



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

M.Olsen

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MAY 17 1996

MEMORANDUM

SUBJECT: Final Soil Screening Guidance

FROM: Elliott P. Laws
Assistant Administrator

TO: Director, Office of Site Remediation and Restoration
Region I
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III, IX
Director, Waste Management Division
Region IV
Director, Superfund Division
Regions V, VI, VII
Assistant Regional Administrator, Office of Ecosystems
Protection and Remediation
Region VIII
Director, Environmental Cleanup Office
Region X

PURPOSE

This memorandum transmits the Soil Screening Guidance and its supporting Technical Background Document for your immediate use as a tool at Superfund National Priorities List (NPL) sites. This guidance provides a simple method for calculating site-specific screening levels for chemicals commonly found at these sites.

DIRECTOR'S OFFICE

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BACKGROUND

These screening levels can help EPA rapidly identify those areas at residential sites that do not warrant further remedial investigation or action at the national level. This guidance may not be appropriate for all sites and its use is not required. However, where a screening approach is useful and the assumptions and condition are appropriate, this guidance should be applied.

As part of our Administrator's charge in 1991 to accelerate the rate of cleanup at NPL sites, the Agency has been working to develop tools both to standardize and streamline decision making for contaminated soils. As part of this effort, the Agency aggressively sought input from a wide range of stakeholders, including other Federal and State Agencies, industry groups, environmental advocacy groups, auditors, insurers, lenders, and independent technical experts. Most agreed that while there was indeed a great need to standardize the current soil cleanup process, it was also important to allow appropriate consideration of site-specific information in order to ensure cost-effective decisions. Development of this guidance has been a resource intensive effort. In addition to a great deal of technical analysis/peer review, it also required a number of very difficult policy choices. This final guidance blends a wide range of "standard" approaches and assumptions with the flexibility to design a decision-making process based on site-specific conditions. Use of this guidance may result in greater national consistency, overall programmatic cost savings, and a data collection/decision process that will be substantially more transparent to involved stakeholders.

DISCUSSION

The Soil Screening Guidance encourages collection of site-specific data that can make a significant difference in a Superfund soil cleanup strategy. Likewise, it is designed to help site managers avoid collecting unnecessary data from areas of a site, or on exposure pathways that are highly unlikely to present a substantial human health threat. The guidance is intended to be used early in the RI/FS process whenever residential land use is likely. However, this guidance does not replace the remedial investigation or baseline risk assessment where screening indicates that further investigation is warranted.

The guidance is not designed to address commercial - industrial land use, nor to address potential ecological effects of soil contaminants. At specific sites, consideration of other exposures, land uses, or receptors may be very important; however, other guidance and analysis will be necessary for those purposes. This guidance may be useful in the context of RCRA Corrective Actions, economic redevelopment projects (brownfields), and voluntary cleanups, where residential land use is anticipated and human health exposures are of concern. However, misuse of this guidance may result in actions that are either unnecessarily expensive, or not adequately protective of human health and ecological receptors.

Because of the widespread interest in this guidance beyond the boundaries of our own program, we have attempted to document both the issues and their resolution in enough detail so that interested readers might fully understand why the guidance is designed as it is. As a result, a great deal of discussion on current site characterization and risk assessment methods has been presented. Accordingly, and in an effort to minimize complexity, we have issued this guidance in two parts: (1) Soil Screening Guidance: User's Guide (OSWER Directive 9355.4-23, PB96-963505) designed for the RPM, OSC, or Regional manager who seeks to understand the basic concepts, approaches, and assumptions in the soil screening decision framework; and, (2) Soil Screening Guidance: Technical Background Document (TBD) (OSWER Directive 9355.4-17A, PB96-963502) that provides a comprehensive analysis of the technical or policy issues and choices. Please encourage your technical staff to read this TBD carefully. It contains update information, not found in other Superfund documents.

In addition, a very brief nontechnical fact sheet, titled Soil Screening Guidance: Fact Sheet (OSWER Directive 9533.1-14FSA, PB96-963501) is available and presents a general overview of the soil screening process. Finally, an overview of our response to comments received during the public comment period is also available; this document is titled Soil Screening Guidance: Response to Comments (OSWER Directive 9355.4-22, PB96-963506).

Readers will notice that this guidance often relies on equations and assumptions derived from the Risk Assessment Guidance for Superfund (RAGS), Human Health Evaluation Manual (HHEM), Part B. In many cases, this guidance updates the RAGS, HHEM, Part B models to reflect improvements in Superfund risk assessment guidance or clarifications in program policies.

It is clear from concerns raised during outreach sessions that there is potential for mis-use of this guidance. For this reason, I would like to highlight several important messages:

- A Soil Screening Level (SSL) derived according to this guidance is NOT a "cleanup standard," and only in limited situations should it be used as a "cleanup goal." An SSL is a concentration in soil which represents a level of contamination above which there is sufficient concern to warrant further site-specific study. Concentrations in soil above these levels do NOT automatically designate a site as dirty, nor trigger a response action.
- Generally, where concentrations fall below the screening level, no further study or response action would be warranted under CERCLA except when certain site conditions described in the guidance are present.
- SSLs do not supersede existing Federal or State ARARs that may affect selection of cleanup levels for soils.

IMPLEMENTATION

Effective immediately, the attached guidance and its technical support document should be used where it can better focus our limited financial resources at Superfund NPL sites by screening soils from further study or action. If you or your staff have any questions, please contact your OERR Regional Accelerated Response Center.

In addition, where Region-specific screening tools already exist that use tables of risk-based numbers or similar formulae or risk-based assumptions, it is strongly recommended that these tools be modified as appropriate to be consistent with this guidance. When applying a soil screening approach for NPL sites, the models, equations and assumptions presented in this guidance should be used to screen the need for further site-specific study at residential properties. Also, as stated above, the models used in this guidance relevant to residential land use supersede those used in the Risk Assessment Guidance for Superfund, HHEM -- Part B. The HHEM Part B models should no longer be used for the development of risk-based preliminary remediation goals in residential settings.

Due to limitations on our printing budget, we are sending only two copies of this guidance to each Regional Office. I am asking that your Region provide managers and staff with copies as needed. Additional bound copies will be made available by Headquarters in the future when funding becomes available. We are also pursuing ways to make the guidance available in an electronic format.

The public can purchase the documents mentioned above by calling the National Technical Information Service (NTIS) at 703-487-4650 and requesting these documents by name or number.

For further information, you may call David Cooper of OERR at 703-603-8763 or at <<cooper.davide@epamail.epa.gov>>.

Attachments

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