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

APR 17 1996

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Administrative Reforms for Lead Risk Assessment

FROM: Stephen D. Luftig, Director
Office of Emergency and Remedial Response

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

This memorandum outlines specific steps to implement the principles outlined in the Administrator's October 2, 1995 Administrative Reforms related to lead.

Lead is one of the most frequently encountered chemicals at Superfund sites. Lead cleanups are also reported to be some of the most costly cleanups. In the spirit of continuous improvement, we believe that this is a time to seek out information on the consistent implementation of the OSWER Lead Directive. These efforts to collect and analyze lead-related information will require your support.

Technical Review Workgroup for Lead and Review of Draft Lead Issues Plan

Background

In order to support site-specific lead risk assessments and assist in the development of national lead policy for Superfund, the Technical Review Workgroup (TRW) for lead was established more than five years ago and is a resource that is available to advise Regions on questions relating to site-specific risk

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opportunity to comment on the approach undertaken.

4) Send any draft Regional Guidance relating to lead to Headquarters for review before release.

Materials requested above should be sent to Larry Zaragoza (703-603-8867), the Headquarters member of the TRW.

Support for Adult Lead Risk Assessments

I am pleased to report that a number of adult lead risk assessments are being referred to the TRW, which is developing guidance on this issue. It is our belief that these reviews will promote consistency and help ensure that information is shared across Regions. To request consultation, contact Mark Maddaloni (212-637-4312) of EPA's Region 2, the head of the adult lead subcommittee.

Feedback on the Process

Questions on policy or the overall approach outlined in this memo should be directed to Larry G. Reed (703-603-8960), Deputy Director, OERR. Questions specific to the application of risk assessment in Superfund should be directed to David Bennett (703-603-8759), Senior Process Manager for Risk.

cc: E. Laws

Attachment

LEAD ISSUES PLAN

Introduction

On October 2, Administrator Browner announced a series of Administrative Reform that were announced to improve the operations of the Superfund Program. Administrative Reform 2 is "Risk Assessments Grounded in Reality". Lead was a visible pollutant before this Administrative Reform. The effect of the latest round of Administrative Reforms will be to focus efforts to develop and implement actions that improve the consistency and understanding of Superfund Risk Assessments. The output for this administrative reform involves continued utilization of the Lead Work Group (usually known as the Technical Review Workgroup [TRW]). The TRW has been responsible for supporting the refinement of the model (Integrated Biokinetic Uptake Model--IEUBK), which is used to assess the impact of environmental lead levels on child blood levels. This document provides a plan for addressing the issues associated with effective implementation of more effective use of the TRW and establishing clear communication links in the reorganized OERR.

Lead is a key pollutant for the Superfund program for two reasons. First, the information on the adverse health effects associated with lead exposure is more extensive than for other environmental contaminants. As a result of our improved understanding of lead relative to other chemicals, EPA has developed a Lead Model (Integrated Exposure Uptake Biokinetic Model/IEUBK) to assess the relative contributions of lead exposure to blood lead levels in children. This approach allows for the relative contributions of all environmental sources of lead to be assessed (e.g., paint, soil lead, house dust). Second, as the most prevalent chemical found at sites, the costs of lead cleanups are expected to be high. The combination of complex environmental assessment issues and high cleanup costs makes lead one of the more controversial chemicals for Superfund sites. This plan is intended to promote consistent assessment of lead at Superfund sites, identify primary responsibilities for different activities, and establish a communication network between headquarters and EPA Regional Offices on lead issues.

This plan is designed to support the continued work of the Lead TRW and establishes a network for the communication of lead related policy issues. Policy issues, such as development of a short sheet that outlines how the IEUBK should be used to assess lead impacts at non-emergency removal sites, would be addressed by this group. The policy related issues would be closely coordinated with the Lead Technical Workgroup. Both groups would be served by a group of individuals within headquarters that would support the communication of policy issues for the policy group and generally support certain logistics for the Lead TRW.

