Paul Nadeau

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

MAY 22 1996

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

OSWER Directive 9200.1-17

MEMORANDUM

SUBJECT: Focus Areas for Headquarters Support for Regional Decision Making

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

Purpose

This memorandum outlines the technical and policy areas the Office of Emergency and Remedial Response (OERR) is focusing its regional coordination efforts on in FY 1996 to promote appropriately consistent program implementation and effective communication between Headquarters and the Regions.

Background

These focus areas represent critical program areas that warrant special attention by Regional and Headquarters management and staff because they 1) have a dramatic impact on the ultimate cleanup decisions EPA makes; 2) they entail issues of intense public, Congressional, and stakeholder interest; and/or 3) they are areas where the policy is changing rapidly due to new understandings in science or technology. Targeting regional coordination will promote continuous improvement in the quality and public understanding of EPA's response decision making in those areas where the coordination will have the greatest impact. Appropriately consistent implementation of national program guidance and policy, and effective communication, will go far toward demonstrating the rationality, fairness, and predictability of our decisions, and enhancing the Superfund program's overall credibility.

The goal of consistent implementation is that we all share a common understanding of program policies and, as a result, employ similar rationales in response selection rather than having, for example, the same cleanup level or identical technologies at every site. Hence, the purpose for focused support for Regions is to ensure this common understanding and credible decision making across Regions and to encourage transparent presentation so that those outside the Agency understand our decisions.

This effort builds on the long-standing tradition of regional coordination in OERR. While the level of involvement of Headquarters staff in supporting response selection has varied over the years, we are now in a period where a strong partnership between the Regions and their Headquarters counterparts on key technical and policy issues related to response selection decisions is crucial.

The persistence and prominence of national consistency as a concern among stakeholders inspired a special meeting of the Waste Management Division Directors in summer of 1995 in Chicago. Areas of concern discussed at that meeting became the focus of a consistency initiative during the latter part of FY 1995. Under this initiative Headquarters staff reviewed proposed plans and draft records of decision (RODs) that related to the focus areas,

developed information on program performance, and suggested alternate language or approaches for some RODs.

In October 1995, OERR's reorganization placed an emphasis on program implementation and the promotion of full program integration begun under the Superfund Accelerated Cleanup Model (SACM) through the establishment of five Regional Accelerated Response Centers, each of which has responsibility for supporting two Regions in their site assessment, removal, and remedial activities.

Continued focus on some key policy areas remains important this fiscal year. These focus areas will enable us to tell the story of our program implementation efforts in a more effective way. Through more direct support of Regional decision making in critical areas and the inclusion of an evaluation component in the process, we will be able to identify trends and good examples of effective implementation we can share nationally, with Congress, States, and the public.

Implementation

This memorandum provides a strategy for OERR and the Regions to work together as partners to ensure that the directives and guidance related to the identified focus areas are implemented in an appropriately consistent manner across all Regions. A key element of focused regional coordination is ensuring that Regions receive and understand all policies related to the four focus areas. To the degree that resources allow, Headquarters will provide face-to-face presentations on the focus areas to appropriate Regional personnel. It is important that all of us share an understanding of the policies related to the focus areas so that they can be incorporated into site activities as early as possible. OERR staff will continue to support Regions on any technical or policy issue that arises, although we will make special efforts to promote understanding of these key issues and facilitate effective decision making with respect to them.

Since decision documents provide one of the most succinct and objective demonstrations of policy implementation, they will be used to assess our progress in implementing the focus areas, as was done last year. Review of draft documents provides an opportunity to positively impact decision documents before they

are made final. Our purpose is to ensure that Agency decisions are clear and consistent in presentation and content and not to second-guess Regional decision-making. However, we will flag inconsistencies and expect to work through such issues as may arise. Headquarters will also compile results for discussion at year's end. This will allow us to gauge our progress toward continuous improvement and to shift our focus to other areas, as appropriate.

Non-Federal Facility Sites: To implement this effort, Regions should send their draft proposed plans to the appropriate Accelerated Response Centers for review. The Accelerated Response Centers will determine the need to obtain draft RODs; and we will prioritize our further attention on those documents based on their relation to the focus areas. For non-time-critical removal actions, the Region should contact the appropriate Regional Coordinator to determine the need to send in the draft Engineering Evaluation/Cost Assessment or Action Memorandum. We will work diligently to accomodate Regional schedules in providing our feedback to you. Sending these documents to Headquarters will enable us to document the national progress of the Superfund program, as well as demonstrate effective implementation of the focus areas. In addition, some compilation of national statistics regarding the focus areas will be developed from review of draft decision documents.

