

**STATEMENT OF BASIS**  
**Barrick Mercur Mine Reclamation Project**

Closure Phase Period Renewal  
Ground Water Quality Discharge Permit No. UGW450002

**March 15, 2024**

**Basis For Permit Renewal**

Barrick Resources (USA), Inc. operated gold mining and processing facilities at Mercur from 1982 through 1998. During this period groundwater quality discharge permit UGW450001 was obtained for Valley Fill Leach Area 3 (VFL3) and UGW450002 was obtained for the Reservation Canyon Tailings Impoundment. Also during that period, the Division issued Stipulation and Consent Order Docket No. GW90-03-A to resolve operational issues associated with Valley Fill Leach Area 2 (VFL2). Effective April 1998, the mine entered full closure status.

UGW450001 expired in December 1999. The Consent Order for VFL2 remained in effect during the model demonstration period through 2001. UGW450002 will expire in April 2018. In light of the closure status of the mine and the inter-relationships of the facilities discussed above, consolidating the Consent Order stipulations and both groundwater permits into a single enforceable regulatory tool in 2000 was deemed appropriate. This approach incorporated into UGW450002 the applicable terms and conditions of UGW450001. The permit also referenced the terms and conditions of the Consent Order for VFL2. UGW450001 terminated with the effective date of permit modification to UGW450002 in 2000.

The Permittee maintained a record of compliance with the conditions of permit UGW450001, including the VFL2 Consent Order, through the previous permit term prior to incorporation into UGW450002 in August 2000. The Permittee has also maintained a record of compliance with the conditions of UGW450002 both prior and subsequent to the incorporation of UGW450001 and the VFL2 Consent Order into UGW450002 in August 2000. No adverse effects to ground water, the environment or public health are known to have occurred due to the operation of VFL3, VFL2, or the tailing impoundment during this period. Barrick will continue to transfer neutralized VFL3 draindown water and tailings impoundment incidental seepage to the East Bay (a lined facility integral to the Reservation Canyon Tailings Impoundment) through the end of the closure period as needed until such time that treatment of the east bay water has met the approved goals and objectives for discharge to an onsite location under Permit UGW450002. Barrick has completed the cessation of operations and reclamation of VFL3 associated with this permit as well as the complete closure of VFL2. Permit UGW450001 is incorporated into UGW450002 on the basis that: 1) all ground water protection levels will continue to be met; 2) the sampling, monitoring and reporting procedures are deemed adequate to determine compliance with the applicable requirements; 3) there is no expected impairment of present or future beneficial uses of ground water; and 4) final closure of VFL3 will be completed under the provisions of UGW450002.

## I. DESCRIPTION OF FACILITIES

Valley Fill Leach Area 3 Description - Barrick Mercur Mine operated (VFL3) for the extraction of gold using cyanide solutions from January, 1991 through 1997. The facility is now reclaimed and awaiting final, permanent closure. The facility is located in the SW1/4, SW1/4, Sec 32, T.5S, R3W and the NW1/4, Sec 5, T.6S., R.3W in Mercur Canyon in the southern Oquirrh Mountain range of Tooele County. The facility is limited to one cell approximately 1,700 feet long and 750 feet wide. At the end of the facility's life it contained approximately 5 million tons of spent heap leach ore with an average depth of 150 feet. The heap was neutralized during 1997 and covered during 1998. In 1997, a vertical solution dewatering well was put in place to pump in concert with the pumping cistern the remaining fluids from this leach area and transport via pumping and piping to the East Bay lined cell within the Reservation Canyon Tailing Impoundment. After the free draining fluids in VFL3 achieve model-predicted flow rates, the wells will be removed and final closure will be complete. Residual waters have been modeled *de minimis* as to probable impact to ground water at the property boundary.

Reservation Canyon Tailing Impoundment Facility Description - Barrick operated a tailing impoundment at the Mercur Mine for the disposal of tailings from the beneficiation and processing of gold from its gold milling operation. The tailing impoundment is located in Reservation Canyon in the southern Oquirrh Mountain range on the Tooele/Utah County line in Section 5 of Township 6 South and Range 3 West Salt Lake Base and Meridian. The tailing facility consists of a saddle dam, main dam, upstream levee, internal East Bay lined cell, approximately 27 million tons of deposited mill tailing, and all drains and external containment ponds associated with the main dam and saddle dam. The tailing treatment system is no longer in use as the milling operations have been dismantled and removed.