OERR has recently undergone a reorganization and there has been a change in staff associated with the reorganization. In order to minimize any impact of reorganization and personnel changes, this plan proposes new points of contact and working relationships. This plan should help to ease disruptions that would otherwise occur as a result of Headquarters, and

possibly, Regional reorganization efforts. This draft plan is currently being circulated as a draft to obtain a common understanding of the objectives to be obtained and ideas of both Regional and Headquarters members of the TRW. At this point, this draft document is being circulated to members of the TRW and others whose review will be sought. Comment from these sources can be used to build an understanding of respective roles and responsibilities. This document should serve as a vehicle to develop some agreement on the issues of key importance. Such a compilation of responsibilities, activities, and priorities has not been prepared for lead in the past. As a first effort, this plan is viewed as an opportunity to improve communications and the efficiency of program activities on lead.

Lead Technical Review Workgroup (TRW)

The Lead TRW provides sites specific assistance in the application of the IEUBK, undertakes tasks to improve the IEUBK, and other issues associated with the assessment of lead risks at Superfund sites. The TRW is composed of lead health specialists from EPA Headquarters and Regional Offices. In addition to providing advice on a number of sites that are being evaluated with the IEUBK, the TRW produced the guidance manual for the application of the IEUBK as well as the model refinements that were undertaken to prepare the model for site specific application at Superfund sites. A primary function of the TRW is to promote good science. A listing of specific projects that are scheduled for the workgroup are provided in Appendix A.

The TRW is currently chaired by a Regional Toxicologist from Region 8. However, there are a number of talented and experienced toxicologists on the workgroup and the position of chair is expected to rotate to another Region soon. The current membership is included as part of Table 1. This composition of the TRW has served the program well. It provides representation from EPA Regional Offices, ORD and OPPTS. In addition to sharing information on program directions on lead assessment efforts, the other program office representatives have helped to build better working relationships with the Superfund Program. This structure helps to promote more efficient communication on lead program activities across the Agency as well as sharing scientific and technical information that might not otherwise be shared as efficiently.

Policy Group

One of the suggestions made at this year's OERR Strategic Planning Retreat was that we should have a policy group to discuss lead related issues and promote consistency in the lead policy issues. The approach that this group would take would be similar to the approach taken by the Large Area Lead Mining Sites group, which has had periodic meeting to discuss key lead policy issues. The support of this group would also provide a resource for access on lead assessment approaches that should promote consistency. Finally, because the Policy Group would be briefed on various lead activities, the support of the Policy Group for continued dedication of staff to support the Technical Review Workgroup and other activities would be sought.

The membership of this group would be composed of Regional Managers. The group should be chaired by the OERR Director/Deputy Director and support would be provided by OERR and Regional staff.

Headquarters Coordination Group

The headquarters coordination group would be responsible for the coordination of information generated by the Technical Review Workgroup and the Policy Group. In addition, this group would track and share information that is generated by the other groups that perform lead related work that are identified in this plan. This will help to ensure that information provided by the Regions will be available to all Regions to better understand the effectiveness of National lead policies. Moreover, this group will also seek to ensure that Headquarters requests for information on lead will be coordinated and not duplicated. In order to achieve this objective, a network of lead contacts will be established that will include at least one staff from each Regional Center and Regional Contacts for lead issues (again, at least one from each region).

Work with Regional Coordinators

Given the challenges in Superfund Reauthorization, interests from Congress, and others, we are often seeking information on lead. The collection of site specific information has frequently been requested and these requests have sometimes been repeated among Headquarters staff in contacting Regional Offices for Information. In order to avoid this problem in the future, information on lead sites will normally be centralized and coordinated according to the responsibilities outlined in Table 1. This will help to promote a more efficient use of headquarters staff and reduce repeated requests from EPA Regions for site specific information. Finally, this will provide a known source where information on lead sites has been centralized.

Requests for Information on Lead to Support Reauthorization

Given that much of the information outlined in this plan will address how the Superfund program assesses lead and requires ready access to the information outlined in this plan, information in this area shall be coordinated through the headquarters lead contacts, as identified in Table 1. This work would also include continuing support for the Three City Lead Study and outreach with the Community Involvement and Outreach Center (e.g., Kim Fletcher, David Sternberg).

