Çöpler Tailings Storage Facility (TSF) Summary

The Çöpler Tailings Storage Facility (TSF) became fully operational the last quarter of 2018. This Facility is intended to store mine waste (tailings), that are comprised of crushed rock particles suspended in water. This waste material is the result of the extraction process where gold and other metals of interest are removed from the ore. Tailings are treated and neutralized before their disposal into the TSF, resulting in a Class-II (non-hazardous) waste, as defined in Turkish regulations.

Anagold is aware of the importance of safe design and management of TSFs. Following internationally accepted best practices for tailings management, the Çöpler TSF has been developed to address any potential risk to the human health or the environment by means of its design, construction, operations, and reviews and audits.

Design: The Çöpler TSF has been designed to follow both Turkish national requirements and tailings dam guidelines from the World Bank, the Canadian Dam Association (CDA), the Mining Association of Canada (MAC), among others.

- Designed by an external, qualified consulting firm with extensive experience in TSFs around the world.
- Downstream raise method: The most conservative method for conventional tailings dam. Each raise is built buttressing the prior one.
- Fully lined: Triple layered system that covers the basin and TSF embankment, comprised of 50 cm of a low permeability soil, overlain by a Geosynthetic Clay Liner (GCL) and an HDPE geomembrane that prevents any seepage from entering the native ground.
- The design allows to withstand extreme rain events and earthquakes of large magnitude without significant damage or releasing tailings to the environment. Numerical simulations for these scenarios were developed by expert consultants and incorporated into the design criteria.
- No effluents are discharged to the environment. All recovered water within the tailings storage system is captured and reclaimed.
- Designed for closure: The closure of the TSF is incorporated early into the design process and updated as required, to facilitate the transition to reclamation and long-term monitoring at the end of the life of mine.

Construction: The quality of construction is key to ensure that the facility performs as expected.

- Incrementally raised: small raises are built as the requirement for storage capacity increases over the life of mine.
- Built with locally sourced engineered materials that ensure maximum dam stability and redundant systems to capture any potential seeps.
- All construction materials are subject to quality controls to verify adherence to the design specifications.
- Construction is executed by a qualified contractor that conducts a Quality Control (QC) process, including sampling of materials, topographic control, and laboratory tests.
- The contractor is supervised by the designer firm in a Quality Assurance (QA) process, reviewing the adequacy of the construction methodologies and controls and certifying that the facility is being constructed in accordance with the design intent. The Designer has a full-time representative onsite.
- Construction supervision and management is conducted by Anagold.

Operations: Operation of the TSF is thoroughly documented and closely monitored, with environmental, health and safety, and stability indicators that measure adherence to pre-established optimal values.

- Operations in accordance with a Corporate Tailings Management System, performance indicators, a risk management plan, and the design intent at all times.
- An Operations, Maintenance and Surveillance (OMS) manual has been developed to thoroughly document the day-to-day operation of the facility. The manual allows for a risk-informed decision-making process and monitoring the correct performance of operation activities.
- Planned deposition: Deposition of tailings is planned along with the process plant team according to a tailings deposition plan.
- Environmental monitoring: groundwater and surface water samples are tested on a regular basis to verify that their quality parameters are within allowable limits and are not impacted by mining activity.
- Geotechnical Monitoring: The dam and its foundation is monitored through geotechnical instruments to measure pore pressure, flows, displacements and ground motions to confirm the stability of the structure.

Review and Assurance: design, construction, operation, monitoring and closure plan for the Çöpler TSF are subject to strict quality control and quality assurance processes, independent reviews by third parties, and audits by the Ministry of Environment, Urbanization and Climate Change of Republic of Turkey (“Ministry”).

- The designer company appoints an Engineer of Record responsible for recommendations related to design, operations, and closure. The EOR conducts a yearly Dam Safety Inspection of the TSF.
- Anagold has designated an Independent Review Board of three internationally renowned subject matter experts to conduct a yearly review of the TSF design, construction, operations, and closure plan.
- A third-party qualified engineering company conducts a thorough Dam Safety Review every a few days, that includes an independent design review.
- The TSF design was reviewed and approved by the Ministry.
- Çöpler has made significant progress towards compliance the GISTM standards, the strictest tailings management standard published up to date.