STATEMENT OF BASIS

Ground Water Discharge Permit UGW490011
Tintic Consolidated Metals, LLC
November 2023

Introduction

The Division of Water Quality (DWQ) under the authority of the Utah Ground Water Quality Protection Rules[1](Ground Water Rules) issues ground water discharge permits to facilities which have a potential to discharge contaminants to ground water[2]. As defined by the Ground Water Rules, such facilities include mining operations[3]. The Ground Water Rules are based on an anti-degradation strategy for ground water protection as opposed to non-degradation; therefore, discharge of contaminants to ground water may be allowed provided that current and future beneficial uses of the ground water are not impaired and the other requirements of Rule 317-6-6.4A are met[4]. Following this strategy, ground water is divided into classes based on its quality[5]; and higher-quality ground water is given greater protection[6] due to the greater potential for beneficial uses.

DWQ has developed permit conditions consistent with R317-6 and appropriate to the nature of the mined materials, facility operations, maintenance, best available technology[7] (BAT) and the hydrogeologic and climatic conditions of the site, to ensure that the operation would not contaminate ground water.

Basis for Permit Issuance

Under Rule 317-6-6.4A, DWQ may issue a ground water discharge permit if:

1) The applicant demonstrates that the applicable class TDS limits, ground water quality standards protection levels and permit limits established under R317-6-6.4E will be met;
2) The monitoring plan, sampling and reporting requirements are adequate to determine compliance with applicable requirements;
3) The applicant is using best available technology to minimize the discharge of any pollutant; and

1 Utah Admin. Code Rule 317-6
2 https://deq.utah.gov/ProgramsServices/programs/water/groundwater/docs/2008/08Aug/GWQP_PermitInfo.pdf
3 Utah Admin Code Rule 317-6-6.1A
4 Preamble to the Ground Water Quality Protection Regulations of the State of Utah, sec. 2.1, August, 1989
5 Utah Admin. Code Rule 317-6-3
6 Utah Admin. Code Rule 317-6-4
7 Utah Admin. Code Rule 317-6-1(1.3)

4) There is no impairment of present and future beneficial uses of the ground water.

Specifics of the Facility and permit are further described below.

Facility Location and Description

The Facility, Tintic Operations, is located in Utah County approximately 12 miles ESE of Eureka (Figure 1, pg. 3 of the Ground Water Discharge Permit (Permit) Application (Application)).

