkbox"/>
32.	Soap and detergent manufacturing	X	X	X	<input type="checkbox"/>
33.	Steam electric power plants	X	X	<input type="checkbox"/>	<input type="checkbox"/>
34.	Textile mills (except Subpart C, Greige Mills)	X	X	X	<input type="checkbox"/>
35.	Timber products processing	X	X	X	X

Key
 * See note at conclusion of 40 CFR 122, Appendix D (1983) for explanation of effect of suspensions on testing requirements for primary industry categories
 † The pollutants in each fraction are listed in Table B
 X Testing is required
 Testing is not required

*Based on note at conclusion of 40 CFR 122, Appendix D, the US Environmental Protection Agency has suspended the requirements of § 122.21(g)(7)(ii)(A) and Table I of Appendix D as they apply to certain industrial categories. The suspension applies, among other, to all subcategories of the ore mining industry, except for Subpart B (aluminum ore subcategory).

Iron Mountain Mine

Area Map



Iron Mountain

Outfall 1

Iron Mountain Mine

Mill Building

Outfall 2

Sweet Hills HP

56

56

Google Earth

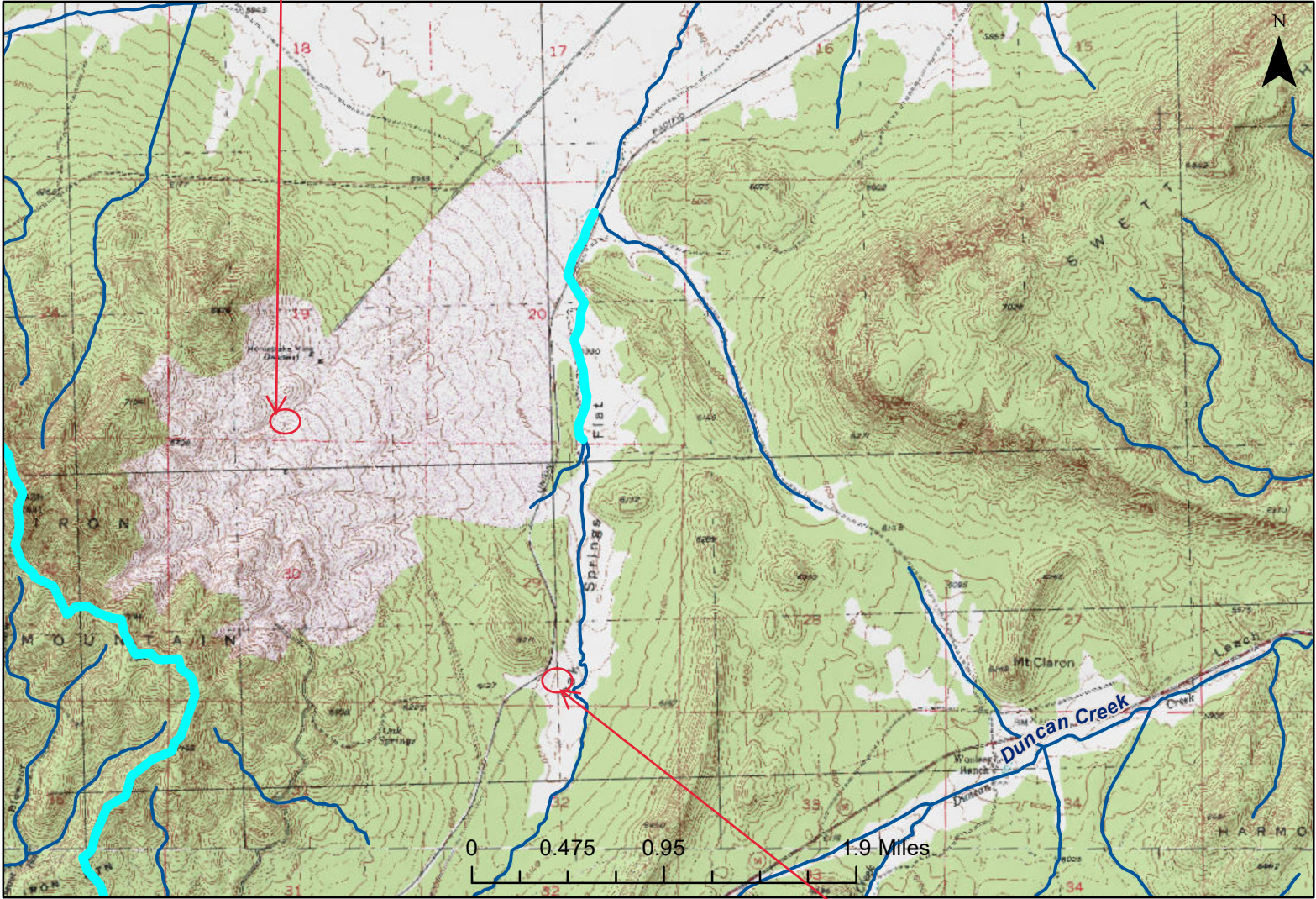
1 mi





Beneficial Uses and Water Quality Assessment Map

Approximate location outfall-1



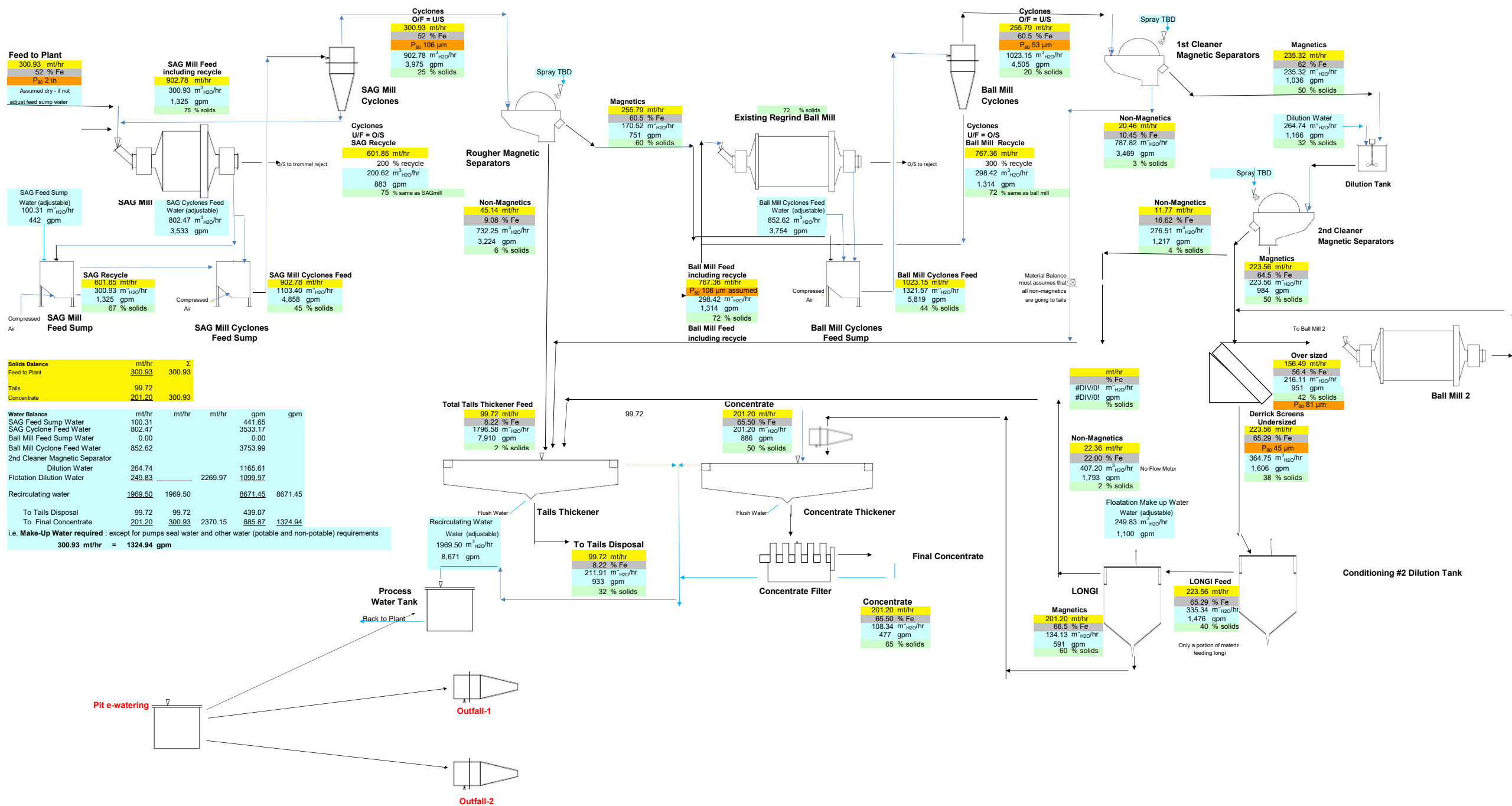
Approximate location outfall-2

Unit ID: UT-not defined
 AU_Type: null
 Assessment Unit Name: none
 Unit Description: Beneficial uses area only (No AUs): West Desert region (undefined beneficial uses)
 Beneficial Uses: Use Class 2B = Infrequent Primary Contact Recreation (e.g. wading, fishing); Use Class 3D = Waterfowl, Shore Birds and Associated Aquatic Life
 RIVER_MILE: null
 Watershed Management Unit: null
 2016 Assessment: none: no defined assessment unit(s)
 Beneficial Use: Cause of Impairment: null
 TMDL Required: 303d Cause of Impairment: null
 TMDL Approved: Cause of Impairment: null
 Aquatic Habitat Impairment: null
 PROTECTED: Use Class 2B = Infrequent Primary Contact Recreation (e.g. wading, fishing), Use Class 3D = Waterfowl, Shore Birds and Associated Aquatic Life
