3.0 ROSEMONT RECLAMATION AND CLOSURE CONCEPTS

The overall reclamation and closure plan proposed for Rosemont Copper is based on several key components, referred herein as initiatives. These initiatives provide the physical and philosophical foundation for this reclamation and closure plan and will remain constant throughout the operation of the facility. These initiatives include:

Beginning with the end in mind. The placement of materials in the various storage areas will be based on the final closure configuration. For example, the overall slopes of waste rock areas at closure will be 3H:1V minimum. Therefore, initial waste rock placement will incorporate setbacks, etc. to facilitate efficient regrading to achieve these final design slopes.

This philosophy also applies to the approach Augusta has taken with securing a sustainable water supply for the Project. Even before the first load of material is mined at the site, Augusta has already started a recharge program within the Tucson Active Management Area (AMA) so that the total water recharged will be 105% of the total water production over the life of the Project. Details of this recharge plan are found in the MPO.

Looking to the future and taking a broad view of the area post-mining, Augusta is investigating the development of a trust fund to be managed by a board of trustees with a view toward conservation and education. Augusta is also reviewing options for donating land and securing development rights of selected areas to help protect the land from future development.

Constructing an outer facility buttress. During the initial years of mine development, waste rock from stripping operations will be placed along portions of the southern and eastern footprint of the waste rock storage area. In addition to defining the outer footprint, placement of this outer buttress will be used to help screen active mining operations from vantage points in the area. In the waste rock storage area, the outer buttress will screen the active mining operations and isolate, if necessary, waste rock that may have the potential to generate acid rock drainage. In the tailings storage area, this outer waste rock buttress will serve to stabilize the outer slope of the dry tailings stacks.

Concurrently reclaiming the outer surfaces of the waste rock and tailings storage areas. Reclamation of the Rosemont Ridge landform will not be deferred to the end of the Project. Concurrent reclamation, as practicable, is planned for the outer shell or buttress encompassing the waste rock and tailings storage facilities. Growth media salvaged from the facility footprints may also be placed on the outer shell to facilitate revegetation.

Shaping the facilities to blend with surrounding topography. As practicable, and depending as aspect, the final reclaimed surface contours of Rosemont Ridge will reflect the natural topography in the area surrounding the Rosemont site. During the initial stages of operation, the waste rock, tailings, and heap leach areas will have distinct footprints. In time, however, the footprints will merge and share a common boundary. This final facility configuration will be shaped as needed to reflect surrounding topography. Surfaces will be constructed to achieve a stable landform, both at final closure and during operations.

The plant site area will be regraded as needed to achieve stable post-reclamation features. Topsoil placement and seeding are also anticipated for the upper benches of the open pit to reduce visual impacts.

Constraining disturbances to the Barrel Canyon drainage system. In order to limit the overall physical exposure of the Project, mine facilities are planned to be contained within the Barrel Canyon drainage system. Previous mine plans developed for the property had extended tailings and overburden storage facilities into Scholefield Drainage and also into Sycamore Canyon (Mines Project Group, University of Arizona, July 1980). The waste rock storage area, dry stack tailings storage facility, and heap leach facility are all located within the Barrel Canyon drainage system, with associated access roads leading into Barrel Canyon.

Minimizing downstream hydrologic disturbances. Facility construction will be planned and sequenced to minimize the disruption of surface and groundwater flows to downstream water courses. The sub-watersheds of Barrel Canyon and Scholefield Canyon comprise 16% and 6%, respectively, of the downstream Davidson Canyon watershed (Westland Resources, August 2007). It is estimated that Davidson Canyon contributes from 8% to 24% of the base flow in Cienega Creek at Marsh Station Road (Pima Association of Governments, November 2003). Cienega Creek is classified as a unique water by ADEQ. Therefore, conservation of the quantity and protection of the quality of surface and groundwater resources leaving the Project site is of high importance. Except for closed basins, such as the open pit, control structures will be designed to pass stormwater around or through the facilities during operations and at closure.

Preparing a comprehensive drainage plan. In addition to maintaining the overall hydrologic balance of the watershed basin, the surface water drainage plan for the reclaimed facilities will be strategically incorporated into the operational phase. The placement and timing of drainage structures will serve both the operational and closure stages of the Project. Specific surface water control methods selected for the reclaimed surface of the Rosemont Ridge landform vary depending on location.

Using modern technology to minimize the generation of impacted water. The Rosemont operation will include milling operations for sulfide ores and leaching for oxide ores. Conventional slurry line and settling pond technology for tailings disposal will not be used at Rosemont. Tailings will instead be mechanically filtered and stacked dry (10-15% moisture) behind a thick, durable rock buttress. The formation and migration of seepage from this tailings disposal system is negligible. The spent heap leach pile will be covered with a layer of durable waste rock, eliminating the possibility of flux through the pile.

Managing operations to minimize environmental impacts. As described above, the dry stack tailings material will be placed behind a thick buttress of waste rock. The buttress will be constructed in advance of the tailings deposition, thereby eliminating the migration of stormwater runoff from the tailings area and minimizing the potential for dust generation from the facility side slopes. Dust will be managed, as needed, by methods such as water sprays or dust suppressants.

Salvaging soil resources. Soil resources will be salvaged, as practicable and as needed, to reclaim the outer surface of the Ridge, as well as for reclamation of the plant site. Where practicable, soil resources will be stripped and placed directly on the outer slopes.

Implementing selective vegetation removal. Wherever possible, the existing desert shrubs and foliage will be left intact to decrease runoff and sediment loads. Species of concern such as the Arizona giant sedge and species of importance to wildlife such as agaves (food source for bats) are also present in the Project area (Westland Resources August, 2007). Where practicable, facilities will be constructed to avoid sensitive vegetation areas; if avoidance is not possible, salvage and transplant may be considered.

Revegetating reclaimed surfaces. The final reclaimed surfaces will be revegetated using a seed mix appropriate to the southwest. In addition to consultation with the Forest Service, testing is being performed at the University of Arizona's School of Natural Resources to determine the desired seed mix, soil amendments, and planting techniques.

Preparing estimated closure costs for a variety of closure scenarios. Estimated closure costs were prepared for the facility - not only at the end of operations but also at intermediate years. Concurrent reclamation of the outer slopes of the Rosemont Ridge landform allows for retirement of closure obligations during operations. Accurate cost estimates are required for effective planning and facility operation as well as for the determination of performance guarantees.