

Reclamation

- Tailings Return/Placement
- Tailings Contouring to mimic per-mining topography
- Topsoil Return
- Planting

2.1.3 Site Preparation

To initiate mining activities, the project area will be delineated by survey markers and flagging in the field. A pre-mining survey based off of LiDAR will be used to create a topographic surface that will serve as a guide for design elevations for all post-mining reclamation. All merchantable timber will be harvested prior to mining activities. Timber will be harvested on average 4 to 6 months prior to mining. Timber that is not merchantable and timber scraps will be removed by Twin Pines and all areas within the limits of clearing and mining will be root raked, windrowed, and stockpiled for use during the reclamation process.

After the area has been cleared; the permanent processing facilities and infrastructure will be constructed/installed along with the berms, stormwater ponds, and other best management practices for sediment control. The berms will be constructed along the perimeter of the disturbed area to mitigate erosion and contain stormwater. Generally, 6 inches of topsoil within each mining area will be removed by heavy equipment and transported to the berms/topsoil storage piles around the perimeter of the mining area. Additionally, silt fencing and hay bales will also be utilized in appropriate locations for additional erosion control.

The topsoil storage piles/mining perimeter berms will serve to prevent stormwater runoff and muddy water within the active cut from leaving the site as well as preserve "seed banks" for native vegetation and a planting medium for later reclamation. Topsoil removal will be conducted two to six months in advance mining activities. The topsoil storage piles will be stabilized with an internal three horizontal to one vertical (3H:1V slope) and an external four horizontal to one vertical (4H:1V) slopes and seeded to prevent erosion. As noted previously, silt screens and hay bales will be utilized along the outside of the topsoil storage piles to control post construction erosion.

The permanent processing plants and conveyor systems, which are discussed in detail in Section 2.1.4, will also be constructed during site preparation phase. A recycled process water pond will be constructed adjacent to each processing plant. The process water ponds will be designed to maintain a volume of water to operate the PCP for approximately 48-hours without the addition of make-up water. Twin Pines will also install a well into the UFA at each processing plant to provide the needed make up water to operate the PCP.

2.1.4 Excavation, Processing, and Tailings Return

2.1.4.1 *Keystone Mining Block and Adirondack Mining Block*

Excavation of the mining cuts will commence after the topsoil is removed. The dragline mining process proceeds as follows: The dragline moves through the mining area excavating approximately 100-foot wide cuts, in an east to west or west to east direction as shown on Figure 5. The excavated material is stockpiled nearby. It is then transferred to an apron feeder which feeds to a screen. This screen removes roots and other large objects. The material is then transferred to a pit/feed conveyor system.