 BLU_Ribbon: null
 Anti-Degradation Category: Category 1 = No point discharges allowed within U.S. Forest Service outer boundary or to other specified waters of R317-2-12 and Category 3 = water quality degradation may be allowed for non-Category 1 and 2 waters pursuant to antidegradation review
 TMDL Information: null
 MAPLABEL: null
 New_AUID: null
 Perimeter: null
 Area_m2: 46793575408.50468

Utah Iron
Cedar City, Utah, USA

2,135,250 metric tons p.a. fed to plant @ 90 % mill availability 24/7
All tonnages are metric tonnes
Pumps NOT shown
Water density taken as 1 mt/m³
Pumps seal water and other water (potable and non-potable) requirements NOT shown
Tonnages based on Dawson Test #37
Filter spray water strainers NOT shown

Utah Iron Concentrator Flow Sheet



Solids Balance		mt/hr	Σ
Feed to Plant		300.93	300.93
Tails		99.72	
Concentrate		201.20	300.93

Water Balance		mt/hr	mt/hr	gpm	gpm
SAG Feed Sump Water		100.31		441.65	
SAG Cyclone Feed Water		802.47		3533.17	
Ball Mill Feed Sump Water		0.00		0.00	
Ball Mill Cyclone Feed Water		852.62		3753.99	
2nd Cleaner Magnetic Separator					
Dilution Water		264.74		1165.61	
Flotation Dilution Water		249.83	2269.97	1099.97	
Recirculating water		1969.50	1969.50	8671.45	8671.45
To Tails Disposal		99.72	99.72	439.07	
To Final Concentrate		201.20	300.93	2370.15	1324.94

i.e. Make-Up Water required : except for pumps seal water and other water (potable and non-potable) requirements
300.93 mt/hr = 1324.94 gpm

Notes:

1. The proposed discharge consists of water from de-watering of the mining pit. Effluent water is not used in the process presented in the diagram and is not in direct contact with process material or facilities.
2. The proposed discharge is designed to 280 gpm (0.4 mgd). discharge may be diverted to outfall 1 or outfall 2.
3. Pit de-watering water is intermittently diverted to be used as make-up water for the ore processing process.

