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

AUG 21 1998

MEMORANDUM

SUBJECT: Interim Final Policy on the Use of Risk-Based Methodologies in Setting Priorities for Cleanup Actions at Federal Facilities

FROM: Timothy Fields, Acting Assistant Administrator
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Office of Enforcement and Compliance Assurance

TO: RCRA/CERCLA National Policy Managers
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I. PURPOSE

On October 2, 1995, Administrator Browner announced the third round of Superfund Reforms. Among the reforms announced was one aimed at addressing "the use of risk-based priority setting for determining Federal Facility clean-up milestones". This policy serves several purposes. The first is to fulfill the Administrator's commitment by promoting a more understandable and consistent approach to setting priorities for cleanup activities for federal facilities where EPA is the lead regulator. The second is to implement formally the consensus recommendations reached by the Federal Facility Environmental Restoration Dialogue Committee (FFERDC) concerning the role of risk and other factors in priority setting. The third purpose is to provide direction for the use of tools developed by or that may be developed by other agencies in sequencing work and setting priorities for cleanup actions at federal facilities. This policy also connects the process of setting priorities with the budget process. This policy is intended to complement the draft Office of Enforcement and Compliance Assurance policy, "Federal Facility Enforcement Policy in Response to DoD Funding Shortages", and other policies EPA has developed. This policy applies to all federal agencies (Departments of Defense and Energy, as well as the Civilian Federal Agencies.)

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II. BACKGROUND

This policy is based in part on the recommendations of the FFERDC and is in response to the risk evaluation and prioritization tools in use or that may be developed by other agencies. Although this policy limits discussion to relative risk tools because of the current use, it applies to any risk-based method for categorizing or ranking activities or sites to establish priorities. Whatever risk-based priority setting tool is used, consideration must be given to the "risk plus other factors" approach to establishing priorities recommended by the FFERDC and implemented by this policy.

A. The FFERDC Recommendations

The Federal Facility Environmental Restoration Dialogue Committee (FFERDC) was convened by EPA to develop consensus recommendations on ways to improve the process for making cleanup decisions at federal facilities. Committee membership was broad-based and included representatives from federal agencies; national and local environmental, citizen and labor organizations; Tribal governments and Native American organizations; and state governments and governmental associations.

In its April, 1996 Final Report, the FFERDC set forth several recommendations with respect to stakeholder involvement and funding and priority setting (see Chapter 5). Recommendations made in Chapter 5 on funding and priority setting include:

1) Cleanup activities (e.g., assessments, studies, construction projects, sampling, operation and maintenance) should be prioritized rather than particular sites. While recognizing that risk has an important role in the prioritization process, the Committee also identified other factors that warrant consideration and which could appropriately change the relative priority of an activity or project. This approach was labeled "risk plus other factors" or " risk plus" in the FFERDC Final Report. (See pages 86-87 for a list of factors.) EPA supports this type of approach to establishing priorities among activities or contaminated sites.

2) When prioritizing activities, a process that considers "risk plus other factors" should be used with the agreement of appropriate regulator(s) and in consultation with other stakeholders. The prioritization process should be revisited periodically, at a minimum annually, to allow for the consideration of new information. It was understood that new information could lead to changes in the sequencing and funding of cleanup activities.

3) With regard to a given facility's cleanup budget, the FFERDC Final Report recommended that a collaborative process involving the federal agency responsible for cleanup, regulators, and other stakeholders be established to ensure regular and timely exchange of budget information relative to the prioritized activities, sites, and projects. This process may also set the framework for consideration of changes either to milestones or to the scope of an activity. Information exchange and discussions should be occurring both in the budget formulation and in the budget execution stages.

The FFERDC also recognized that while there are federal budget constraints that may affect the timing or sequencing of activities, the activities per se should still be implemented. **That is, funding constraints may affect when an activity may occur, but not whether the activity should occur. Cleanup goals and requirements are not dependent on funding availability; therefore, a remedy should not be determined based on funding.**

The FFERDC recommendations establish a qualitative approach for considering risk and other factors in priority setting. Building on the efforts of the FFERDC, this policy seeks to recognize the need to address contaminated sites or activities generally based on risk, while retaining discretion to address sites

or activities based on factors in addition to risk sooner than anticipated that may, based on application of a relative risk or other risk-based tool, pose a lesser relative risk. Technical, socio-developmental, budgetary, ecological or environmental justice concerns are examples of factors that can affect the sequencing of an activity. Consequently, this policy recognizes risk as a major factor on establishing the sequence of projects, but not the only factor.

B. Relative Risk Tools

Some federal agencies have developed tools to evaluate the "relative risk" of contaminated sites to aid in setting cleanup priorities within and, in some cases, across facilities.[1] These tools generally group sites into high, medium, and low risk categories. (In this context, for example, once a site has been evaluated and categorized or ranked, the term "relative risk" indicates, qualitatively, that sites placed in the high risk category pose a greater risk than those placed in either of the other risk categories.) These categories are based on a wide range of information about the site contaminants, pathways and potentially affected receptors (both human and environmental). These tools are intended to provide a consistent framework for assessing and comparing the relative risk of sites within a federal agency, and to aid in the subsequent sequencing of cleanup activities. (Definitions of terms can be found in Attachment 1.)