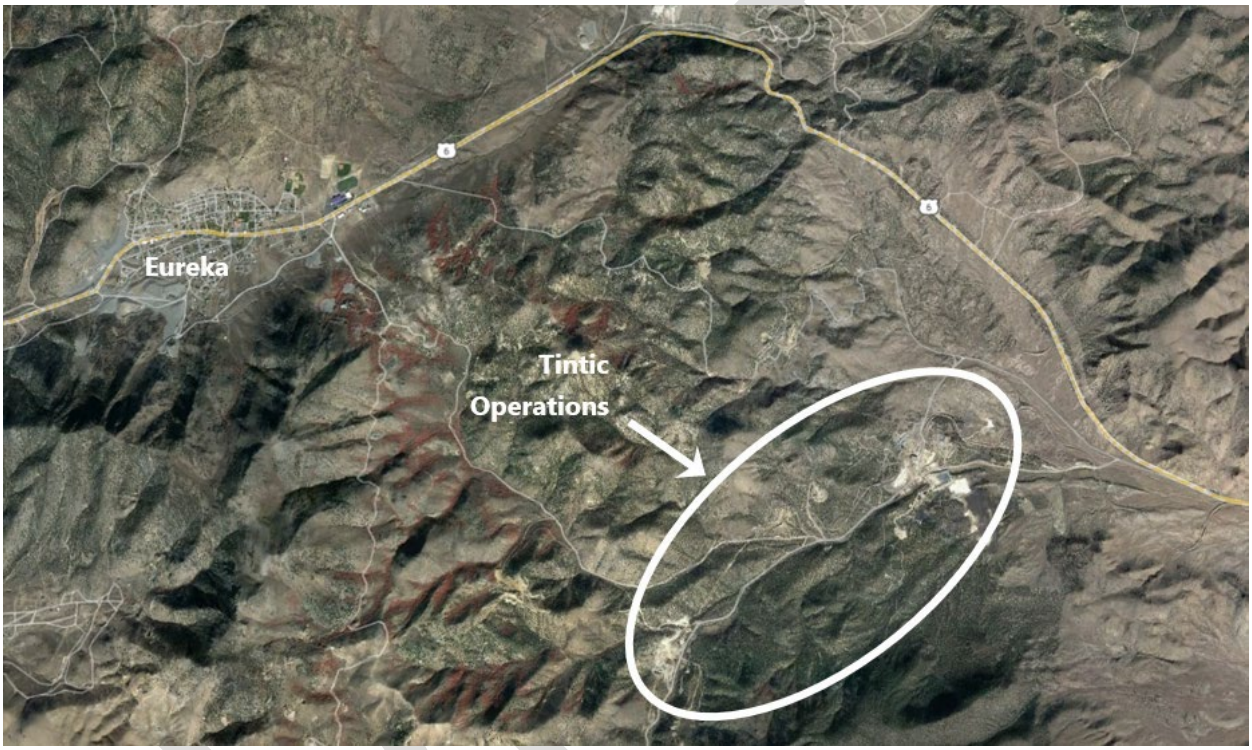

Figure 1: Facility Site Location

The Facility is a gold and silver mining and processing operation. Mining will consist of underground operations using a mix of conventional and mechanized drill and blast methods, as further detailed in the Facility's Utah Division of Oil, Gas, and Mining ("DOGM") NOI. Ore will be extracted from the underground operations and temporarily stored in designated Transfer Point and Ore Storage locations prior to processing in the Mill Facility. Waste rock will either be used for backfilling voids generated by ore extraction or placed in the designated aboveground Waste Rock Storage Facility. The processing operation will consist of two separate circuits:

• Crushing, grinding and classification, vat and agitated tank leaching processing, carbon recovery and stripping with metal recovery, dewatering, and cyanide destruction resulting in thickened neutralized tailings;

• Cyanide heap leaching on the (to be) converted, permitted Pilot-Scale Tailings Pad, and carbon recovery and stripping with metal recovery.

There are two distinct operational areas that will be subject to the Ground Water Discharge Permit: (1) the Transfer Point and Waste Rock Facility Area; and (2) the Ore Storage and Ore Processing Area. Figure 2 illustrates the location of the two proposed operational areas within the greater mine site.

