



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

OSWER 9285.7-55

December 29, 2003

**MEMORANDUM**

**SUBJECT:** Release of *Guidance for Developing Ecological Soil Screening Levels* (Eco-SSLs) and Eco-SSLs for Nine Contaminants

**FROM:** Marianne Lamont Horinko /s by Barry Breen for/  
Assistant Administrator

**TO:** Superfund National Policy Managers, Regions 1 - 10  
RCRA Senior Policy Advisors, Regions 1 - 10

**Purpose**

The purpose of this memorandum is to transmit for immediate use the *Guidance for Developing Ecological Soil Screening Levels* (OSWER 9285.7-55) and the Ecological Soil Screening Levels (Eco-SSLs) for the following list of nine contaminants frequently found in soil at hazardous waste sites. These nine contaminant-specific documents and all the supporting attachments for the Guidance are available at: <http://www.epa.gov/ecotox/ecossl/>. A link to this site is also on the Superfund Risk Homepage. As Eco-SSLs are developed for more contaminants during the next several months, they will also be placed on this web site.

<u>Eco-SSL</u>	<u>OSWER No.</u>
Aluminum	9285.7-60
Antimony	9285.7-61
Barium	9285.7-63
Beryllium	9285.7-64
Cadmium	9285.7-65
Cobalt	9285.7-67
Dieldrin	9285.7-56
Iron	9285.7-69
Lead	9285.7-70

**Background**

This guidance document describes the process a multi-stakeholder team used to derive a set of risk-based Eco-SSLs for many of the soil contaminants that are frequently of ecological concern for plants and animals at hazardous waste sites. The Guidance also describes how these screening values should be used in assessing ecological risks at sites. The Eco-SSLs presented in the contaminant-specific documents are concentrations of contaminants in soil that are protective of ecological receptors that commonly come into contact with soil or ingest biota that

live in or on soil. These values can be used to identify those contaminants of potential concern in soils requiring further evaluation in a baseline ecological risk assessment.

EPA prepared a list of twenty-four (24) contaminants to be addressed initially by the Eco-SSL guidance. This list was based on a review of the contaminants of concern reported in recent Record of Decisions at Superfund National Priority List sites. The Eco-SSL contaminant list also includes contaminants nominated by the EPA Regional Biological Technical Assistance Groups. The process for developing Eco-SSLs for additional chemicals is continuing, and more Eco-SSL documents will be issued within the next 12 months.

## **Implementation**

Although these screening levels were developed specifically to be used during Step 2 of the Superfund ecological risk assessment process (Screening-Level Exposure Estimate and Risk Calculation), EPA envisions that any federal, state, tribal or private environmental assessment or cleanup program can use these values to screen soil contaminants in order to determine if additional ecological site study is warranted. The Eco-SSLs are not designed to be used as cleanup levels and EPA emphasizes that it would be inappropriate to adopt these Eco-SSLs as generic cleanup standards. OSRTI is also preparing an Eco-Update Bulletin to describe how this information can be used in the baseline risk assessment to develop risk-based cleanup *goals*. This Eco-Update will soon be available at:  
<http://www.epa.gov/superfund/programs/ecorisk/ecossl.htm>.

EPA initiated this program to derive Eco-SSLs in order to conserve resources by eliminating the need for EPA and other risk assessors to perform duplicative toxicity data literature searches and data evaluations for the same contaminants at every site. These values will also help risk assessors focus their resources on key site-specific studies needed for critical decision-making. EPA expects that the Eco-SSLs will increase consistency among screening level risk analyses and decrease the possibility that potential risks from soil contamination to ecological receptors will be overlooked.

For contaminants for which there is no current Eco-SSL, RPMs should consult with their regional ecological risk assessor(s) for other screening values that are appropriate.

If you have any questions on these documents you may contact:  
Steve Ells, OSRTI, at [ells.steve@epa.gov](mailto:ells.steve@epa.gov) or (703) 603-8822;  
David Charters, ERT-Edison/OSRTI at [charters.david@epa.gov](mailto:charters.david@epa.gov) or (732) 906-6825;  
David Cozzie, OSW, at [cozzie.david@epa.gov](mailto:cozzie.david@epa.gov) or (703) 308-0479; or  
Dale Hoff, Region 8, at [hoff.dale@epa.gov](mailto:hoff.dale@epa.gov) at (303) 312-6690.

cc: Michael Cook, OSRTI  
Betsy Southerland, OSRTI  
Robert Springer, OSW  
Jim Woolford, FFRRO  
Nancy Riveland, Superfund Lead Region Coordinator, USEPA Region 9  
Lisa Price, RCRA Lead Region Coordinator, USEPA Region 6  
Ecological Risk Assessment Forum Co-Chairs  
NARPM Co-Chairs  
Joanna Gibson, OSRTI Documents Coordinator  
Steve Luftig,, Senior Advisor to OSWER AA  
Walter Kovalick, TIP/OSRTI  
Debbie Dietrich, OEPPR

Cliff Rothenstein, OUST  
Linda Garczynski, OBCR  
Sandra Connors, FFEO  
Susan Bromm, OSRE  
Charles Openchowski, OGC  
OSRTI Center Directors and Senior Process Managers