

Official Draft Public Notice Version Date April 17, 2013

The findings, determinations and assertions contained in this document are not final and subject to changes following the public comment period.

**FACT SHEET STATEMENT OF BASIS
JORDANELLE SPECIAL SERVICE DISTRICT
UPDES PERMIT NUMBER: UT0022403
MAJOR INDUSTRIAL**

FACILITY CONTACTS

Dan Matthews
Manager Jordanelle SSD
(435) 333-0475

Shane Paddock
Treatment Manager
(435) 333-0475

Facility Name: Jordanelle Special Service District
Keetley Water Treatment Plant
P.O. Box 519
10500 North 1420 West
Heber City, Utah 84032

DESCRIPTION OF FACILITY

Jordanelle Special Service District (JSSD) maintains a non-operational silver, lead and zinc mine near Park City, Utah. The mine has been inactive since 1982. The SIC code for this inactive mine is 1031, the NAICS code is 21223 for lead and zinc ores, the SIC code is 1044 and the NAICS code is 21222 for silver ores. Currently, Jordanelle Special Service District treats the mine water to provide drinking water to the community. The SIC code is 4941 and the NAICS code is 22131 for water supply. The discharge point from the facility to the Jordanelle Reservoir is Outfall 001 which is located at latitude 40°38'03" and longitude 111°26'13".

The treatment consists of two Ondeo-Degremont Densedeg high-rate solids contact clarifiers. Raw mine water flows from the drain tunnel to a splitter box. It then flows into the two rapid mixers where lime addition occurs to raise the pH. The water is then drawn into the solid contact reactors through an axial flow turbine. Polymer is injected into the water on the downstream side of the axial flow turbine. Floc particles are sheared as they are drawn through the turbine. As particles reach a specific density, they are drawn through an up-flow chamber and then cascade into the thickener. It is in the thickener that settling occurs. Sludge is drawn from the thickener and recycled into the solids contact reactor to facilitate coagulation. Water is then discharged from the thickener into troughs where it flows to a conditioning chamber. If needed the pH is adjusted downward using carbon dioxide prior to being discharged from the facility to the settling pond and then to the Jordanelle Reservoir via Outfall 001.

DISCHARGE

DESCRIPTION OF DISCHARGE

The Jordanelle SSD has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the last 3 years of data is attached and there were no violations.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	The effluent is discharged from the southeast corner of the settling pond above the high water mark of the Jordanelle Reservoir. Located at latitude 40° 38' 03" and longitude 111° 26' 13".

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge flows into Jordanelle Reservoir. The Jordanelle Reservoir is classified as 1C, 2A, 3A, and 4 according to the Utah Administrative Code (UAC) R317-2-13;

Class 1C	-Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.
Class 2A	-Protected for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.
Class 3A	-Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
Class 4	-Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), the daily maximum for total recoverable mercury and the maximum monthly average for total recoverable lead are based on 40CFR440.102(a). The limitations for copper, zinc, the daily maximum for lead, the maximum monthly average for mercury, and aluminum are based on water quality standards and the wasteload analysis. The limits for pH are based on current Utah Secondary Treatment Standards (*UAC R317-1-3.2*). Mass based limit are taken from the WLA. The oil and grease is based on best professional judgment (BPJ). The permit effluent limitations are:

Parameter	Maximum Monthly Average	Daily Minimum	Daily Maximum
TSS, mg/L	20	NA	30
Total Recoverable Copper, mg/L	NA	NA	.053
Total Recoverable Copper lbs/day	NA	NA	3.4
Total Recoverable Mercury, mg/L	0.00017	NA	0.002
Total Recoverable Mercury, lbs/day	NA	NA	0.5
Total Recoverable Lead, mg/L	0.03	NA	0.35
Total Recoverable Lead, lbs/day	2.1	NA	NA
Total Recoverable Zinc, mg/L	NA	NA	0.54
Total Recoverable Zinc, lbs/day	NA	NA	35.1
Total Recoverable Aluminum, mg/L	1.36	NA	2.43
Total Recoverable Aluminum, lbs/day	87.7	NA	157.3
Oil & Grease, mg/L	NA	NA	10
pH, Standard Units	NA	6.5	9

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are shown in the table below. The permit will require reports to be submitted monthly and quarterly, as applicable, on Discharge 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 IV.G)*, and submitted by NetDMR, or to the Division of Water Quality.

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Daily	Recorder	MGD
TSS	Monthly	Grab	mg/L
Total Recoverable Copper	Quarterly	Composite	mg/L
Total Recoverable Mercury	Yearly	Composite/Grab	mg/L
Total Recoverable Lead	Quarterly	Composite	mg/L
Total Recoverable Zinc	Monthly	Composite	mg/L
Total Recoverable Aluminum a/	Quarterly	Composite	mg/L
Oil & Grease b/	Weekly	Visual/Grab	mg/L
WET, Chronic Biomonitoring	Quarterly	Composite	Pass/Fail
pH	Daily	Grab	Standard Units

a/ Sample required only if alum or aluminum additives are added.

b/ Monitoring and reporting the results of a laboratory analyzed sample for oil & grease is not required unless the visual sample produces a positive result.

WASTE LOAD ANALYSIS AND ANTIDegradation REVIEW

Effluent limitations are also derived using a waste load analysis (WLA), which is appended to this statement of basis as ADDENDUM. The WLA incorporates Secondary Treatment Standards, Water Quality Standards, Antidegradation Reviews (ADR), as appropriate 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 the UPDES permit development, a WLA and ADR were performed. An ADR Level I review was performed and the conclusion was that an ADR level II review was required, because the receiving water or downstream water is a 1C drinking water source. A copy of the ADR Level II is appended to this document.

STORM WATER

According to Utah Administrative Code (UAC) R317-8-3.9 this facility will not be required to maintain coverage under the UPDES multi-sector general permit for discharges associated with industrial activity, permit number UTR000000, sector G (Mineral Industry, SIC Major Group 10). This is because the storm water will not likely come in contact with or be contaminated by an overburden, raw material, intermediate product, finished product, by product, or waste product located on the site of the operation.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring)*. 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.*

Since Jordanelle SSD is classified as a major industrial discharger, the renewal permit will require whole effluent toxicity (WET) testing. This testing will consist of chronic toxicity testing using one species, *Ceriodaphnia dubia*, quarterly as detailed in the permit. WET testing of *Pimephales promelas* (fathead minnow) may be required by the Director if the permittee significantly changes its treatment system. The permit will contain the standard requirements for accelerated testing upon failure of a WET test, and a Preliminary Toxicity Investigation (PTI) and Toxicity Reduction Evaluation (TRE) as necessary.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Matthew Garn, Environmental Engineer
Utah Division of Water Quality,
January, 2013

PUBLIC NOTICE

Began:
Ended:
Public Noticed in:

DRAFT PN