HERMOSA
TAILINGS FACILITY INFORMATION

Tailings Storage Facility (TSF) Construction History (GISTM Requirement 15.1 B1 & B5)

The Hermosa Project is located in Santa Cruz County, approximately 50 miles (80 km) southeast of Tucson, Arizona, in the United States. The project is situated in the Patagonia Mountains of southern Arizona. Forest vegetation in this area generally consists of juniper, Mexican pinyon, and mesquite trees with several different species of grasses and shrubs. Area elevations range from approximately 4,800 to 5,300 feet above mean sea level (1,400 to 1,600 meters above mean sea level). The main drainages in the area are Alum Gulch, which flows northwest and Harshaw Creek, which flows northeast. Both drainages empty into Sonoita Creek. Alum Gulch and Harshaw Creek are ephemeral drainages that experience flows during the summer monsoon precipitation events. Patagonia is the nearest town and is located five miles (nine kilometers) by direct line from the Hermosa Project.

The Hermosa Project has one existing dry stack TSF, which is located on South32 Hermosa private land. This TSF was constructed as the Tailings and Potentially Acid Generating (PAG) Material Remediation, Placement and Storage Project, and was completed under the State of Arizona Voluntary Remediation Program (VRP). Construction commenced in 2018 and was completed in 2020. The focus of the VRP project was to construct a geomembrane lined TSF for the remediation of four historic tailings piles from an old mining operation. The historic tailings piles were remediated using standard earthworks (fill placement) methodology where the historic tailings were moved to the new lined TSF and compacted in one foot lifts as part of the VRP project. The end product is a dry stack TSF for containment of material that is placed as an engineered fill within the geomembrane lined facility. Drainage from the TSF is collected in a dedicated, double-lined, Underdrain Collection Pond and then treated in Water Treatment Plant #1 to meet applicable surface and groundwater standards prior to reuse or discharge to the environment. The facility currently stores approximately 1,200,000 cubic yards (900,000 m^3) of historic tailings, waste rock and other permitted materials.

TSF1

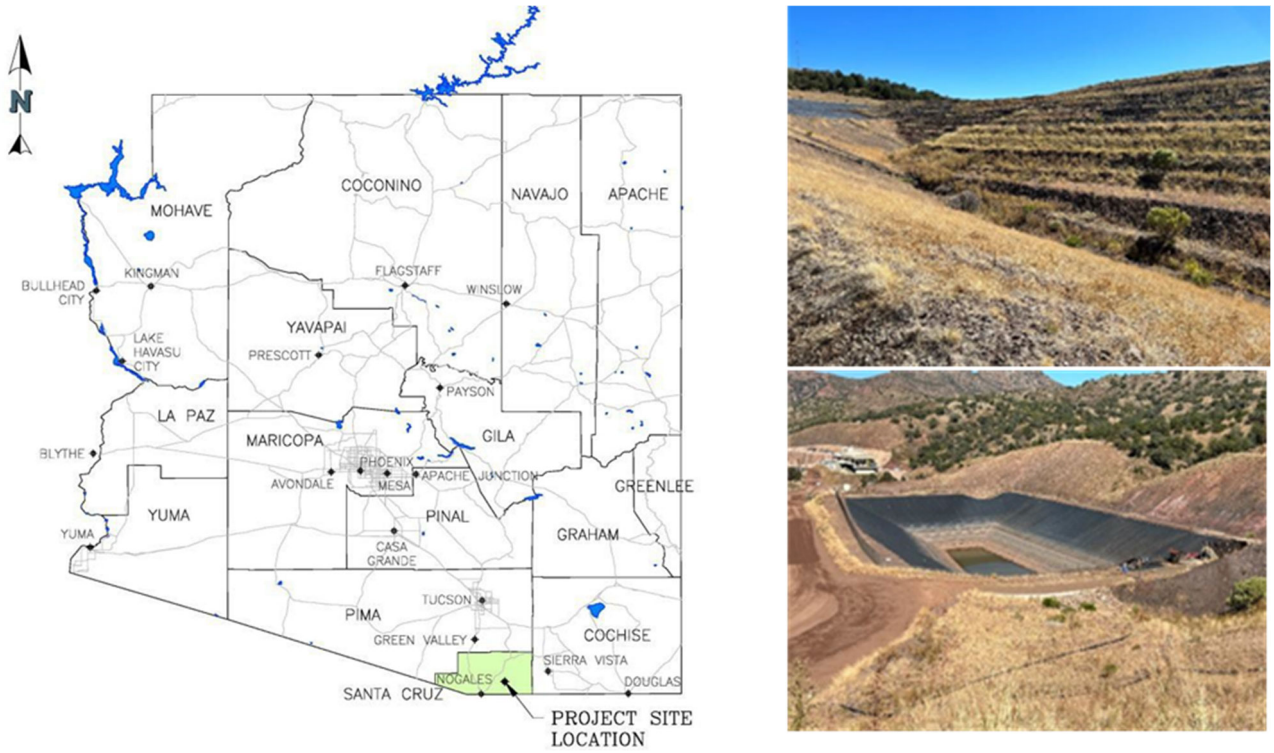

Figure 1: Existing TSF (TSF1)

A summary of the existing TSF construction follows:

Description	Year	Method	Height [toe to crest]	Reduced Level (RL) [Mine datum]
Existing TSF	2018	Dry stack	98 ft (30 m)	5118 ft (1,560 m)

Table 1: Existing TSF (TSF1) Construction History

New TSF Description (GISTM Requirement 15.1 A1)

An expansion to the existing TSF, referred to as TSF1, is planned as part of the transition to an operating mine. The Hermosa Project includes a proposed underground mining operation from which tailings will be filtered and mechanically placed in TSF1. In addition, potentially acid generating (PAG) waste rock reporting to the surface will be stored within TSF1 as well as other miscellaneous permitted materials. Similar to the existing TSF, the TSF1 expansion will be geomembrane lined and the tailings will be spread in one foot (0.3 meter) lifts, manipulated via discing to reduce moisture content when necessary, and compacted similar to an engineered fill. The TSF1 expansion is located on South32 Hermosa private land, is designed with a maximum stacking height of 243 feet (74 meters) and provides approximately 6.9 million cubic yards (5.3 million cubic meters) of dry stacked filtered tailings and PAG waste rock storage capacity.

TSF2 is the second TSF planned to be constructed on National Forest System Lands near the Hermosa Project's existing TSF (TSF1). The TSF2 design (geomembrane lined) and planned operations (compaction in one foot lifts) are very similar to TSF1. TSF2 is designed with a maximum stacking height of 358 feet (109 meters), providing an additional 25.8 million cubic yards (19.7 million cubic meters) of storage capacity for dry stack filtered tailings, waste rock, and other miscellaneous materials.