Information Management Issues

In order to improve information that is maintained with known quality, lead related information management issues will be coordinated through this group. Types of information that will be sought shall include: sites where the IEUBK has been used (and the version of the IEUBK), cleanup levels, cost of cleanup, satisfaction of the community with the outcome and other information that is deemed important to assessing progress with lead related assessments

and associated cleanups. This work will be coordinated with Jim Konz, who is preparing the electronic reporting requirements for risk information, and others. Larry Zaragoza will provide the lead for this activity.

Management Support

Lead issues are clearly a high visibility activity for OERR and management support will be key to success. The Process Manager for Risk will be a resource to help secure resources for lead related issues (e.g., contractor support). In order to insure communications in critical areas, regular communications will take place with the Process Manager for Risk on key activities in any lead area and the OERR Director. There will also be quarterly meetings that will address all areas of lead work. Larry Zaragoza will serve as the overall coordinator for lead related activities and he will be responsible for communicating with the different levels of management on the items outlined above.

Coordination with Other Federal Agencies

ATSDR

ATSDR coordination will be facilitated through the Mid-Level Managers' Workgroup and the Senior-Level Managers' Workgroup. This group will work directly with the Headquarters Coordination Group.

Centers for Disease Control (CDC)

The CDC is responsible for a variety of public health issues including national lead survey work. They also have established standards for sampling blood lead and conducting epidemiological studies that are relevant to the interpretation of health data for Superfund sites. Their review and comment is sought when appropriate.

Other Federal Agencies

Other Federal Agencies (e.g., Department of Energy, Department of Defense) also have interests in lead risk assessment and the implementation of policies. Promoting consistency requires outreach and exchange of information.

Representation on the Title X Workgroup for OPPTS

Larry Zaragoza will continue OERR representation in the Title X Workgroup efforts, which includes an economic analysis that will support the upcoming OPPTS rulemaking under Title X. Given Congressional interest in Superfund and its relationship to other programs, this effort is important to both OPPT and OERR.

Table 1. Contacts for Lead Activities

Activity	Participants
Technical Review Workgroup	Region II (Mark Maddaloni) Region III (Roy Smith) Region V (Pat Van Leeuwen) Region VIII (Susan Griffin (Chair) and Chris Weis) Headquarters: ORD (Harlal Choudhury/Cinn; Rob Elias and Allan Marcus/RTP; and Paul White/DC) OPPTS (Karen Hogan) OSWER/OERR (Barbara Davis replacement?)
Policy Group	Steve Luftig Staff Support: Larry Zaragoza
Headquarters Coordination Group	Chair, Larry Zaragoza Lisa Askari, Steve Chang, June Wiaz
Other Federal Agency Coordination	Steve Luftig/Larry Reed/Elaine Davies/David Bennett

Appendix A: Listing of Lead Projects of the Technical Review Workgroup

Title	Activity	Chair	Members
Site-Specific Support		Chair: Susan Griffin, Pat Van Leeuwen, Mark Maddaloni	
Validation Work	1) Field data is being used to compare blood lead levels in children with IEUBK model results. These results may indicate a need for revisions to the IEUBK if differences are seen. 2) The computer code is being checked for consistency with documentation and correct computations. 3) Hold a validation workshop in Spring of 1996.	Karen Hogan	Paul White, Allan Marcus
Independent Verification		Karen Hogan	Rob Elias, Susan Griffin
Validation Workshop		Chris Weis, Harlal Choudhury	Barbara Davis, Karen Hogan, Paul White, Allan Marcus, Roy Smith, Rob Elias
Outreach to Managers/Validation Work		Susan Griffin	Karen Hogan, Harlal Choudhury
Adult Lead Number	This effort is using the results of the Leadville Risk Assessment and information from available models, such as Dr. O'Flaherty's model to assess options for development of an adult lead number.	Mark Maddaloni	Pat Van Leeuwen, Paul White, Allan Marcus, Rob Elias, Roy Smith, Susan Griffin, Harlal Choudhury, Barbara Davis
Sampling Guidance		Susan Griffin	Chris Weis, Karen Hogan, Mark Maddaloni, Paul White, Roy Smity, Rob Elias, Harlal Choudhury, Barbara Davis, Pat Van Leeuwen
Research Planning		Chris Weis, Rob Elias	Karen Hogan, Mark Maddaloni, Bruce Means, Paul White, Allan Marcus, Harlal Choudhury, Barbara Davis
SOP Fact Sheet		Susan Griffin	Paul White, Bruce Means, Harlal Choudhury, Rob Elias
Publication		Rob Elias	All

