

**Abstract for Project Task Statement 2 (AGMT-0875) between the National Energy Technology Laboratory (NETL) and Ramaco Carbon to Umbrella CRADA (AGMT-0787)**

NETL and Ramaco will collaborate to characterize domestic coal, beneficiated coal, and coal byproducts to evaluate these materials for rare earth element (REE) content and ease of extraction. Ramaco will provide samples of coal, beneficiated coal, and coal byproducts to NETL, as well as provide research expertise on coal extraction and processing. NETL will characterize these feedstocks using the chemical/physical methods being utilized in its research laboratories. The objectives of this project are: identify promising coal-related REE reserves by testing and analysis of core samples from coal bearing formations; provide insights and expertise into opportunities for the extraction of REEs and other value-added products from domestic coal; and collect data that will be used to create quantitative modeling tools for predicting the likelihood of successful prospecting for REEs in coal, beneficiated and processed coal, and related geologic formation.