Sustainable Construction Materials

Today, manufacturers and energy providers are faced with challenges on how to properly manage byproducts produced during the manufacturing process. Ash produced from coal-fired power plants are one of the largest byproducts produced in the United States and can pose significant environmental challenges.

Fortunately, fly and bottom ash can be recycled and repurposed in cement and concrete. New technologies and methods are making it possible to turn what is perceived as waste into a valuable resource that reduces embodied carbon in other carbon-intensive industries.

Our Primary Areas of Practice Include:

- Embodied carbon reduction strategies for energy utilities, manufacturers, and landfill owners / managers.
- Research and development of new products using sustainable construction materials.
- Scientific solutions for the reuse of industrial by-products.
- Beneficial use of coal combustion residuals as a sustainable building material.
- Waste management strategies, including evaluation of thermal profiles and outgassing potentials of by-products destined for disposal at landfill sites.
- Cutting-edge concrete mix design development, optimization, and qualification with a focus on sustainability. Mass concrete, self-consolidating concrete, high-performance concrete and other innovative mixes can be optimized for performance and carbon reduction.

Materials Laboratory – Our materials lab is equipped to answer questions ranging from hazardous nature characterization for disposal to identification of mineral compounds for reuse purposes.

Microscopy / Petrography Laboratory – We have one of the largest and most respected microscopy and petrography departments in the world providing extensive experience related to critical and complicated petrographic needs.

Specialized Testing – CTLGroup's experience in laboratory testing extends far beyond standard testing. Our experts can design, build, and perform specialized tests that provide you with the crucial information that you need.

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