Title X		Karen Hogan	Bruce Means, Pat Van Leeuwen, Mark Maddaloni

Medium, Low, and Other Priorities of the Lead Technical Review Workgroup

Title	Activity	Chair	Members
Medium Priority Projects			
Outreach with Removal Program		Pat Van Leeuwen	Mark Maddaloni, Bruce Means, Barbara Davis
ATSDR/State Cooperation	Coordination on field studies, use and interpretation of blood lead data that can be used for comparing predicted and observed blood lead levels.	Pat Van Leeuwen	Mark Maddaloni, Bruce Means, Chris Weis
Low Priority Projects			
Repository of Lead Articles/Workgroup Archive		Rob Elias	Barbara Davis, Pat Van Leeuwen
Projects without Leads			
FOIA Requests/Getting docket in order		Harlal Choudhury	
Training of workgroup in litigation support			
Model implementation/ development			
Technical Documentation			
Training			
Communication with Congress			
Science Policy Council Briefing			

Activity	Lead/Contributors	Objectives
Validation of the IEUBK	Karen Hogan (Lead) --Harlal Choudhury --Barbara Davis --Rob Elias --Allan Marcus --Roy Smith --Pat Van Leeuwen --Chris Weis --Paul White --Larry Zaragoza	1) Field data is being used to compare blood lead levels in children with IEUBK model results. These results may indicate a need for revisions to the IEUBK if differences are seen. 2) The computer code is being checked for consistency with documentation and correct computations. 3) Hold a validation workshop in Spring of 1996.
Training on the Model Applications		
Development of an Adult Number	Mark Maddaloni	This effort is using the results of the Leadville Risk Assessment and information from available models, such as Dr. O'Flaherty's model to assess options for development of an adult lead number.
Defining Research Needs	Rob Elias lead (All)	
Sampling Guidance	Susan Griffin	Lead with contractor support
Publication in Peer-Review Journals	Structure of the Model (Barbara Davis, Rob Elias, Paul White) Model Validation (Karen Hogan, Larry Zaragoza)	

Activity	Lead/Contributors	Notes
Site Specific Applications	Harlal Choudhury	An 800 number would be established to assist with routine questions and direct new questions that will require policy setting decisions.
Removal Policy Short Sheet	?	Development of a short sheet for removal actions to describe when the IEUBK should be used to promote consistency in lead assessment efforts and cleanups.

Activity	Lead/Contributors	Notes
Coordination with ATSDR, CDC	Pat Van Leeuween	Coordination on field studies, use and interpretation of blood lead data that can be used for comp
Technical Memoranda/Fact Sheets --Gardens --GSD --Soil Dust ratios --Soil/dust intake		
Archives and tracking records	Rob Elias	Scientific papers used to support model development efforts will be made available in a repository. Moreover, other materials (including confidential materials) that were used to support model refinement shall also be organized and maintained for future reference.
Monte Carlo Model Options		Examination of the potential utility of Monte Carlo approaches for use in the IEUBK shall be evaluated.