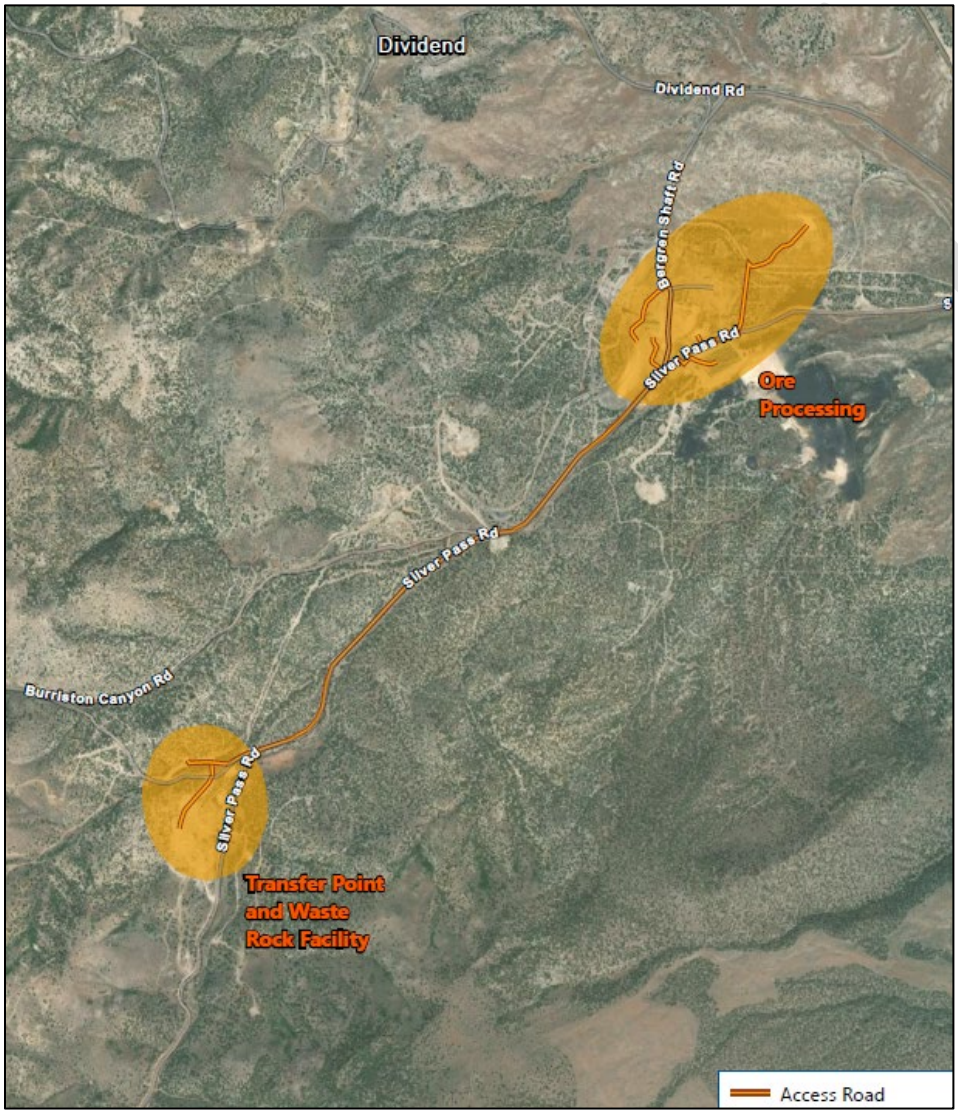

Figure 2: Tintic Operational Areas

The estimated life of mining operations is 7 years.

Standard Industrial Classification (SIC) Codes

1041 – Gold Ores
Establishments primarily engaged in mining gold ores from lode deposits or in the recovery of gold from placer deposits by any method. In addition to ore dressing methods such as crushing, grinding, gravity concentration, and froth flotation, this industry includes amalgamation, cyanidation, and the production of bullion at the mine, mill, or dredge site.

1044 – Silver Ores
Establishments primarily engaged in mining, milling, or otherwise preparing silver ores. The production of bullion at the mine or mill site is included.

Recent Permitting and Activity

This Ground Water Discharge Permit will replace the existing Permit by Rule (PBR) issued by DWQ on July 28, 2021 (DWQ-2021-013316) for pilot scale construction and operation at the current site. Since the facility will now move to larger (and as contemplated and described in the PBR), full scale operations, a discharge permit is required.

Nevertheless, while the PBR describes the pilot scale nature of the 2021 activity (approximately 30,000 tons of ore) as part of the permit determination, the other the primary base for the PBR remain the same as follows:

- Ground water, where encountered beneath the Tintic operations, is saline, geothermal Class III-type ground water over 1,000 feet below surface.
- There are no perennial water bodies (seeps, springs, ponds, etc.) within a one-mile radius of the proposed activities.

Historical Operations

The area for this Permit is part of the historic East Tintic Mining District a subdistrict of the larger Tintic Mining area. As such, the area has had significant mining within the district and at the current site which was previously operated by Kennecott Utah Copper as the Sunshine Mining Company.