Valley Fill Leach Area No. 2 Description - Barrick Mercur Mine operated VFL2 for the extraction of gold using cyanide solutions. The facility was closed in July 1993, was neutralized in September 1994, and covered by November 1995. The facility remains subject to the conditions of Stipulation and Consent Order now contained in Permit UGW450002. Those conditions remaining are ground water monitoring and dewatering of the leach pad. The facility is located in the NE1/4, Sec 8, T.6S, R3W and the SE1/4, Sec 5, T.6S., R.3W in the saddle between Manning and Mercur Canyon in the southern Oquirrh Mountain range of Tooele County. The facility is limited to one cell approximately 1200 feet long and 500 feet wide. Final cover placement on VFL2 was completed in September 1995. During 1998, an infiltration manhole was installed through the cover to accommodate the infiltration of incidental area flows and seepage in Manning Canyon. Barrick intends to grout the leakage collection pipe closed, and reclaim the leakage collection system area. Barrick completed the 5-year post-closure monitoring of the leakage collection system in April 2001 and demonstrated that post-closure monitoring results met previous modeled predictions for the system and drilled out the VF2 liner. Residual waters have been modeled *de minimis* as to probable impact to ground water at the property boundary.

## II. GROUND WATER

Class - Based on the total dissolved solids data from eleven monitoring wells at the site the ground water is defined as both Class IA and Class II. The average dissolved solids values from the wells range from 345 mg/l to 2,124 mg/l.

Background - When greater than 50% of the background samples for a particular constituent were detectable, background was determined by estimating the mean and standard deviation of all background samples.

Protection Levels - Class IA is pristine ground water. Class II ground water is protected for use as drinking water or other similar beneficial use by the Ground Water Quality Protection Regulations, UACR317-6. Protection Levels are determined based on the criteria of UACR317-6.4 taking into account naturally occurring degradation in accordance with UACR317-6-6.10.

Ground Water Monitoring - The Permittee has installed eleven monitoring wells at the site. Dry wells are not used as compliance monitoring points under this permit. Wells MW-1, MW-2, MW-9, MW-10, MW-11, MW-13, MW-15, MW-16, MW-17, MW-18, and MW-19 will be used as compliance monitoring wells. These wells will be monitored for metals, inorganic ions, pH, cyanide, nitrate, nitrite, ammonia and total dissolved solids. Routine monitoring will be on a semiannual basis. Reporting will be on a semiannual basis.

## III. CLOSURE AND RECLAMATION

Permanent closure and final reclamation of the VFL3 and the Reservation Canyon tailing impoundment was initiated in 1998 as part of a mine-wide closure. Under previous versions of these permits, permanent closure and final reclamation requirements that are protective of ground water were incorporated. These include the following activities that have been implemented.

### TAILINGS IMPOUNDMENT

- Placement of perforated drainage pipes with a drain gravel cover in the concrete drainage aprons, encapsulating the gravel drains with filter fabric, and covering of drains with subsoil and top soil.
- Covering and re-vegetative seeding of the downstream embankments of the Main Buttress and Levee Buttress with a minimum one-foot thick layer of subsoil and a minimum one-foot thick layer of topsoil.
- Covering and re-vegetative seeding of the area between the Levee Buttress and the Saddle Dam

- Design and construction of a storm water diversion channel through the Saddle Dam to permit free drainage of storm water that falls between the Levee Buttress and the Saddle Dam.
- Re-grading crest height of the Buttress Embankment rock fill onto the tailings beach leaving a normal six-foot high interim rock fill berm above the tailings surface for storm water control and freeboard.
- Placement of cover system over the tailing surface.
- Installation of an incidental area flow and seepage pipeline connection to an infiltration manhole in the Valley Fill Leach Area No. 2 facility.
- Upgrading existing, and construction of additional interim storm water diversion channels.

#### VALLEY FILL LEACH AREA 3

- Dismantling and removal of process facilities.
- Implementation of permanent closure and final reclamation by re-grading, re-contouring, shaping, placement of a soil cover system (minimum 3 feet of subsoil and minimum 1 foot of top soil) and re-vegetative seeding of the Valley Fill Leach Area No. 3 facility.

#### VALLEY FILL LEACH AREA 2

- Dismantling and removal of process facilities.
- Completion of contouring, shaping, placement of a soil cover system (minimum 3 feet of subsoil and minimum 1 foot of top soil) and re-vegetative seeding of the Valley Fill Leach Area No. 2 facility.