Briefing on Lead Activities

Issues for Today

- Update on the Administrative Reform
- Lead Issues Plan (Policy Group and Large Area Lead Sites/Lead Workgroup)
- Activities under the Technical Review Workgroup

Administrative Reform Update

- Part of the Administrator's October 1995 Announcement on Administrative Reforms that sought to:
  - Make Smarter cleanup choices that protect public health at less cost and
  - Ensure Reasonable and Consistent Risk Assessments
  - This reform seeks to make fuller use of the existing Technical Review Workgroup for lead
- The proposed implementation of this Administrative Reform is outlined in the April 17 memorandum from OERR

Background on the Administrative Reform

- Congressman Bliley, Chair of Commerce Committee sent two letters during 1995 on a variety of issues related to lead risk assessment, the IEUBK model, and cleanup decisions
- Meetings with other Agencies (e.g., ATSDR, CDC) and States sometimes raise questions as to what would be the best method for assessing impacts of lead
- Testimony before Congress has sometimes been very critical of EPA lead decisions (e.g., Granite City, Smuggler Mountain, Triumph)
- While there are opportunities for improving EPA's approach, at least some of the issues above should be addressed by information sharing

The April 17, 1996 Administrative R. form

- Continue reliance on the Technical Review Workgroup (supports review of site-specific risk assessments and other lead risk issues)
- Establish a plan for addressing lead issues that includes coordination of lead related issues
  - Assemble the large area lead sites group; include other major lead policy issues; and seek participation of all regions; rename group to reflect key issues to all regions
  - Establish a senior management oversight group to provide for overall direction
  - Comments were due by May 31 on the draft plan

- This is the second quarterly review of lead activities and includes: Technical Review Workgroup and lead planning issues that have been undertaken to promote the Administrative Reform for lead

- The April 17 Memo also requested comment on the Draft Lead Issues Plan and invited questions

Results of the Request of the April 17 Request

- Written responses from Regions 5, 6, 7, 8, 9, 10
- Nine IEUBK Risk Assessments have been submitted from Region 3
- A number of lead issues are being raised as a part of information sharing
- The revised plan will be sent out to Regions in a format that reflects comments and identifies differences (General Summary and draft responses attached)
- Propose that the Lead Issues Plan be a document that will serve as a reference for those interested in lead issues (updated as appropriate)
- During the recent Division Director's Meeting in Texas, most every region indicated that there is interest at the Regional Division Director level. Written comment from Region 6 indicated that Bill Honker would serve on the Policy Group.

Lead Technical Review Workgroup (TRW)

- The TRW participated in the Region 8 meeting with States on Lead Issues and held a meeting there in Golden Colorado following that meeting

- Significant progress has been made on the following issues (e.g., a draft document exists that has been reviewed at some level):

  - Guidance for the assessment of adult lead risks based on existing applications (Interim pending eval. of other avail. models) Ready for review by TRW

  - Development of a Short Sheet that outlines risk assessment resources for lead including the TRW, contacts, and key guidance (still draft. Larry Z copy ?!)

  - Working with the National Center for Environmental Assessment in Research Triangle Park, an agenda has been developed and key participants have been invited to a meeting on lead models to be held the second week of September in Research Triangle Park, North Carolina (a regular meeting of the TRW is expected to take place before/following the validation workshop) 9/9-11

  - John Cunningham and Larry Zaragoza are developing a short sheet on the use of the IEUBK model in supporting Removal Decisions (will be circulated to all regions for comment)

TRW Continued

- The Three Cities Study has been completed and copies distributed to researchers, Members of Congress, and others.

- The meeting with States in Region 8 has been instrumental in identifying a number of issues that relate to both risk assessment and risk management at lead sites. The Region 8 meeting was very useful in clarifying many of these issues.

Lead Work Group

- The Lead Work Group will draw heavily from the former Large Area Lead Sites group but also address other key issues of interest to all Regions

- A meeting is scheduled for August 27 to 29. Leadership for this meeting provided by Shahid Mahmud (OERR), Brad Bradley (Region 5), Ken Wangeruod (Region 8) and Nick Ceto (Region 10).

- A note to Regional Division Directors will be sent to summarize the proposed agenda for the meeting, identify expected participants, and announce that we expect the first meeting of the Policy Group to be held during the first two weeks of October (Chicago has been proposed).