The website mindat.org (https://www.mindat.org/loc-26744.html) provides a good historical summary of the east mining district:

> *The East Tintic district, in Utah County 30 mi southwest of Provo, is a subdistrict of the greater Tintic mining area, the second largest district in Utah. East Tintic is a very large Ag-Pb-Au producer and was productive from the early 1900s to the 1970s. The district is about the fifth largest metal mining district in Utah. Total district metal production at*

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modern metal prices is estimated at $3.14 billion. Nearly 6 million tons of ore have been mined from the East Tintic district averaging recovered grades of about 435 ppm Ag, 3.77 ppm Au, 8.5% Pb, 3.0% Zn, and minor amounts of Cu as well as by-product Cd, Bi, and Mn (Krahulec and Briggs, 2006). The district is the third largest Zn producer in Utah. The Burgin Pb-Zn-Ag and the Tintic Standard Ag-Pb underground mines are the two most productive operations.

and the entire Tintic district (https://www.mindat.org/loc-4192.html):

The district is well known throughout the world for its substantial production values of lead, silver, gold, copper, and zinc. This production came mainly from an estimated 120 large and small mines. From 1869 to 1987, the district produced 19.1 million tons of ore containing 2.77 million ounces of gold, 272 million ounces of silver, 22.8 billion pounds of lead, 450 million pounds of zinc, and 254 million pounds of copper. With these totals, the Tintic mining district is the second leading non-ferrous metal producer in the state behind the Bingham mining district. All recent production has been from the North Lily mine dump and the Trixie and Burgin mines, in the eastern part of the district.

The district is divided into two areas: (1) the Main Tintic in Juab and Utah Counties, which includes the area around the towns of Eureka, Mammoth, and former town site of Silver City; and (2) the East Tintic, also in Juab and Utah Counties, which includes the area around the former town sites of Dividend and Homansville.

The Tintic mining district was discovered in 1869 by George Rust.

Hydrogeology

The facility area covered by the Permit lies within the Geothermal area of the east Tintic mining district. As noted above the depth to ground water is more than 1,000 feet and typically between 5,000 and 10,000 mg/L TDS with one or more contaminants above the drinking water standards. Ground water in the deep bedrock greater than 1,000 feet is classified as **Class III- Limited Use Ground Water**.

Additionally-

- There are no drinking water wells or sources within a one-mile radius of the operations.
- The semi-arid climate only produces 10.5 inches of precipitation and evaporation rates far exceed the amount of precipitation.
- As a result of the dry climate, there are no alluvial valley fill or shallow bedrock aquifers in the facility area that could potentially be affected by discharge from the facility.
- Deep ground water in the Tintic Mountains is not used for any purpose other than occasional mining usage.

Best Available Technology

While the naturally existing conditions at the site make any discharge to ground water difficult, the permittee has proposed a mix of contact water collection ditches routed to a lined Collection Pond for the Ore Transfer Area and Waste Rock Facility, and double lined ponds with leak detection systems for process waters associated with the Ore Processing area. All of the facilities will be constructed to provide full containment for both storm (contact water) and process water to ensure no discharge.

The full design, construction and specifications of the lined facilities are included in the Construction Permit included as Appendix A and summarized in Part I.B of the discharge permit.

Permit Conditions

Best Available Technology (BAT) is used to maintain compliance with ground water protection levels through no discharge. This requires no discharge of drainage pad and pond water from the facility. Maintenance of BAT will be demonstrated by the absence of drainage pad water off the pads and monitoring of the leak detection layer leak rates in compliance with the calculated allowable leak rate (ALR) and maximum allowable head (MAH). The permittee is required to monitor the facility and compliance points (Compliance Monitoring Part I.C) in accordance with the monitoring requirements and, under normal operations, submit reports to DWQ quarterly.

Any spills, releases, or upset conditions must be reported to DWQ within 24 hours or to the UDEQ spill hotline. Requirements for reporting non-compliance and probable non-compliance are contained in Part I of the permit.

Compliance Schedule

The permittee must submit the items in Part I.F of the permit by the required dates.

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