UPDES Industrial Permit Application - Iron Mountain Mine
Part IV - Facility Monitoring Data

Parameter	Units	March-2023		May-2023		June-2023		August-2023	
		Result	MDL/RL	Result	MDL/RL	Result	MDL/RL	Result	MDL/RL
pH	s.u	7.69		7.83					
Temprature (deg celcius)	degree celcius	7.59		14.93					
BOD5	mg/L	NA		NA		NA		ND	2
COD	mg/L	NA		NA		NA		6	5
TOC	mg/L	NA		NA		NA		1.3	0.3
TSS	mg/L	NA		NA		NA		8	3
Amonia as N	mg/L	0.25	0.2	0.3	0.2	0.24	0.2	ND	0.06
Antimony, Total	mg/L	ND	0.02	ND	0.02	ND	0.02	0.0005	0.00004
Arsenic, Total	mg/L	ND	0.05	ND	0.05	ND	0.05	0.0021	0.00009
Beryllium, Total	mg/L	ND	0.001	ND	0.001	ND	0.001	ND	0.00007
Cadmium, Total	mg/L	ND	0.005	ND	0.005	ND	0.005	ND	0.00005
Chromium, Total	mg/L	ND	0.005	ND	0.005	ND	0.005	ND	0.0007
Copper, Total	mg/L	ND	0.005	ND	0.005	ND	0.005	0.00088	0.0002
Lead, Total	mg/L	ND	0.02	ND	0.02	ND	0.02	ND	0.0001
Mercury, Total	mg/L	ND	0.00015	ND	0.00015	ND	0.00015	0.00011	0.00008
Nickel, Total	mg/L	NA		NA		NA		0.00024	0.00006
Selenium, Total	mg/L	0.09	0.02	ND	0.02	ND	0.02	0.0015	0.0001
Silver, Total	mg/L	ND	0.005	ND	0.005	ND	0.005	ND	0.00005
Thallium, Total	mg/L	ND	0.0002	ND	0.0002	ND	0.0002	ND	0.00003
Zinc, Total	mg/L	ND	0.01	ND	0.01	ND	0.01	0.00316	0.0008
Cyanide, Total	mg/L	NA		NA		NA		ND	0.002
Phenols, Total	mg/L	NA		NA		NA		ND	0.021

Notes:

mg/L- milligrams per liter

NA- not analyzed

ND- not detected

MDL/RL- laboratory method detection limit/reporting limit

Ardon, Ehud

Subject: Request for waiver for testing of Table A pollutants

From: Jeff Studenka <jstudenka@utah.gov>
Sent: Wednesday, November 15, 2023 4:53 PM
To: Ardon, Ehud <ehud.ardon@wsp.com>
Cc: Mike McCandless <mbmfossil@gmail.com>; Buchanan, Corey <corey.buchanan@wsp.com>
Subject: Re: Request for waiver for testing of Table A pollutants

Received, thank you.



Jeff Studenka

UPDES Individual Permits Section

Division of Water Quality
Phone: (385) 602-7303
waterquality.utah.gov

Emails to and from this email address may be considered public records and thus subject to Utah GRAMA requirements.

On Wed, Nov 15, 2023 at 2:41 PM Ardon, Ehud <ehud.ardon@wsp.com> wrote:

Jeff,

Utah Iron is requesting a waiver for the following pollutants included in Appendix A of the UPDES permit application:

- Biochemical oxygen demand (BOD5)
- Chemical oxygen demand (COD)
- Total organic carbon (TOC)

The waiver is requested as these pollutants are not normally associated with iron ore mining.

Thanks,



Ehud Ardon

Lead Consultant, Project Management

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WSP USA

511 Congress St, Ste. 200

Portland, Maine

04101 USA

wsp.com

Division of Water Quality (DWQ) UPDES Program

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Table A. Conventional and Non-Conventional Pollutants¹										
	Pollutant	Waiver Requested (if applicable)	Units (specify)		Effluent				Intake (optional)	
					Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
<input type="checkbox"/>	Check here if you have applied to Utah DWQ for a waiver for <i>all</i> of the pollutants listed on this table for the noted outfall.									
1.	Biochemical oxygen demand (BOD ₅)	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
			Mass	<input type="checkbox"/>						
2.	Chemical oxygen demand (COD)	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
			Mass	<input type="checkbox"/>						
3.	Total organic carbon (TOC)	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
			Mass	<input type="checkbox"/>						
4.	Total suspended solids (TSS)	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
			Mass	<input type="checkbox"/>						
5.	Ammonia (as N)	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
			Mass	<input type="checkbox"/>						
6.	Flow	<input type="checkbox"/>	Rate	<input type="checkbox"/>						
7.	Temperature (winter)	<input type="checkbox"/>	Fahrenheit	<input type="checkbox"/>						
	Temperature (summer)	<input type="checkbox"/>	Fahrenheit	<input type="checkbox"/>						
8.	pH (minimum)	<input type="checkbox"/>	Standard units	SU						
	pH (maximum)	<input type="checkbox"/>	Standard units	SU						

