

SERVICES

Durability Assessment
 Durability Testing
 Evaluation of Materials
 Collaborative Research

KEY PERSONNEL

Neal Berke, Vice President – Research

PRINCIPAL INVESTIGATORS

Kimberly Kurtis, Prof. Georgia Tech.
 Tyler Ley, Prof.-OK State
 Robert Moser-ERDC

REFERENCE

Richard Meiniger-Turner-Fairbank
 Highway Research Center

Numerous presentations and papers were produced. (See reference list.)

Chloride Content (ppm on Concrete)

	At 357 days	Average	Std. Dev.	COV
At crack	Top 1 to 2 inches	1736	143	0.08
Offset	Top 1 to 2 inches	114	47	0.41
At crack	Bottom	704	99	0.14
Offset	Bottom	1	2	1.41



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of flexural beam corrosion test specimen.
 TCG was one of the principal investigators with Georgia Tech, OK State, and the Army Corps of Engineers in evaluation the performance of alternative cementitious materials (ACMs). TCG conducted the transport and corrosion performance testing. Transport properties included the ASTM C1556 Bulk Diffusion and NT Build 492 Non Steady-State Diffusion, and ASTM C1760 Bulk Conductivity as function of time. The conductivity measurements were used to determine how the permeability decreased in time.

Corrosion testing which involved mortar macrocell and polarization resistance as well as cracked beam tests with flexural fatigue. In some cases corrosion was accelerated due to poor binding of chloride, and in some cases, extractions of pore water showed a significant reduction in pH. Examination of chlorides at the cracks showed that some ACMs and OPC had reduced ingress versus some other products with poor binding of chlorides.