The TTL waters of the U.S. delineations (Appendix A) were conducted during a period of time spanning from April 2018 to April of 2019 to evaluate aquatic resources within areas that the applicant proposes impacts. Figure 3 provides an aerial view of the proposed project site.

The mining area consists of forested, shrub-scrub, and herbaceous wetlands, streams, and uplands consisting of planted pine, scrub-shrub and forested habitat. The proposed mining area is primarily in use as a commercial forestry operation, therefore much of the habitat has been degraded due to the bedding activities herbicide use typically associated with silvicultural practices in the region.

2.0 PURPOSE AND NEED

The applicant's purpose and need for the proposed project includes the extraction (maximum mineral recovery based on economic consideration and landowner commitments) of high quality heavy mineral reserves in a safe, cost effective and environmentally sound manner for export by truck, rail and eventual barge to national and international customers.

Mineral sand-derived products, particularly those containing titanium dioxide and zirconium, are in high demand worldwide in the pigment, aerospace, medical, foundry, and other industrial products. Elemental components, chiefly titanium, are used as the white pigments. Titanium dioxide is nontoxic and has replaced lead as the predominant pigment in paints and coatings.

Many deposits of heavy mineral sands (HMS) have been identified in the Atlantic Coastal Plain, including more than a dozen deposits that have been mined. Three Atlantic Coastal Plain districts have seen the bulk of the heavy mineral sands production and these districts are: (1) the Jacksonville district in northeastern Florida and southeastern Georgia, (2) a sequence of deposits along the Fall Zone in southeastern Virginia, and (3) the Lakehurst district in southern New Jersey. HMS are sediments containing dense (heavy) minerals that accumulate with sand, silt, and clay in coastal environments locally forming economic concentrations of heavy minerals.

Considerable resources of HMS in the form of detrital grains of titanium, ilmenite, leucoxene, and rutile, could exist in large areas of the Atlantic Coastal Plain. These heavy mineral sand deposits represent possible domestic sources of titanium that have yet to be developed. Identifying potential domestic resources of titanium is useful because titanium has significant industrial applications, and because the great majority of titanium mineral concentrates consumed in the U.S. are imported (91 percent in 2016; Ober, 2017). Only two HMS mining operations are currently (as of 2017) active in the U.S., due to closure of the HMS mines in southern Virginia.

Many prospective areas for HMS deposits in the Atlantic Coastal Plain occur near the modern shores or on barrier islands, for example, the coasts of South Carolina, southeastern Georgia, and northeastern Florida. Much of the modern coastal areas are covered by infrastructure. Thus, land-use and permitting considerations may limit mineral development along the modern coast.

The proposed activity will result in the full-time employment of approximately 150-200 workers from the local area. It is anticipated that the proposed facility will have an operational life of 8 years.