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 1. Toxic Metals, Cyanide, and Total Phenols												
1.	Antimony, Total (7440-36-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
2.	Arsenic, Total (7440-38-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
3.	Beryllium, Total (7440-41-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
4.	Cadmium, Total (7440-43-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
5.	Chromium, Total (7440-47-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
6.	Copper, Total (7440-50-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
7.	Lead, Total (7439-92-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 1. Toxic Metals, Cyanide, and Total Phenols <i>continued</i>												
8.	Mercury, Total (7439-97-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
9.	Nickel, Total (7440-02-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
10.	Selenium, Total (7782-49-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
11.	Silver, Total (7440-22-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
12.	Thallium, Total (7440-28-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
13.	Zinc, Total (7440-66-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
14.	Cyanide, Total (57-12-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
15.	Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹											
	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
Section 2. Organic Toxic Pollutants (GC/MS Fraction – Volatile Compounds)											
1.	Acrolein (107-02-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
2.	Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
3.	Benzene (71-43-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
4.	Bromoform (75-25-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
5.	Carbon tetrachloride (56-23-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
6.	Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
7.	Chlorodibrompmethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					
8.	Chloroethane (75-00-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
					Mass	<input type="checkbox"/>					

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 2. Organic Toxic Pollutants (GC/MS Fraction – Volatile Compounds) <i>continued</i>												
9.	2-chloroethylvinyl either (110-75-80)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
10.	Chloroform (67-66-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
11.	Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
12.	1,1-dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
13.	1,2-dichloroethane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
14.	1,1-dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
15.	1,2-dichloropropane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
16.	1,3-dichloropropylene (542-75-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses

Section 2. Organic Toxic Pollutants (GC/MS Fraction – Volatile Compounds) *continued*

17.	Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
18.	Methyl bromide (74-83-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
19.	Methyl chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
20.	Methylene chloride (75-09-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
21.	1,1,2,2-tetrachloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
22.	Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
23.	Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
24.	1,2-trans-dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 2. Organic Toxic Pollutants (GC/MS Fraction – Volatile Compounds) <i>continued</i>												
25.	1,1,1-trichloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
26.	1,1,2-trichloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
27.	Trichloroethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						
28.	Vinyl chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
					Mass	<input type="checkbox"/>						

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Continue to Section 3

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 3. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Acid Compounds)												
1.	2-chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
2.	2,4-dichlorophenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
3.	2,4-dimethylphenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
4.	4,6-dinitro-o-cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
5.	2,4-dinitrophenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
6.	2-nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
7.	4-nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
8.	p-chloro-m-cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹											
	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
Section 3. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Acid Compounds) <i>continued</i>											
9.	Pentachlorophenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
10.	Phenol (108-95-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
11.	2,4,6-trichlorophenol (88-05-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						

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Continue to Section 4

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 4. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Base/Neutral Compounds)												
1.	Acenaphthene (83-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
2.	Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
3.	Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
4.	Benzidine (92-97-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
5.	Benzo (a) anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
6.	Benzo (a) pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
7.	3,4-benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
8.	Benzo (ghi) perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 4. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Base/Neutral Compounds) <i>continued</i>												
9.	Benzo (k) fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
10.	Bis (2-chloroethoxy) methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
11.	Bis (2-chloroethyl) ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
12.	Bis (2-chloroisopropyl) ether (102-80-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
13.	Bis (2-ethylhexyl) phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
14.	4-bromophenyl phenyl ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
15.	Butyl benzyl phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
16.	2-chlorophthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 4. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Base/Neutral Compounds) <i>continued</i>												
17.	4-chlorophenyl phenyl ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
18.	Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
19.	Dibenzo (a,h) anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
20.	1,2-dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
21.	1,3-dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
22.	1,4-dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
23.	3,3-dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
24.	Diethyl phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required 40 CFR chapter I, subchapter N or O.

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 4. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Base/Neutral Compounds) <i>continued</i>												
25.	Dimethyl phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
26.	Di-n-butyl phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
27.	2,4-dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
28.	2,6-dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
29.	Di-n-octyl phthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
30.	1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
31.	Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
32.	Fluorene (86-37-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants¹											
	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
Section 4. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Base/Neutral Compounds) <i>continued</i>											
33.	Hexachlorobenzene (118-74-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
34.	Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
35.	Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
36.	Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
37.	Indeno (1,2,3-cd) pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
38.	Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
39.	Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
40.	Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required 40 CFR chapter I, subchapter N or O.

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)		
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses	
Section 4. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Base/Neutral Compounds) <i>continued</i>												
41.	N-nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
42.	N-nitrosodi-n-propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
43.	N-nitrosodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
44.	Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
45.	Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
46.	1,2,4-trichlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required 40 CFR chapter I, subchapter N or O.

Continue to Section 5

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹											
	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
Section 5. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Pesticides) <i>continued</i>											
1.	Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
2.	α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
3.	β-BHC (319-85-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
4.	γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
5.	δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
6.	Chlorodane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
7.	4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						
8.	4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses

Section 5. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Pesticides) *continued*

9.	4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
10.	Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
11.	α-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
12.	β-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
13.	Endosulfan sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
14.	Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
15.	Endrin aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
16.	Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹

	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses

Section 5. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Pesticides) *continued*

17.	Heptachlor epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
18.	PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
19.	PCB-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
20.	PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
21.	PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
22.	PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
23.	PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							
24.	PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration							
					Mass							

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Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants ¹											
	Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
			Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
Section 5. Organic Toxic Pollutants (Gas Chromatography/Mass Spectrometry (GS/MS) Fraction – Pesticides) <i>continued</i>											
25.	Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration						
					Mass						

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Available data of source water is included in attached table

