A. Twin Pines violated the NHPA by not exploring a large enough geographic area.

Twin Pines' consultant went astray when it first started its work on this project. It did not establish an Area of Potential Effects (APE). In other words, it did not determine the proper scope of its surveys.³³¹ Unless this is done properly, the Corps, as the lead federal agency for the project, cannot rely on the results of the surveys. The APE is defined as:

[T]he geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The [APE] is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.³³²

Under the NHPA, the Corps must identify any cultural and historic resources within the APE and determine whether the project would result in adverse effects to those resources. ACHP regulations implementing Section 106 of the Act define "adverse effect" broadly as:

[A]n undertaking [that] may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.³³³

The Corps' historical and cultural resource analysis in this case thus substantially relies upon setting an appropriate APE. It is important to establish a proper APA because the work within the APE can be extensive. This analysis typically includes "background research, consultation, oral history interviews, sample field investigation, and field survey." If an agency fails to define the APE properly, historic and cultural resources subject to direct or indirect effects from the project could be overlooked. Here, the Twin Pines failed to define an APE at all, leaving the public unable to meaningfully comment on the scope of the cultural analysis and the Corps unable to rely on the results of the surveys.

Even if the consultants had established an APE that encompasses the area that the consultants surveyed, the consultants would still have erred. For instance, in the introduction of each report, the consultants state that the surveys cover the Adirondack, Keystone, and TIAA parcels, when in fact they cover a fraction of those parcels.³³⁵ To add additional confusion, the

³³¹ 36 C.F.R. § 800.4(a).

³³² 36 C.F.R. § 800.16(d).

^{333 36} C.F.R. § 800.5(a)(1).

³³⁴ 36 C.F.R. § 800.4.

³³⁵ Matt Lyons, TerraXplorations, Inc., A Phase I Cultural Resources Survey of the Twin Pines Minerals Adirondack property in Charlton County, Georgia at 1 (May 2019) ("Adirondack Cultural Review"); Matt Lyons, TerraXplorations, Inc., A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone property in Charlton County, Georgia at 1 (October 2018) ("Keystone Cultural Review"); Matt Lyons, TerraXplorations, Inc., A Phase I Cultural