

Jonathan O'Donnell



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Advisors: Craig Benson and Tuncer Edil

Previous Education:

B.S. in Environmental Science (2006)

University of Southern Maine

Professional History:

Environmental Engineering & Remediation, Inc.
Aquarion Engineering Services / Edwards & Kelcey,
Inc.

Jonathan worked part-time for four years during his undergraduate schooling at a civil and environmental engineering consulting firm in

Portland, Maine. Duties included environmental site investigations and remediation, and municipal consulting in stormwater management and road-salt use.

Research Focus:

Trace Element Leaching from Fly Ash Stabilized Road Construction Materials

Jonathan's current research is in the type and quantity of elemental and ionic contaminants that may leach from road materials and soils that have been stabilized with self-cementitious fly ash. Fly ash is captured as a byproduct during the combustion of coal. Leachate is collected from lysimeters placed under stabilized road sections at six field sites, as well as from several control sections using standard road materials without fly ash. Chemical analysis of Leachate is conducted using ICP-OES and ionic chromatography. Additionally, column leaching tests and batch water leaching tests are being conducted on stabilized and standard materials in an effort to correlate concentrations from lab testing with field leaching amounts.

Outside Interests:

Jonathan is a politics and news junkie, a Philadelphia Eagles fanatic, and enjoys playing guitar, cooking, disc golf, jam bands, and travel.