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Table C. Certain Conventional and Non-Conventional Pollutants ¹										
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
<input type="checkbox"/>	Check here if you believe all pollutants on Table C to be present in your discharge from the noted outfall. You need not complete the "Presence or Absence" column of Table C for <i>each pollutant</i> .									
<input type="checkbox"/>	Check here if you believe all pollutants on Table C to be absent in your discharge from the noted outfall. You need not complete the "Presence or Absence" column of Table C for <i>each pollutant</i> .									
1.	Bromide (24959-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
2.	Chlorine, total residual	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
3.	Color	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
4.	E.coli	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
5.	Fluoride (16984-48-8)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
6.	Nitrate	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
7.	Nitrite	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
8.	Nitrogen, total organic (as N)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					

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Table C. Certain Conventional and Non-Conventional Pollutants¹ continued

	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
9.	Oil and Grease	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
10.	Phosphorus (as P), total (7723-14-0)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
11.	Sulfate (as SO ₄) (14808-798-)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
12.	Sulfide (as S)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
13.	Sulfite (as SO ₃) (14265-45-3)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
14.	Surfactants	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
15.	Aluminum, total (7429-90-5)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
16.	Barium, total (7440-39-3)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
17.	Boron, total (7440-42-8)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						

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Table C. Certain Conventional and Non-Conventional Pollutants¹ <i>continued</i>											
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Units (specify)		Effluent				Intake (optional)	
		Believed Present	Believed Absent			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average	Number of Analyses
18.	Cobalt, total (7440-48-4)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
19.	Iron, total (7439-89-6)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
20.	Magnesium, total (7439-95-4)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
21.	Molybdenum, total (7439-95-4)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
22.	Manganese, total (7439-95-5)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
23.	Tin, total (7440-31-5)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						
24.	Titanium, total (7440-32-6)	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>						
				Mass	<input type="checkbox"/>						

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Table C. Certain Conventional and Non-Conventional Pollutants¹ <i>continued</i>										
	Pollutant/Parameter <small>(and CAS Number, if available)</small>	Presence or Absence <small>(check one)</small>		Units <small>(specify)</small>	Effluent				Intake <small>(optional)</small>	
		Believed Present	Believed Absent		Maximum Daily Discharge <small>(required)</small>	Maximum Monthly Discharge <small>(if available)</small>	Long-Term Average Daily Discharge <small>(if available)</small>	Number of Analyses	Long-Term Average	Number of Analyses
25.	Radioactivity									
	Alpha, total	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
	Beta, total	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
	Radium, total	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					
	Radium 226, total	<input type="checkbox"/>	<input type="checkbox"/>	Concentration	<input type="checkbox"/>					
				Mass	<input type="checkbox"/>					

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required 40 CFR chapter I, subchapter N or O.

UPDES Industrial Permit Application - Iron Mountain Mine
 Table C Parameters - available data

Parameter	Units	March-2021		June-2021		March-2023		May-2023		June-2023		August-2023	
		Result	MDL/RL	Result	MDL/RL	Result	MDL/RL	Result	MDL/RL	Result	MDL/RL	Result	MDL/RL
Bromide	mg/l	NA		NA		0.3	0.01	0.4	0.01	0.4	0.01	0.4	0.01
Fluoride	mg/l	NA		NA		0.172	0.1	0.209	0.1	0.204	0.1	0.179	0.1
Nitrate/Nitrite (as N)	mg/l	0.5	0.05	0.35	0.01	NA		NA		NA		NA	
Nitrate (as N)	mg/l	NA		NA		15.5	1	5.65	1	2.14	0.1	ND	0.07
Nitrite (as N)	mg/l	NA		NA		0.2	0.1	ND	0.1	ND	0.1	ND	0.08
Total Organic Nitrogen	mg/l	NA		NA		ND	1.2	ND	1.2	ND	1	ND	0.4
Phosphorus (Total as P)	mg/l	NA		NA		0.9	0.01	0.03	0.01	0.02	0.01	0.1	0.06
Sulfate	mg/l	208	10	218	10	274	10	180	10	166	10	213	3.22
Aluminum	mg/l	NA		NA		1.4	0.05	0.2	0.05	ND	0.05	0.1	0.02
Barium	mg/l	NA		NA		0.064	0.005	0.06	0.005	0.061	0.005	0.06	0.0006
Boron	mg/l	NA		NA		0.07	0.05	0.1	0.05	0.11	0.05	0.12	0.03
Cobalt	mg/l	NA		NA		ND	0.01	ND	0.01	ND	0.01	0.0006	0.00005
Iron	mg/l	NA		NA		4.72	0.02	0.32	0.02	0.11	0.02	0.13	0.005
Magnesium	mg/l	77.7	5	88.1	0.1	NA		NA		NA		65	0.02
Molybdenum	mg/l	NA		NA		0.08	0.01	0.04	0.01	0.03	0.01	0.0325	0.0005
Manganese	mg/l	NA		NA		0.165	0.005	0.009	0.005	0.009	0.005	0.0017	0.0009
Tin	mg/l	NA		NA		ND	0.02	ND	0.02	ND	0.02	0.02	0.01
Titanium	mg/l	NA		NA		0.017	0.005	ND	0.005	ND	0.005	0.0014	0.001