- The August meeting of the Lead Working Group and the September meeting of the TRW are expected to help prepare issues for the October Policy Group meeting

Table 1. Participation Lead Groups

Region	Technical Review Workgroup	Adult Lead Subgroup	Nominations	Lead Work Group
1		Mary Ballew		
2	Mark Maddaloni	Mark Maddaloni, Chair		
3	Roy Smith (on detail to OAQPS)			
4		Kevin Koporec		
5	Pat Van Leeuwen, Chair	Mark Johnson Pat Van Leeuwen		Nick Morgan
6			***Ghassan Khoury****	
7		Cheri Baysinger-Daniel, MO DoH		
8	Susan Griffin Chris Weis	Chris Weis		Ken Wangerud
9			***Stan Smucker*****	Michael Bellot/Stan Smucker
10		Roseanne Lorenzana		Nick Ceto
OERR	Larry Zaragoza	Larry Zaragoza		Shahid Mahmud
ORD	Harlal Choudhury Robert Elias Allan Marcus Paul White			
OPPT	Karen Hogan			

*Nomination identified by Region. Membership into the Technical Review Workgroup will require completion of an application and approval.

**Volunteer as a point of coordination but active participation in the Technical Review Workgroup is not expected at this time.

Comments on the Draft Lead Plan and Responses

Comment	Response	Comment Source
Endorsement of a Policy Group (Region 10 recommended a meeting by mid summer)	A policy group will be formed. A request for Regional participation is underway.	Region 10
Support promoting consistency in decision making and establishing an effective communications network	The April 17 plan was intended to be a first step. Hopefully, the revised plan will move forward	Region 5, Region 7, Region 10
The relationship of the different groups should be clarified--a graphic should help.	Agreed and the plan has been so revised.	Region 3/8 Accelerated Response Center
The role of the large area lead sites group should be explicitly mentioned.	The plan would create a lead workgroup, which addresses lead management issues. A decision has been made that the subject matter of this group should include the issues that have been addressed by the large area lead sites group but should also be included to include key management issues of interest to all regions.	Region 3/8 Accelerated Response Center
Establish representatives of the Large Area Lead sites and TRW as members for the Policy group in order to identify issues and bring focus to policy discussions	Recommendation reflected in revised plan	Region 10
Please consider inviting and ATSDR representative to become a member of the Policy Group	Recommendation reflected in revised plan	Region 10

Clarify the identity of "Regional Coordinators"	Regional coordinators were intended to be HQ staff that support Regional staff. This has been clarified.	Region 10
New issues identified by the TRW are important: criteria for removal actions (5,10) defining the role of blood lead studies (10) addressing uncertainty evaluating bioavailability (10) a lead paint policy (10)	These are important, a schedule to implement these issues and determine if other issues are of similar importance will be developed.	Region 5, Region 10
Support encouragement of inclusion of regional participation in Policy Group, Lead Workgroup (management issues), and the TRW.	Response we have sought to identify parties for each group and are in the process of identifying participants for the Policy Group.	Region 7
Concurrence from out-of-region groups on site-specific decisions should not be required nor implied.	There is no expectation to have concurrence on site-specific decisions unless that site-specific decision creates consistency problems, which can undermine the credibility of all actions.	Region 7
Establish a bulletin board or some other source to communicate pertinent issues on lead sites.	Given that some of the information may be sensitive, we will explore the possibility of using lotus notes or some other vehicle.	Region 3/8 Accelerated Response Center

Develop a communication interface for State groups to obtain their input.	We absolutely agree that community/state involvement is needed. We expect site-specific coordination to take place through the regions but options for further outreach should be explored. For example, ATSDR may have an infrastructure to target state health officials and we could also place information on lead issues on a Internet site for access by the public.	Region 7
The plan should note the lead is a focus area that is related to other Administrative Reforms	This point was in the last draft and has been emphasized in the revised draft plan.	Region 3/8 Accelerated Response Center
Coordination is needed with the Office of Solid Waste, the Office of Air, and the office of Water because of the efforts to develop the National Hardrock Mining Framework.	This need will be raised to the Policy and the Working Level Policy Group/Large Area Lead Sites groups.	Region 3/8 Accelerated Response Center
Training and outreach is needed for lead risk assessment and policies	Nick Ceto (Region 10) and Nick Morgan (Region 5) have suggested that members of the TRW discuss this issue at the working level meeting in August. A recommendation is desired.	Region 3/8 Accelerated Response Center