Federal Facility Sites: The Federal Facilities Restoration and Reuse Office (FFRRO) will look at decision documents for Federal Facility sites, to the extent that FFRRO Headquarters staff can meet necessary site-specific schedules, particularly where the Region has an interest in Headquarters review. Therefore, draft decision documents for Federal Facilities should be sent to FFRRO. OERR will provide assistance to FFRRO as needed on technical issues associated with the focus areas.

FOCUS AREAS

OERR's Regional Accelerated Response Centers will focus particular attention on the following four areas:

- **Risk management and cost-effectiveness decision documentation:** ensuring that all Superfund decision

documents clearly present the risks that warrant taking an action, how the risks will be addressed by the response action, the other benefits of the response action, the response costs, and how it was determined that the effectiveness of the response justifies the cost. Risk management decisions include land use and exposure assumptions, which should be reasonable, not speculative;

- **Ground water policy**: ensuring implementation of the phased approach to ground water remediation, use of the Technical Impracticability Guidance, and measurement of response performance;

- **Lead policy**: ensuring implementation of the OSWER lead directive (OSWER Directive #9355.4-12) issued in July 1994, including the use of the integrated exposure and uptake biokinetic model (IEUBK);

- **Presumptive remedies**: ensuring implementation of presumptive remedy guidances at all appropriate sites and measuring resulting impacts (e.g., time and cost saving).

Attachment 1 to this memorandum describes each focus area in more detail, highlighting why each focus area has been identified, and explains the Regions' and Headquarters' anticipated roles.

The four focus areas apply to response actions taken under both removal authority and remedial authority, although the specific application of guidance in a particular area may be different depending on the specific authority involved. For example, the clarification of risk management and cost-effectiveness decisions should be tailored to the specific decision document and the magnitude of the response. For some actions performed under removal authority, the discussion of risks to be addressed and the benefits of the response may be qualitative and less detailed than that for more complex, extensive actions for which more detailed information will be available. In contrast, however, presumptive remedies identify appropriate technologies for specific situations, regardless of the response authority. Similarly, when developing a final response action that addresses lead problems, cleanup levels

should consider health-based levels developed with the IEUBK for both removal and remedial actions. The attached outlines provide more detail on specific implications for actions under removal authority.

REGIONAL COORDINATION

Each of the five Regional Accelerated Response Centers in OERR has designated several staff to serve as Regional Coordinators for the two Regions that each Center is designed to serve. These staff are specifically charged to work with the Regions to resolve general and site-specific policy issues of concern; to provide the Regions with guidance, expertise, and national policy perspectives; to collect and analyze information from the Regions on program implementation, and to promote Regional involvement in the development and implementation of new Superfund initiatives. Attached is a list of Headquarters staff and their responsibilities for regional service.

These Regional Coordinators will assist the Regions with the implementation of these focus areas. They can help ensure that pertinent information regarding the focus areas (e.g., guidance, directives) is disseminated to the Regional staff and management. They can also assist Regions in achieving the specific goals for focus areas by providing project managers with relevant information or specific contacts with subject matter experts, as necessary. Additionally, they will help Headquarters tracking and/or evaluation activities that will be conducted to assess our progress and tell our story.

OTHER IMPORTANT REGIONAL ACTIVITIES

While much of OERR's communications with Regions will focus on the areas described above, your continued attention to several other program implementation goals is important. Headquarters will continue its support to help achieve those goals. The following list is intended to encourage the Regions to implement new guidances or continue progress in the following areas:

- **Construction completions.** Over 800 of the nearly 1300 NPL sites have remedies under construction or are "construction complete." OERR will continue to track construction completions. OERR will assist the Regions by reviewing

closeout reports and providing assistance in accordance with the Construction Completions Care Package.

- **Community involvement.** Communities should be involved throughout the entire response process, for example in developing land use assumptions. Several recently announced reforms provide new opportunities to involve the public in risk assessments and remedy decisions.