Notes:

mg/L- milligrams per liter

NA- not analyzed

ND- not detected

MDL/RL- laboratory method detection limit/reporting limit

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Table D. Certain Hazardous Substances and Asbestos¹					
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
1.	Asbestos	<input type="checkbox"/>	<input type="checkbox"/>		
2.	Acetaldehyde	<input type="checkbox"/>	<input type="checkbox"/>		
3.	Allyl alcohol	<input type="checkbox"/>	<input type="checkbox"/>		
4.	Allyl chloride	<input type="checkbox"/>	<input type="checkbox"/>		
5.	Amyl acetate	<input type="checkbox"/>	<input type="checkbox"/>		
6.	Aniline	<input type="checkbox"/>	<input type="checkbox"/>		
7.	Benzonitrile	<input type="checkbox"/>	<input type="checkbox"/>		
8.	Benzyl chloride	<input type="checkbox"/>	<input type="checkbox"/>		
9.	Butyl acetate	<input type="checkbox"/>	<input type="checkbox"/>		
10.	Butylamine	<input type="checkbox"/>	<input type="checkbox"/>		
11.	Captan	<input type="checkbox"/>	<input type="checkbox"/>		
12.	Carbaryl	<input type="checkbox"/>	<input type="checkbox"/>		
13.	Carbofuran	<input type="checkbox"/>	<input type="checkbox"/>		
14.	Carbon disulfide	<input type="checkbox"/>	<input type="checkbox"/>		
15.	Chlorpyrifos	<input type="checkbox"/>	<input type="checkbox"/>		
16.	Coumaphos	<input type="checkbox"/>	<input type="checkbox"/>		
17.	Cresol	<input type="checkbox"/>	<input type="checkbox"/>		
18.	Crotonaldehyde	<input type="checkbox"/>	<input type="checkbox"/>		
19.	Cyclohexane	<input type="checkbox"/>	<input type="checkbox"/>		

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required 40 CFR chapter I, subchapter N or O.

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UPDES Permit No.		Facility Name		Outfall Number	
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Table D. Certain Hazardous Substances and Asbestos¹ continued					
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
20.	24-D (2,4-dichlorophenoxyacetic acid)	<input type="checkbox"/>	<input type="checkbox"/>		
21.	Diazinon	<input type="checkbox"/>	<input type="checkbox"/>		
22.	Dicamba	<input type="checkbox"/>	<input type="checkbox"/>		
23.	Dichlobenil	<input type="checkbox"/>	<input type="checkbox"/>		
24.	Dichlone	<input type="checkbox"/>	<input type="checkbox"/>		
25.	2,2-dichloropropionic acid	<input type="checkbox"/>	<input type="checkbox"/>		
26.	Dichlorvos	<input type="checkbox"/>	<input type="checkbox"/>		
27.	Diethyl amine	<input type="checkbox"/>	<input type="checkbox"/>		
28.	Dimethyl amine	<input type="checkbox"/>	<input type="checkbox"/>		
29.	Dinitrobenzene	<input type="checkbox"/>	<input type="checkbox"/>		
30.	Diquat	<input type="checkbox"/>	<input type="checkbox"/>		
31.	Disulfoton	<input type="checkbox"/>	<input type="checkbox"/>		
32.	Diuron	<input type="checkbox"/>	<input type="checkbox"/>		
33.	Epichlorohydrin	<input type="checkbox"/>	<input type="checkbox"/>		
34.	Ethion	<input type="checkbox"/>	<input type="checkbox"/>		
35.	Ethylene diamine	<input type="checkbox"/>	<input type="checkbox"/>		
36.	Ethylene dibromide	<input type="checkbox"/>	<input type="checkbox"/>		
37.	Formaldehyde	<input type="checkbox"/>	<input type="checkbox"/>		
38.	Furfural	<input type="checkbox"/>	<input type="checkbox"/>		

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Table D. Certain Hazardous Substances and Asbestos¹ continued					
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
39.	Guthion	<input type="checkbox"/>	<input type="checkbox"/>		
40.	Isoprene	<input type="checkbox"/>	<input type="checkbox"/>		
41.	Isopropanolamine	<input type="checkbox"/>	<input type="checkbox"/>		
42.	Kelthane	<input type="checkbox"/>	<input type="checkbox"/>		
43.	Kepone	<input type="checkbox"/>	<input type="checkbox"/>		
44.	Malathion	<input type="checkbox"/>	<input type="checkbox"/>		
45.	Mercaptodimethur	<input type="checkbox"/>	<input type="checkbox"/>		
46.	Methoxychlor	<input type="checkbox"/>	<input type="checkbox"/>		
47.	Methyl mercaptan	<input type="checkbox"/>	<input type="checkbox"/>		
48.	Methyl methacrylate	<input type="checkbox"/>	<input type="checkbox"/>		
49.	Methyl parathion	<input type="checkbox"/>	<input type="checkbox"/>		
50.	Mevinphos	<input type="checkbox"/>	<input type="checkbox"/>		
51.	Mexacarbate	<input type="checkbox"/>	<input type="checkbox"/>		
52.	Monoethyl amine	<input type="checkbox"/>	<input type="checkbox"/>		
53.	Monomethyl amine	<input type="checkbox"/>	<input type="checkbox"/>		
54.	Naled	<input type="checkbox"/>	<input type="checkbox"/>		
55.	Naphthenic acid	<input type="checkbox"/>	<input type="checkbox"/>		
56.	Nitrotoluene	<input type="checkbox"/>	<input type="checkbox"/>		
57.	Parathion	<input type="checkbox"/>	<input type="checkbox"/>		

