Deriving Plant and Soil Invertebrate Ecological Soil Screening Levels (Eco-SSLs) for Ecological Risk Assessment. (S11-checkai171439-Poster)

Authors:

- R.T.Checkai* - *U.S. Army Edgewood Chemical Biological Center*
- M.C.Swindoll - *ExxonMobil Biomedical Sciences, Inc.*
- S.D.Foster - *U.S. Environmental Protection Agency*
- R.G.Kuperman - *Geo-Centers, Inc.*
- R.S.Wentsel - *U.S. Environmental Protection Agency*
- S.J.Ells - *U.S. Environmental Protection Agency*
- C.L.Russom - *U.S. Environmental Protection Agency*
- J.Walter - *Syracuse Research Corporation*

Abstract:

USEPA in collaboration with DoD, DOE, states, universities, and industry, has derived Ecological Soil Screening Levels (Eco-SSLs) for approximately 23 contaminants found at Superfund sites. Eco-SSLs are ecotoxicity values for use in Screening Ecological Risk Assessments (ERAs) to identify contaminants warranting evaluation in a Baseline ERA, and to eliminate those that do not. The Eco-SSL derivation process began with thorough literature search/retrieval. Studies must meet all acceptance criteria to be considered; studies were scored according to nine technical evaluation criteria (0, 1, or 2, for each evaluation criterion). Studies from literature must score >10 total out of 18 (max.) to be included. Studies were also sorted by treatment effects (e.g., reproduction, growth), and toxicity parameter (e.g., EC20, EC10). Acute effects and mortality data were not considered appropriate for deriving Eco-SSLs. Derivation included a quality control review of the evaluation, scoring, and calculations. Studies done to fill data gaps, so that an Eco-SSL may be derived, should be designed for maximum compliance with Eco-SSL evaluation criteria; such studies must also undergo quality control review.

Corresponding Author Information:

Ronald T. Checkai
U.S. Army Edgewood
Chemical Biological Center

phone: 410-436-2129
fax: 410-436-2081
e-mail:

AMSSB-RRT-TE E3150 DR Ron.Checkai@sbccom.apgea.army.mil CHECKAI
APG, MD 21010-5424

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