QUIKRETE® AND OAK RIDGE NATIONAL LABORATORY PARTNER TO DEVELOP PRINTABLE CONCRETE

ATLANTA, GA (March 16, 2020) – The QUIKRETE® Companies and the U.S. Department of Energy’s (DOE) Oak Ridge National Laboratory (ORNL) recently entered a cooperative research and development agreement to design next-generation concrete for use in the production of large-scale structures through a 3D printing process. Using additive manufacturing system developed by ORNL, the collaboration with QUIKRETE® will deliver specially-formulated concrete that establishes new construction capabilities.

In alignment with the DOE’s Advanced Manufacturing Office’s Multi-Year Program Plan, QUIKRETE® and ORNL are developing a concrete mix with the strength, curing time, and durability to construct buildings, energy installations, transportation infrastructures and other large-scale structures faster, more affordably and with less energy consumption. Designed as a pumpable, low- or zero-slump material that sets quickly and gains strength rapidly, this new concrete will be ideal for printable construction projects. In addition, the one-of-a-kind concrete will meet tensile strength, compressive strength, ductility and other structural performance characteristics required as a viable building material.

“Oak Ridge National Laboratory is one of the most advanced players on the global additive technology stage. QUIKRETE® is not only a leader in concrete technology, but also second-to-none in construction materials manufacturing and logistics. Working together, QUIKRETE® and ORNL can quickly develop advanced and economical “concrete inks” to supply all varieties of 3D concrete printers. We are optimistic that this technology will be a game changer for the concrete industry and revolutionize the construction practice,” said Chuck Cornman, Chief Technology Officer at The QUIKRETE® Companies.

“We look forward to working with QUIKRETE®, developing a novel material for large-scale construction, and we anticipate this project will have significant industry impact,” said Brian Post, R&D Scientist at ORNL. “As a leader in advanced manufacturing, DOE’s Manufacturing Demonstration Facility at ORNL is uniquely suited to advance this technology.”
The partnership will leverage ORNL’s scientific expertise and its unique facilities along with QUIKRETE®’s robust experience in the plastic and hardened properties of cement-based building materials. The two-phased collaboration, which is the first between QUIKRETE® and ORNL, concludes in two years.

The QUIKRETE® Companies
Founded in 1940, The QUIKRETE® Companies serves the residential, commercial, industrial and infrastructure industries as a scalable, single-source solution for building, repair and rehabilitation projects across North America. Not only the largest manufacturer of packaged concrete and cement mixes in the U.S. and Canada, The QUIKRETE® Companies also delivers high-quality, commercial-grade products through related industry-leading organizations including Custom Building Products®, Contech® Engineered Solutions, Rinker Materials™, Keystone Hardscape®, Pavestone®, Best Block, Premier Building Solutions™, Spec Mix®, Target Technologies®, Daubois® and QPR®. The QUIKRETE® Companies operates about 250 facilities including technical centers to provide unmatched product innovation, depth, quality-control and distribution as well as full-service customer support. The QUIKRETE® Companies truly is “What America’s Made Of”. For more information, visit www.quikrete.com or call (800) 282-5828.

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