- **Partial deletions.** A recent policy change (60 Federal Register 55466, November 1, 1995) allows portions of sites to be deleted before the remedy is completed for the whole site. This tool may be useful in getting sites or portions of sites back into productive use.

- **CERCLIS III.** All Regions will begin using CERCLIS III rather than CERCLIS II for program management activities by early summer. By late summer, use of the system for all Tier I data will expand to other Regional staff, e.g., remedial project managers (RPMs), on-scene coordinators, site assessment managers.

- **Alternative approaches to site cleanup.** Given the limitations on site assessment and listing sites, alternative approaches to site cleanup may be appropriate, such as the use of voluntary cleanup programs, removal authorities, and state authorities.

HEADQUARTERS CONTACTS

For more information on regional coordination and the focus areas, please feel free to contact appropriate staff of the Accelerated Response Center associated with your Region, as provided in Attachment 2.

The following list provides a key to the attachments.

Attachments

cc: OERR Center Directors
OERR Senior Process Managers
Elaine Davies, OERR
Larry Reed, OERR
Gershon Bergeisen
Jerry Clifford, OSRE
Jim Woolford, FFRRO
Kris Hoellen, ASTSWMO
Sharon Jaffess, Region 2, Co-chair, NARPM
Lesley Brunker, Pegion 3, Co-chair, NARPM
Jay Bassett, Region 4, Co-chair, NARPM
Shelley Brodie, Region 7, Co-chair, NARPM
Carl Pelligrino, Region 2, Chair, NOSCA

ATTACHMENT 1: REGIONAL COORDINATION FOCUS AREAS

1) Risk Management and Cost-effectiveness Decision Documentation

Why it is important:

- **Critical information.** Risk and cost are two critical pieces of information in deciding to take a response action, determining the appropriate scope of the action, and ultimately selecting the response action.

- **Criticism.** Program decision making has been criticized. This criticism may have been caused by our failure to clearly explain the links between the risks present at sites and the response actions taken to address them. Similarly, the role of cost in our decisions may not have been presented clearly. As a consequence, the program has taken severe criticism for making decisions that are perceived as not cost-effective. By focusing on improving the documentation of the role risks and costs play in our decisions, we hope to improve the transparency of our decision-making and the public's trust in it.

- **Reauthorization.** Both Congress and the Administration are examining the role of cost in Federal remediation programs. The reauthorization bills and EPA's Superfund Reforms reflect increased scrutiny of the role of cost considerations in the Superfund remedy selection process. Consistent decision making and documentation of EPA's response selection has become more important than ever.

Through this focus area we are highlighting the need to make sound and transparent risk management decisions and to encourage the proper documentation of those decisions, as well as the information used to make those decisions.

Key Messages for Region Action:

- It is very important that Regional risk assessor and risk managers (RPMs and OSCs) discuss site issues and coordinate efforts so that the response actions relate to the risks found at sites.

- **Clearly present risks** that warrant action and clearly demonstrate how the response will take care of these risks.

- Decision documents (i.e., RODs and action memoranda) should **explicitly identify the risks that warrant taking an action** and how the remedy will address those risks, quantified to the extent appropriate.

- Use only **reasonable exposure pathways for risk assessments.** While EPA remains committed to basing decisions on a reasonable maximum exposure case, it is important to remember that this is defined as the highest exposure that is reasonably expected to occur. Look carefully at the exposure pathways of concern to ensure that the pathways used to justify taking an action are reasonable (e.g., generally, residential land use of a landfill is not reasonable unless that land use currently exists).

- **Clearly explain and clearly present the costs** of the selected response action and of alternative remedies considered, and how the costs were balanced with other tradeoffs in the presentation of the rationale for the decision. These should include a thoughtful consideration of long-term operations and maintenance (O&M) costs. It is important that O&M costs are sufficiently considered so that the States have a realistic understanding of the O&M costs they will be assuming.

- **Clearly state the benefits.** Although we perform cost-effectiveness rather than cost benefit analysis in the Superfund program, the decision document should clearly identify the benefits of different alternatives in the nine criteria analysis and the benefits of the selected response action in the rationale for selection. This includes the risks and exposure pathways that will be addressed by the remedy. Nonquantifiable benefits, such as reuse of brownfields, should also be described.

- EPA's effort to more clearly describe the role of cost **does not modify the already important role of cost in our program.** Rather, these activities emphasize EPA being more

consistent and transparent when considering the costs of cleanup actions and what they are accomplishing.