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UPDES Permit No.		Facility Name		Outfall Number	
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Table D. Certain Hazardous Substances and Asbestos¹ continued					
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
58.	Phenolsulfonate	<input type="checkbox"/>	<input type="checkbox"/>		
59.	Phosgene	<input type="checkbox"/>	<input type="checkbox"/>		
60.	Propargite	<input type="checkbox"/>	<input type="checkbox"/>		
61.	Propylene oxide	<input type="checkbox"/>	<input type="checkbox"/>		
62.	Pyrethrins	<input type="checkbox"/>	<input type="checkbox"/>		
63.	Quinoline	<input type="checkbox"/>	<input type="checkbox"/>		
64.	Resorcinol	<input type="checkbox"/>	<input type="checkbox"/>		
65.	Strontium	<input type="checkbox"/>	<input type="checkbox"/>		
66.	Strychnine	<input type="checkbox"/>	<input type="checkbox"/>		
67.	Styrene	<input type="checkbox"/>	<input type="checkbox"/>		
68.	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	<input type="checkbox"/>	<input type="checkbox"/>		
69.	TDE (tetrachlorodiphenyl ethane)	<input type="checkbox"/>	<input type="checkbox"/>		
70.	2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	<input type="checkbox"/>	<input type="checkbox"/>		
71.	Trichlorofon	<input type="checkbox"/>	<input type="checkbox"/>		
72.	Triethanolamine	<input type="checkbox"/>	<input type="checkbox"/>		
73.	Triethylamine	<input type="checkbox"/>	<input type="checkbox"/>		
74.	Trimethylamine	<input type="checkbox"/>	<input type="checkbox"/>		
75.	Uranium	<input type="checkbox"/>	<input type="checkbox"/>		

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UPDES Permit No.		Facility Name		Outfall Number	
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Table D. Certain Hazardous Substances and Asbestos¹ continued					
	Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
		Believed Present	Believed Absent		
76.	Vandium	<input type="checkbox"/>	<input type="checkbox"/>		
77.	Vinyl acetate	<input type="checkbox"/>	<input type="checkbox"/>		
78.	Xylene	<input type="checkbox"/>	<input type="checkbox"/>		
79.	Xylenol	<input type="checkbox"/>	<input type="checkbox"/>		
80.	Zioconium	<input type="checkbox"/>	<input type="checkbox"/>		

