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

JAN 22 2009

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

OSWER 9285.7-81

MEMORANDUM

SUBJECT: Transmittal of Guidance for the Sampling and Analysis of Lead in Indoor Residential Dust for Use in the Integrated Exposure Uptake Biokinetic (IEUBK) Model

FROM: James E. Woolford, Director
Office of Superfund Remediation and Technology Innovation

TO: Superfund National Policy Managers, Regions 1–10
Regional Risk Leads, Regions 1–10

Purpose

The purpose of this memorandum is to transmit the document: Guidance for the Sampling and Analysis of Lead in Indoor Residential Dust for Use in the Integrated Exposure Uptake Biokinetic (IEUBK) Model. This guidance recommends methods for collecting and analyzing indoor residential dust data to estimate the mean concentration of lead in dust for use in the Integrated Exposure Uptake Biokinetic (IEUBK) model. The recommendations address applications of the IEUBK model in Superfund lead risk assessments and may not be appropriate for other applications (e.g., HUD lead risk assessments). The sampling and analysis recommendations in this document are intended to enhance consistency in lead risk assessments at Superfund sites.

Background

In Superfund lead risk assessments, lead in indoor dust typically is accounted for in the IEUBK model as an input parameter. Generally, if site-specific dust concentrations are not available, the IEUBK model calculates default concentrations by multiplying outdoor soil lead concentrations by the mass fraction of soil in indoor dust variable (M_{SD}). When feasible, the use

of site-specific residential dust lead data is preferred over the use of the default IEUBK model's indoor dust calculations in order to better characterize risk at the site. In addition, site-specific indoor dust sampling data, under appropriate circumstances (e.g., considerations of data quality and representativeness), can be used to develop a site-specific M_{SD} (U.S. EPA, 1998). A site-specific M_{SD} may then be used to develop a more scientifically supportable preliminary remediation goal for outdoor soil at the site.

Implementation

This guidance provides recommendations for sampling methods and locations, and discusses the strengths and weaknesses of other alternatives to aid in informed decision-making during site risk assessment. It is recommended that EPA risk assessors and risk managers consult with the Lead Committee of the Technical Review Workgroup (TRW) for Metals and Asbestos if site sampling plans specify (or existing data were obtained using) sampling methods that differ from those recommended in this document.

For further information, please contact Aaron Yeow at 703-603-9149.

Attachment

cc: Susan Bodine
Barry Breen
OSRTI Managers
Brigid Lowery, CPA
Debbie Dietrich, OEM
Matt Hale, OSW
David Lloyd, OBLR
John Reeder, FFRRO
Cliff Rothenstein, OUST
Renee Wynn, OPM
Marcia Mulkey, OSRE
David Kling, FFEO
Mary-Kay Lynch, OGC
Wendy Lubbe, Superfund Lead Region Coordinator, Region 7
NARPM Co-Chairs