Headquarters Action Items:

- Review proposed plans, as they become available, or draft RODs to ensure that risk and cost data are clear and presented in a consistent manner nationally, and that decision rationales clearly discuss the role that cost and consideration of benefits considered under the other criteria played in the decision. Action memoranda for large dollar removal sites will also be reviewed. Exposure scenarios or risk assessment assumptions will also be reviewed for appropriateness and consistency.

- Provide advice and national perspective to the Regions in the consistent implementation of guidance on presentation of risk and cost information in decision documents for FY 1996 ROD decisions.

- Continue the Interagency Workgroup on Cost-Effectiveness in the Superfund Remedy Selection Process, which is developing "rules of thumb" in this area (expected late in FY 1996).

Key Guidance:

- "Interim Final Guidance on Preparing Superfund Decision Documents," OSWER Directive: 9355.3-02 (EPA 624/1-87/001), November 1989 (to be updated soon).

- "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," OSWER Directive 9355.0-30, April 1991.

- New guidance resulting from Superfund Reform initiatives should be available in the near future, and will include the following:
  - Role of Cost Directive,
  - Rules of Thumb, and
  - ROD Summary Sheet.

2) Ground Water

Why it is important:

- **Large number of ground-water RODs.** Ground-water RODs have consistently made up approximately two-thirds of the total RODs signed each year since the beginning of the program.

- **Potentially high cost.** Ground-water remedies vary widely in cost, but can be quite high.

- **Controversy.** Restoration of ground-water sites on the National Priorities List can be time- and resource-intensive. These issues have lead to Congressional concerns about Superfund's 1) not matching cleanup objectives with specific problems at sites; 2) alleged inconsistent remedy selection among Regions and sites; 3) apparent lack of flexibility in remedy selection process; and 4) incorporation of the latest developments being out of step with the "science."

Key messages for Regional Action:

- Always evaluate the likelihood of **dense non-aqueous phase liquids (DNAPL)** presence;

- Always consider use of a **phased (sequential) approach** to remediation (i.e., early/interim actions preceding the final action) to reduce immediate risks and to help assess the long-term restoration potential of the site;

- Always consider the **sources of flexibility** available in ground-water remediation decisions: Technical Impracticability (TI) ARAR waivers; longer remediation timeframes; natural attenuation; Alternate Concentration Limits (ACLs); and Ground-Water Classification/Future Use;

- Use Comprehensive State Ground Water Protection Program input if available to determine the classification of the impacted ground water.

- Integrate the **future land and ground-water use** scenarios into the overall site remediation objectives to ensure compatibility.

- Recognize that **use of pump and treat remedies may still be appropriate for achieving many remediation goals.**

Headquarters Action Items:

- Track number of remedy decisions employing phased approach, TI waivers, natural attenuation, ACLs, and other sources of flexibility.

- Track estimated costs of ground-water remedies in RODs.

- Consult with Regional staff on ground-water issues and record the number and type of consultations.

- Qualitatively evaluate level of awareness, interest, and use of guidance in Regions.

Key Guidance:

- "Estimating the Potential for Occurrence of DNAPL at Superfund Sites," OSWER Directive: 9355.4-07FS, January, 1992.

- "Considerations in Ground Water Remediation at Superfund Sites and RCRA Facilities-Update," OSWER Directive 9283.1-06, May 1992.

- "Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration," OSWER Directive 9234.2-25, September 1993.

- "DNAPL Site Characterization," OSWER Publication 9355.4-16FS, September 1993.

- New guidances under development that should be available in the near future include the following:
  - "Presumptive Response Strategy and Treatment Technologies for Contaminated Ground Water at CERCLA Sites"

- "Consideration of 'Comprehensive State Ground Water Protection Programs' by EPA Remediation Programs"

Useful Background:

- "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," OSWER Directive: 9283.1-2, December 1988.
- "Considerations in Ground Water Remediation at Superfund Sites," OSWER Directive: 9355.4-03, October 1989.
- "Suggested ROD Language for Various Ground Water Remediation Options," OSWER Directive: 9283.1-03, October 1990.
- "Methods for Monitoring Pump-and-Treat Performance," ORD publication EPA/600/R-94/123.
- "Methods for Evaluating the Attainment of Cleanup Standards, Volume 2: Ground Water," EPA/230- R-92-014, July 1992.