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UPDES Permit No.	Facility Name	Outfall Number
Hazardous Substances		
1. Acetaldehyde	54. Benzoyl chloride	255. 2,4,5-T esters (2,4,5-trichlorophenoxy acetic acid esters)
2. Acetic acid	55. Benzyl chloride	256. 2,4,5-T salts (2,4,5-trichlorophenoxy acetic acid salts)
3. Acetic anhydride	56. Beryllium chloride	257. 2,4,5-TP acid (2,4,5-trichlorophenoxy propanoic acid)
4. Acetone cyanohydrin	57. Beryllium fluoride	258. 2,4,5-TP acid esters (2,4,5-trichlorophenoxy propanoic acid esters)
5. Acetyl bromide	58. Beryllium nitrate	259. TDE (tetrachlorodiphenyl ethane)
6. Acetyl chloride	59. Butylacetate	260. Tetraethyl lead
7. Acrolein	60. n-butylphthalate	261. Tetraethyl pyrophosphate
8. Acrylonitrile	61. Butylamine	262. Thallium sulfate
9. Adipic acid	62. Butyric acid	263. Toluene
10. Aldrin	63. Cadmium acetate	264. Toxaphene
11. Allyl alcohol	64. Cadmium bromide	265. Trichlorofon
12. Allyl chloride	65. Cadmium chloride	266. Trichloroethylene
13. Aluminum sulfate	66. Calcium arsenate	267. Trichlorophenol
14. Ammonia	67. Calcium arsenite	268. Triethanolamine
15. Ammonium acetate	68. Calcium carbide	269. Triethylamine
16. Ammonium benzoate	69. Calcium chromate	270. Trimethylamine
17. Ammonium bicarbonate	70. Calcium cyanide	271. Uranyl acetate
18. Ammonium bichromate	71. Calcium dodecylbenzenesulfonate	272. Uranyl nitrate
19. Ammonium bifluoride	72. Calcium hypochlorite	273. Vanadium pentoxide
20. Ammonium bisulfite	73. Captan	274. Vanadyl sulfate
21. Ammonium carbamate	74. Carbaryl	275. Vinyl acetate
22. Ammonium carbonate	75. Carbofuran	276. Vinylidene chloride
23. Ammonium chloride	76. Carbon disulfide	277. Xylene
24. Ammonium chromate	77. Carbon tetrachloride	278. Xylenol
25. Ammonium citrate	78. Chlordane	279. Zinc acetate
26. Ammonium fluoroborate	79. Chlorine	280. Zinc ammonium chloride
27. Ammonium fluoride	80. Chlorobenzene	281. Zinc borate
28. Ammonium hydroxide	81. Chloroform	282. Zinc bromide
29. Ammonium oxalate	82. Chloropyrifos	283. Zinc carbonate
30. Ammonium silicofluoride	83. Chlorosulfonic acid	284. Zinc chloride
31. Ammonium sulfamate	84. Chromic acetate	285. Zinc cyanide
32. Ammonium sulfide	85. Chromic acid	286. Zinc fluoride
33. Ammonium sulfite	86. Chromic sulfate	287. Zinc formate
34. Ammonium tartrate	87. Chromous chloride	288. Zinc hydrosulfite
35. Ammonium thiocyanate	88. Cobaltous bromide	289. Zinc nitrate
36. Ammonium thiosulfate	89. Cobaltous formate	290. Zinc phenolsulfonate
37. Amyl acetate	90. Cobaltous sulfamate	291. Zinc phosphide
38. Aniline	91. Coumaphos	292. Zinc silicofluoride
39. Antimony pentachloride	92. Cresol	293. Zinc sulfate
40. Antimony potassium tartrate	93. Crotonaldehyde	294. Zirconium nitrate
41. Antimony tribromide	94. Cupric acetate	295. Zirconium potassium fluoride
42. Antimony trichloride	95. Cupric acetoarsenite	296. Zirconium sulfate
43. Antimony trifluoride	96. Cupric chloride	297. Zirconium tetrachloride
44. Antimony trioxide	97. Cupric nitrate	
45. Arsenic disulfide	98. Cupric oxalate	
46. Arsenic pentoxide	99. Cupric sulfate	
47. Arsenic trichloride	100. Cupric sulfate ammoniated	
48. Arsenic trioxide	101. Cupric tartrate	
49. Arsenic trisulfide	102. Cyanogen chloride	
50. Barium cyanide	103. Cyclohexane	
51. Benzene	104. 2,4-D acid (2,4-dichlorophenoxyacetic acid)	
52. Benzoic acid		
53. Benzointrile		
	105. 2,4-D esters (2,4-dichlorophenoxyacetic acid esters)	
	106. DDT	
	107. Diazinon	
	108. Dicamba	
	109. Dichlobenil	
	110. Dichlone	
	111. Dichlorobenzene	
	112. Dichloropropane	
	113. Dichloropropene	
	114. Dichloropropene-dichloropropane mix	
	115. 2,2-dichloropropionic acid	
	116. Dichlorvos	
	117. Dieldrin	
	118. Diethylamine	
	119. Dimethylamine	
	120. Dinitrobenzene	
	121. Dinitrophenol	
	122. Dinitrotoluene	
	123. Diquat	
	124. Disulfoton	
	125. Diuron	
	126. Dodecylbenzenesulfonic acid	
	127. Endosulfan	
	128. Endrin	
	129. Epichlorohydrin	
	130. Ethion	
	131. Ethylbenzene	
	132. Ethylenediamine	
	133. Ethylene dibromide	
	134. Ethylene dichloride	
	135. Ethylene diaminetetracetic acid (EDTA)	
	136. Ferric ammonium citrate	
	137. Ferric ammonium oxalate	
	138. Ferric chloride	
	139. Ferric fluoride	
	140. Ferric nitrate	
	141. Ferric sulfate	
	142. Ferrous ammonium sulfate	
	143. Ferrous chloride	
	144. Ferrous sulfate	
	145. Formaldehyde	
	146. Formic acid	
	147. Fumaric acid	
	148. Furfural	
	149. Guthion	
	150. Heptachlor	
	151. Hexachlorocyclopentadiene	
	152. Hydrochloric acid	
	153. Hydrofluoric acid	
	154. Hydrogen cyanide	
	155. Hydrogen sulfide	
	156. Isoprene	
	157. Isopropanolamine	
	dodecylbenzenesulfonate	
	158. Kelthane	
	159. Kepone	
	160. Lead acetate	
	161. Lead arsenate	
	162. Lead chloride	
	163. Lead fluoborate	
	164. Lead fluorite	
	165. Lead iodide	
	166. Lead nitrate	
	167. Lead stearate	
	168. Lead sulfate	
	169. Lead sulfide	
	170. Lead thiocyanate	
	171. Lindane	
	172. Lithium chromate	
	173. Malathion	
	174. Maleic acid	
	175. Maleic anhydride	
	176. Mercaptodimethur	
	177. Mercuric cyanide	
	178. Mercuric nitrate	
	179. Mercuric sulfate	
	180. Mercuric thiocyanate	
	181. Mercurous nitrate	
	182. Methoxychlor	
	183. Methyl mercaptan	
	184. Methyl methacrylate	
	185. Methyl parathion	
	186. Mevinphos	
	187. Mexacarbate	
	188. Monoethylamine	
	189. Monomethylamine	
	190. Naled	
	191. Naphthalene	
	192. Naphtheneic acid	
	193. Nickel ammonium sulfate	
	194. Nickel chloride	
	195. Nickel hydroxide	
	196. Nickel nitrate	
	197. Nickel sulfate	
	198. Nitric acid	
	199. Nitrobenzene	
	200. Nitrogen dioxide	
	201. Nitrophenol	
	202. Nitrotoluene	
	203. Paraformaldehyde	
	204. Parathion	
	205. Pentachlorophenol	
	206. Phenol	
	207. Phosgene	
	208. Phosphoric acid	
	209. Phosphorus	
	210. Phosphorus oxychloride	
	211. Phosphorus pentasulfide	
	212. Phosphorus trichloride	
	213. Polychlorinated biphenyls (PCB)	
	214. Potassium arsenate	
	215. Potassium arsenite	
	216. Potassium bichromate	
	217. Potassium chromate	
	218. Potassium cyanide	
	219. Potassium hydroxide	
	220. Potassium permanganate	
	221. Propargite	
	222. Propionic acid	
	223. Propionic anhydride	
	224. Propylene oxide	
	225. Pyrethrins	
	226. Quinoline	
	227. Resorcinol	
	228. Selenium oxide	
	229. Silver nitrate	
	230. Sodium	
	231. Sodium arsenate	
	232. Sodium arsenite	
	233. Sodium bichromate	
	234. Sodium bifluoride	
	235. Sodium bisulfite	
	236. Sodium chromate	
	237. Sodium cyanide	
	238. Sodium dodecylbenzenesulfonate	
	239. Sodium fluoride	
	240. Sodium hydrosulfide	
	241. Sodium hydroxide	
	242. Sodium hypochlorite	
	243. Sodium methylate	
	244. Sodium nitrite	
	245. Sodium phosphate (dibasic)	
	246. Sodium phosphate (tribasic)	
	247. Sodium selenite	
	248. Strontium chromate	
	249. Strychnine	
	250. Styrene	
	251. Sulfuric acid	
	252. Sulfur monochloride	
	253. 2,4,5-T acid (2,4,5-trichlorophenoxyacetic acid)	
	254. 2,4,5-T amines (2,4,5-trichlorophenoxy acetic acid amines)	

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