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For Immediate Release **RMC Research & Education Foundation**

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New Report Release: Impact of Extended Time to Discharge on Concrete Durability and Performance

Alexandria, VA – June 23, 2020: The Ready Mixed Concrete (RMC) Research & Education Foundation is proud to release a new report, titled *Impact of Extended Time to Discharge on Concrete Durability and Performance*. The research was performed by the New Jersey Institute of Technology (NJIT) and was co-funded by the Portland Cement Association (PCA).

It is estimated that on an annual basis, approximately 3% of ready mixed concrete produced is returned to the concrete plant for disposal. One of the reasons that concrete is rejected at a project site is the 90-minute time limit to discharge a load in accordance with ASTM C94, *Specification for Ready Mixed Concrete*, that is enforced by specifying agencies. Although the standard provides conditions where this time limit can be waived, loads of acceptable quality are rejected, resulting in lost revenue and cost to the producer to manage returned loads.

NJIT researchers evaluated properties of concrete mixtures designed for a longer discharge time. Acceptable results were observed for all fresh concrete and durability indicator test results, such as resistivity and freeze-thaw durability, for concrete specimens prepared from samples obtained at different times up to 150 minutes.

In the report, NJIT researchers conclude that the current discharge time limits and specifications are conservative and should be reexamined.

As traffic congestion has increased across the country, this limit has become more difficult to meet. Rejected loads increase both construction costs and sustainability concerns. "As ready mixed concrete producers continue to look for ways to lower their environmental impacts, reduction of returned concrete waste is an important opportunity," says 2020 RMC Research & Education Foundation Chairman, Ted Chandler, Chandler Concrete. Adds Foundation Executive Director Julie Garbini, "This research provides important validation that with technological advances in the production and evaluation of ready mixed concrete, we can and should reconsider arbitrary rules which increase waste and costs without any measurable impact on performance."

The full report is available from the RMC Research & Education Foundation's website at www.rmc-foundation.org, both on the homepage under *What's New from the Foundation* and on its [Concrete Applications](#) page.

The vision of the RMC Research & Education Foundation is to be a lasting resource for increasing quality, professionalism, and sustainability in the ready mixed concrete industry by funding and implementing research and education programs.

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