3) Implementing Lead Policy

Why it is important:

- **Frequently occurring.** Lead is one of the most frequently occurring contaminants at Superfund sites.

- **Large and potentially costly sites.** Some types of sites that typically have lead contamination (i.e., mining sites and smelters) are very large, and cleanup level decisions have significant cost implications.

- **Special methods developed.** Special methods for considering lead toxicity have been developed and must be followed.

- **Inconsistencies among sites.** EPA has been criticized for inconsistencies in setting site-specific lead cleanup levels.

- **Technically and emotionally complex.** Lead sites are technically complex and often have emotionally charged communities. The many other potential sources of lead contamination (pipes, lead-based paint) complicate the issues. and may be beyond the scope of Superfund to address.

Key Messages for Regional Action:

- Apply consistent methodology to set site-specific lead cleanup levels. The **IEUBK model should be used to assist in developing a cleanup level for all response actions with a residential land use**, unless time limitations associated with emergency or time critical removals prevents its use. It should be used with as much site-specific data as possible; at a minimum, soil and house dust must be included in IEUBK application. Cleanup levels should be consistent between the responses taken under removal and remedial authority to the extent possible.

- The OSWER Interim Soil Lead Directive (OSWER Directive: 9355.4-12, July 14, 1994) is the current guidance and **supersedes** previous OSWER directives on lead in soil. A new memorandum, "Administrative Reforms for Lead Risk

Assessment" (April 17, 1996) outlines specific steps to implement lead policy.

- The Technical Review Workgroup of Headquarters and Regional risk assessment experts provides **assistance** in implementing the IEUBK model. Pat Van Leeuwen (Region V, 312-886-4904) and Paul White (Headquarters, 202-260-2589) are the co-chairs of the workgroup.

- The **400 ppm screening level in soil is NOT A CLEANUP LEVEL,** but provides a screening level appropriate for children in a residential setting.

- A soil concentration of 1000 ppm is not *a priori* an appropriate cleanup level for industrial sites. The technical review workgroup can assist in developing an **appropriate industrial cleanup level** as well as levels associated with other land uses.

- Factors such as **lead species, chemical form, and bioavailability** may need to be considered when developing risks and cleanup levels. For example, mining wastes may be less bioavailable to children than other sources of lead. Good site-specific information will be useful in determining bioavailability, lead speciation, and specific chemical forms.

- The large scale of the problem at some sites will make removal or treatment impracticable. Full soil removal may not be appropriate, especially at large sites. **Protective remedies may include exposure intervention to ensure cost-effective yet protective remedies.**

- Where there are multiple sources of lead, **all sources of lead should be considered in determining appropriate cleanup responses.**

<u>Headquarters Action Items</u>:

- Identify lead sites and work with RPMs/OSCs to ensure that they understand the issues.

- Review proposed plans to evaluate consistency with lead policy.

Key Guidance:

- Revised Interim Soil Lead guidance for CERCLA sites and RCRA Corrective Action Facilities, OSWER Directive: 9355.4-12 (PB94-963282), July 14, 1994. This reference contains the full reference for the IEUBK model and supersedes previous OSWER lead guidances including Sept, 1989; May 9, 1990; and June, 1990.

- Guidance on Residential Lead-Based Paint, Lead Contaminated Dust, and Lead-Contaminated Soil, (PB 94-962284), July 14, 1994. (This guidance from the Office of Toxic Substances addresses lead paint hazards.)

- Administrative Reforms for Lead Risk Assessment, April 17, 1996.

4) Presumptive Remedies

Why it is important:

- **Streamlined Investigation.** Presumptive remedies streamline site investigations and speed up the remedy selection process by reducing documentation and feasibility study requirements.

- **Fewer Arguments with Stakeholders.** In addition to significant cost and time savings in the RI/FS process, Superfund stakeholders have indicated that by our clearly presenting acceptable remedy preferences, there will be less cause to argue over cleanup approaches. This will result in better buy-in by states, local communities and PRPs.

- **Voluntary Cleanup.** Certain presumptive remedies may also promote more voluntary cleanups (e.g., manufactured gas plants).

- **Streamlines remedial design.** Additional savings can also be realized in the design phase, as presumptive remedies can minimize or eliminate extensive data collection by anticipating and supporting design needs during the RI/FS process.