Because the TRW is composed primarily of risk assessors, some issues (i.e., Sampling Guidance, coordination with HUD, criteria for removal actions, sampling manual short sheets, trespasser scenario, home gardening, attributable risk, and lead paint) may be better placed with the Lead Work Group.	For most of these issues, there is a component of lead risk assessment that the TRW is expected to constructive role in executing. Brief work plans should help to clarify how the Lead Workgroup and others will coordinate on these issues to ensure that each issue receives the type of review needed. Such work plans will be developed and circulated.	Region 7
New Issues Prioritization: All issues presented are not of equal priority. Region 9 would place a lower priority on: Uncertainty in Lead Risk Assessments; PB STAT; IEUBK Model, v. 0.99e; Other Enhancements to 0.99d; and Attributable Risk.	While this set of priorities may be correct, we seek to ensure that the basis for the concern for the new issues be understood in setting priorities. Also, there should be some consideration of the time required to complete these tasks.	Region 9
Increase the role of regional risk assessors in the coordination of TRW activities	The plan provides for increased communication with policy and management groups. We also have each region directly involved in the TRW activities. We have also sought to bring issues into the Risk Assessors Teleconferences for Superfund discussions. We welcome specific recommendations for improving this framework or expanding our approaches.	Region 9

A Preliminary Remediation Goal for Industrial Sites--Region 9 has been using 1,000 ppm based on the 1989 Directive but should develop a specific national recommendation	This issue will be raised to the TRW. Similarly, we do not have primary ? evaluation levels for lead, which are also needed.	Region 9

Comment	Response	Comment Source
The role of the TRW in developing Agency positions on lead should be clarified		Region 10
Providing all completed IEUBK risk assessments to the TRW--why?	During discussions on Superfund Reauthorization, several members of Congress voiced concerns on the inappropriate use of the IEUBK. Summaries of the approaches employed in IEUBK risk assessments will be used to address these concerns in the future.	Region 10
Clarify that all completed lead risk assessments that used the IEUBK model is not contemplated for time-critical responses.	The April 17 memo requested did not distinguish between time critical and other IEUBK assessments. The intent is to treat time critical applications of the IEUBK in the same way as other applications. Thus, according to the plan, if an application were expected to be innovate, deviate from existing guidance or be controversial, it should be identified and reviewed before any decision on its use.	Region 8
Identify all ongoing and controversial IEUBK risk assessments	Working with Regions on these risk assessments should help to identify consistency issues improve quality	Region 10
How far back should the risk assessments go?	The primary interest is for risk assessments that have employed IEUBK .99d (or later when .99d is updated)	Region 10

To which guidance will the assessments be compared?	The IEUBK results would be compared to current guidance (which includes the soil lead directive, the Guidance Manual, and the Technical Support Document)	Region 10
An analysis of our past risk assessment and risk management decisions will help us work toward a consistent approach	This theme was a central issue in developing the plan for lead issues and designing strong Regional participation.	Region 10
Given the importance of industrial sites, information on adult lead risk assessments should also be assembled	Region 5 has volunteered to forward adult lead risk assessments for review	Region 5
Is the development of sampling guidance to be used solely for the IEUBK?	Yes, there are specific sampling needs that would be targeted for the IEUBK alone. It is our intent to develop sampling guidance for lead. Susan Griffin of Region 8 has been a lead in this area. Coordination with other groups will be undertaken for this project.	Region 8

High Priorities of the Lead Technical Review Workgroup (as of 1995)

