Numerical Modeling for the Solute Uptake from Groundwater by Plants-Plant Uptake Package

by
Amr A. El-Sayed

Dissertation submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

In
Civil and Environmental Engineering

Mark A. Widdowson

John T. Novak
Thomas J. Burbey

G.V. Loganathan
Conrad D. Heatwole

November 27, 2006
Blacksburg, Virginia

Keywords: Phytoremediation, SEAM3D, Groundwater Modeling, Plant Uptake, Root Sorption

Copyright 2006, Amr A. El-Sayed