- **Reform Initiative.** Presumptive remedies have been identified as both administrative improvements and reforms.

Key Messages for Regional Action:

- **Use presumptive remedy guidances at all sites where they are appropriate.** Presumptive remedy guidance is available for municipal landfills, volatile contaminants in soil, and wood treaters. User's Guides for RPMs are also available.

- **Involve stakeholders early** (e.g., community, state and local officials, site owners and/or potentially responsible parties) to familiarize them with the concept of presumptive remedies and how they will be used to streamline site response.

- **Establish future land use assumptions** and **protective cleanup levels** as part of the remedy selection process; they **are** developed **independent of the application of a presumptive remedy**. At specific sites, the need to achieve protective levels consistent with anticipated land use may impact the application of specific presumptive remedies (e.g., protective levels associated with residential land use may preclude the use of biotreatment as one of the presumptive remedies at some woodtreater sites.

- Recognize that some presumptive remedy guidances only address materials comprising "principal threats," while others are more comprehensive.

Headquarters Action Items:

- Develop a questionnaire/survey instrument to evaluate the implementation of presumptive remedies, both where they have been used and where they should have been used but were not used. This survey may be an electronic evaluation form for use by site managers and may include telephone inquiries. OSWER's Federal Facilities Restoration and Reuse Office will address presumptive remedy use at Federal Facilities.

- Track the implementation of presumptive remedies to ensure consistent application of the guidance. Evaluations will be performed and results circulated to communicate lessons learned.

- Monitor the potential application of presumptive remedies through the CERCLIS III database.

- Identify sites which should be employing presumptive remedies. Inform those RPMs them about the use of the presumptive remedy, and provide information on where they can obtain additional guidance and support.

Key Guidance:

- "Presumptive Remedies: Policy and Procedures," OSWER Directive: 9355.0-47FS (PB93-963345), September 1993.

- "Presumptive Remedy for CERCLA Municipal Landfill Sites," OSWER Directive: 9355.0-49FS (PB93-963339), September 1993.

- "Presumptive Remedies: Site Characterization and Technology Selection for CERCLA Sites with Volatile Organic Compounds in Soil," OSWER Directive: 9355.0-48FS (PB93-963346), September 1993.

- "Presumptive Remedies for Soils, Sediments and Sludges at Wood Treater Sites," OSWER Directive: 9200.5-162 (PB95-963410), November 1995.

- New presumptive remedy guidances under development that should be available in the near future include the following:

  - Presumptive Response Strategy and Treatment Technologies for Contaminated Ground Water at CERCLA Sites
  - Manufactured Gas Plants
  - Sites Contaminated with PCBs
  - Grain Storage Sites.

ATTACHMENT 2: REGIONAL COORDINATORS

REGION 1/9 ACCELERATED RESPONSE CENTER

REGION 1 REGIONAL COORDINATORS:
- Mike Hurd.....703-603-8836
- Charles Sands.....703-603-8857

REGION 9 REGIONAL COORDINATORS:
- Karen Bankert.....703-603-9046
- Alan Youkeles.....703-603-8784

REMOVAL COORDINATORS:
- Richard Jeng.....703-603-8749
- Art Johnson.....703-603-8705

REGION 2/6 ACCELERATED RESPONSE CENTER

LEAD CONTACT FOR REGIONAL OPERATIONS
- JoAnn Griffith.....703-603-8774

REGION 2 REGIONAL COORDINATORS - REMEDIAL PROGRAM
- Loren Henning.....703-603-8776
- Marlene Berg.....703-603-8701
- Sherri Clark.....703-603-9043

REGION 6 REGIONAL COORDINATORS - REMEDIAL PROGRAM
- Matt Charsky (lead).....703-603-8777
- Sherri Clark.....703-603-9043
- Karen Tomimatsu.....703-603-8738

REMOVAL, SITE ASSESSMENT
- Terri Johnson.....703-603-8718

EMERGENCIES/OIL/BUDGET/PROGRAM MANAGEMENT
- Schatzi Fitz-James.....703-603-8725

RISK ASSESSMENT, SITE ASSESSMENT
- Janine Dinan.....703-603-8824

ADMINISTRATIVE REFORMS
- Mike Goldstein.....703-603-9045

REMEDIAL DESIGN AND ACTION/O&M/RELOCATION/5 YEAR REVIEW
- JoAnn Griffith.....703-603-8774

REGION 3/8 ACCELERATED RESPONSE CENTER

REGION 3 REGIONAL SUPPORT TEAM

EMERGENCIES/REMOVALS/OIL/ USCG

Roxanna Mero (lead).....703-603-9150
Anne Spencer (support).....703-603-8716

REMEDY SELECTION (includes RI/FS, RODs)