Title	Activity	Chair	Members
Site-Specific Support		Chair: Susan Griffin, Pat Van Leeuwen, Mark Maddaloni	
Validation Work	1) Field data is being used to compare blood lead levels in children with IEUBK model results. These results may indicate a need for revisions to the IEUBK. 2) The computer code has been checked for logical and numeric consistency. 3) Validation workshop in Spring of 1996.	Karen Hogan	Paul White, Allan Marcus
Independent Verification		Karen Hogan	Rob Elias, Susan Griffin
Validation Workshop		Chris Weis, Harlal Choudhury	Barbara Davis, Karen Hogan, Paul White, Allan Marcus, Roy Smith, Rob Elias
Outreach to Managers/Validation Work		Susan Griffin	Karen Hogan, Harlal Choudhury
Adult Lead Number		Mark Maddaloni	Pat Van Leeuwen, Paul White, Allan Marcus, Rob Elias, Roy Smith, Susan Griffin, Harlal Choudhury, Barbara Davis
Sampling Guidance		Susan Griffin	Chris Weis, Karen Hogan, Mark Maddaloni, Paul White, Roy Smith, Rob Elias, Harlal Choudhury, Barbara Davis, Pat Van Leeuwen
Research Planning		Chris Weis, Rob Elias	Karen Hogan, Mark Maddaloni, Bruce Means, Paul White, Allan Marcus, Harlal Choudhury, Barbara Davis
SOP Fact Sheet		Susan Griffin	Paul White, Bruce Means, Harlal Choudhury, Rob Elias
Publication		Rob Elias	All
Title X		Karen Hogan	Bruce Means, Pat Van Leeuwen, Mark Maddaloni

Medium, Low, and Other Priorities of the Lead Technical Review Workgroup (as of 1995)

Title	Activity	Chair	Members
Medium Priority Projects			
Outreach with Removal Program		Pat Van Leeuwen	Mark Maddaloni, Bruce Means, Barbara Davis
ATSDR/State Cooperation	Coordination on field studies, use and interpretation of blood lead data that can be used for comparing predicted and observed blood lead levels.	Pat Van Leeuwen	Mark Maddaloni, Bruce Means, Chris Weis
Low Priority Projects			
Repository of Lead Articles/Workgroup Archive		Rob Elias	Barbara Davis, Pat Van Leeuwen
Projects without Leads			
FOIA Requests/Getting docket in order		Harlal Choudhury	
Training of workgroup in litigation support			
Model implementation/ development			
Technical Documentation			
Training			
Communication with Congress			
Science Policy Council Briefing			

Activity	Lead/Contributors	Objectives
Validation of the IEUBK	Karen Hogan (Lead) --Harlal Choudhury --Barbara Davis --Rob Elias --Allan Marcus --Roy Smith --Pat Van Leeuwen --Chris Weis --Paul White --Larry Zaragoza	1) Field data is being used to compare blood lead levels in children with IEUBK model results. These results may indicate a need for revisions to the IEUBK if differences are seen. 2) The computer code is being checked for consistency with documentation and correct computations. 3) Hold a validation workshop in Spring of 1996.
Training on the Model Applications		
Development of an Adult Number	Mark Maddaloni	This effort is using the results of the Leadville Risk Assessment and information from available models, such as Dr. O'Flaherty's model to assess options for development of an adult lead number.
Defining Research Needs	Rob Elias lead (All)	
Sampling Guidance	Susan Griffin	Lead with contractor support
Publication in Peer-Review Journals	Structure of the Model (Barbara Davis, Rob Elias, Paul White) Model Validation (Karen Hogan, Larry Zaragoza)	

Activity	Lead/Contributors	Notes
Site Specific Applications	Harlal Choudhury	An 800 number would be established to assist with routine questions and direct new questions that will require policy setting decisions.
Removal Policy Short Sheet	?	Development of a short sheet for removal actions to describe when the IEUBK should be used to promote consistency in lead assessment efforts and cleanups.
Coordination with ATSDR, CDC	Pat Van Leeuween	Coordination on field studies, use and interpretation of blood lead data that can be used for comp

Activity	Lead/Contributors	Notes
Technical Memoranda/Fact Sheets --Gardens --GSD --Soil Dust ratios --Soil/dust intake		
Archives and tracking records	Rob Elias	Scientific pape s used to support model development efforts will be made available in a repository. Moreover, other materials (including confidential materials) that were used to support model refinement shall also be organized and maintained for future reference.
Monte Carlo Model Options		Examination of the potential utility of Monte Carlo approaches for use in the IEUBK shall be evaluated.