David Cooper (lead).....703-603-8763
Lisa Askari (support).....703-603-8799
Shahid Mahmud (support).....703-603-8789

REMEDY IMPLEMENTATION (Design and construction)

Ken Skahn.....703-603-8801

BUDGET

Anne Spencer (lead).....703-603-8716
Shahid Mahmud (support).....703-603-8789
Roxanna Mero (support).....703-603-9150

PROGRESS(SCAP, CERCLIS,Constuction Completion, etc.)

Rafael Gonzalez (lead).....703-603-8892
Susan Sladek (support).....703-603-8848

POST COMPLETION (5 YEAR, O&M)

Ken Skahn (lead).....703-603-8801
Susan Sladek (support).....703-603-8848

REGION 8 REGIONAL SUPPORT TEAM

EMERGENCIES/REMOVALS/OIL/USCG

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Shahid Mahmud (support).....703-603-8789

REMEDY SELECTION (includes RI/FS, RODs)

Shahid Mahmud (lead).....703-603-8789
Lisa Askari (support).....703-603-8799
David Cooper (support).....703-603-8763

REMEDY IMPLEMENTATION (Design and Construction)

Rafael Gonzalez (lead).....703-603-8892
Ken Skahn (support).....703-603-8801

BUDGET

Anne Spencer (lead).....703-603-8716
Shahid Mahmud (support).....703-603-8789
Roxanna Mero (support).....703-603-9150

PROGRESS (SCAP, CERCLIS,Constuction Completion, etc.)

Rafael Gonzalez (lead).....703-603-8892
Susan Sladek (support).....703-603-8848

POST COMPLETION (5 Year review, O&M)

Ken Skahn (lead).....703-603-8801
Susan Sladek (support).....703-603-8848

REGION 4/10 ACCELERATED RESPONSE CENTER

PRIMARY REGIONAL COORDINATION CONTACTS:

- John Blanchard.....703-603-9031
- Dan Thornton.....703-603-8811
- Steve Chang.....703-603-8758
- Carolyn Kenmore.....703-603-9033
- Richard Troast.(ROD review lead)...703-603-8805

GENERAL EMERGENCY RESPONSE AND REMOVALS:

- Terry Eby 703-603-8741
- Greg Weigel.....703-603-9058

REGION 5/7 ACCELERATED RESPONSE CENTER

EMERGENCIES/REMOVALS

REGION 5

- Ernie Watkins.....703-603-9011
- Duane Geuder (backup).....703-603-8891

REGION 7

- Awilda Fuentes.....703-603-8748
- Bonnie Gitlin (backup).....703-603-8868

EARLY ACTIONS

- Andrea McLaughlin.....703-603-8793

SITE ASSESSMENT

- Scott Fredericks.....703-603-8771

RISK ISSUES

- Jack Arthur.....703-603-9041

FS/ROD ISSUES (GENERAL)

- Robin Anderson.....703-603-8747

GROUNDWATER

- Ken Lovelace.....703-603-8787

PRESUMPTIVE REMEDIES

- Scott Fredericks (OERR lead).....703-603-8771
- Andrea McLaughlin (munic. landfills)...703-603-8793

FOCUS AREAS REVIEW POINT OF CONTACT

- Bonnie Gitlin.....703-603-8868
- (Specific sites will be assigned to other Regional Team members)

REMEDIAL DESIGN / REMEDIAL ACTIONS ISSUES

REGION 5

Awilda Fuentes.....703-603-8748

REGION 7

Ernie Watkins.....703-603-9011

NATIONAL REMEDY REVIEW BOARD

Bonnie Gitlin.....703-603-8868

COST ESTIMATING

Tom Whalen.....703-603-8807

OPERATIONS AND MAINTENENCE

Tom Whalen.....703-603-8807

CONSTRUCTION COMPLETIONS

Awilda Fuentes.....703-603-8748

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