To be an effective tool, a relative risk approach must be used in agreement with the regulators, in conjunction with timely and meaningful involvement of other stakeholders, and with consideration of "risk plus other factors". There must be an opportunity for regulators and other stakeholders to provide input on the implementation of such an approach, as well as on the application of the results. EPA recognizes that a relative risk approach, when used appropriately, helps to inform the decision process for cleanup. Specifically, by providing information on the relative risks of contaminated sites or cleanup activities, EPA, the states, American Indians/Alaskan Native Villages tribal governments, local governments, and other public stakeholders, as well as federal agencies, will be better able to establish priorities and sequence activities. Under appropriate circumstances, then, a relative risk approach can help to: 1) ensure protection of human health and the environment in a more effective manner; 2) build and justify federal agency budget requests; 3) ensure that appropriated funds are allocated to support the most important activities; and 4) allocate resources if funding shortfalls arise. With limited resources to devote to overseeing federal agency cleanup actions, EPA should focus its efforts and resources on the most significant activities.

III. APPLICABILITY

Although this policy is addressed to the EPA Regional Offices, state and tribal environmental programs may have a major role in oversight of cleanup at federal facilities where EPA is involved. Consistent with other EPA polices and guidances, regional programs should be reducing overlapping regulatory requirements.[2] At several facilities, however, more than one regulator is involved. Some states, for example, are overseeing certain federal facility cleanup work at National Priorities List (NPL) facilities using their authority under the Resource Conservation and Recovery Act (RCRA), while EPA oversees separate sites at the same facility based on our authority under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Additionally, tribal environmental programs are developing a greater capability to exercise a regulatory role. This is especially true at federal facilities

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[1] These approaches are consistent with FFERDC's recommendation that Departmental programs should seek to compare risks, grouping them, as appropriate, into broad categories of concern (i.e., high, medium and low) identifying the populations potentially at risk and in the context of uncertainty.

[2] In November, 1997, EPA issued the "Lead Regulator Policy for Cleanup Activities at Federal Facilities on the National Priorities List". The purpose of the policy is to clarify roles and minimize overlapping federal and state regulatory oversight of cleanups at federal facilities to encourage more efficient use of federal and state resources.

located in Indian Country. Therefore, although this policy applies only to EPA, sensitivity to the primary or co-partnership role of states and tribes in setting priorities should always be kept in mind. Although EPA certainly promotes use of a single framework to set priorities, nothing in this guidance is intended to constrain a state or tribe, in its oversight capacity, from imposing its regulatory requirements. In cases of joint (EPA and state/tribal) oversight, regions should encourage their partners to adopt a "risk plus other factors" approach when establishing cleanup priorities at federal facilities.

This policy does not apply to compliance activities as they are not typically discretionary. It also cannot usurp rights and obligations established by treaty with tribes. Risk-based ranking tools cannot justify non-compliance with deadlines, requirements or time frames mandated by treaty, regulation, or statute. Full compliance with applicable waste management requirements is expected and should be funded as part of the cost of the waste management activity or operation. The timing of actions to correct historical releases from regulated units, such as RCRA permitted units, however, may be pricritized pursuant to risk-based tools, to the extent such corrective actions are discretionary.

IV. POLICY

This policy generally applies to CERCLA and RCRA response (cleanup) activities at federal facilities on the NPL, and to non-NPL federal facilities where EPA is the lead regulatory authority.

A. Use of Federal Agency Risk Ranking Tools

Ranking or categorizing sites or activities based on relative risk should not be understood to be an accurate assessor or predictor of the risks posed by contaminated sites. Relative risk rankings are not a substitute for a baseline risk assessment. The limitations of the relative risk approach are due in part to frequent reliance on incomplete data and liberal use of assumptions, approximations, judgment, and simplification of a complex subject matter. While approximations, simplification and judgment may be appropriate in initial decisions to prioritize activities, they are sufficiently unrefined to provide any accurate assessment of risk. Accordingly, they are inappropriate tools to evaluate remedial options or to use as a sole means to measure progress in risk or relative risk reduction due to site cleanup; nor are they designed to serve as a substitute for a baseline risk assessment.

Consistent with existing statutory and regulatory mandates, federal agencies remain fully obligated to complete all characterization, removal, remedial or corrective actions at their facilities regardless of the results of relative risk or other risk-based prioritization methods. These methods are not to be used to delay indefinitely completion of cleanup action, nor to influence remedy selection. Risk ranking tools are only to be used as a point of departure to set the relative sequence of cleanup.

It is EPA's expectation that federal agencies will provide the EPA regions, and the states and tribes, as appropriate, with timely opportunity to be involved from the outset to assess data needs and sources, to review results, and as necessary, to revisit the results of applying a relative risk ranking approach. It is also EPA's expectation that these parties will work together from the outset to involve the public.

EPA regions reserve the right to disagree with the results of these relative risk-ranking or other tools, especially where the results are not predicated on or are inconsistent with scientific data or science-based judgment, or if the design of the relative risk tool inadequately considers relevant current and future site characteristics. EPA should express and appropriately document its views on the relative risk approach and results to the local facility environmental official, since, in many instances, a federal facility uses the results of a relative risk evaluation to support its budget request. Additionally, EPA should work with the facility to resolve any differences.

Where a federal facility using the relative risk approach or model has not reached agreement with the EPA Regional Office, EPA regions should exercise independent judgment in using the outcomes in establishing priorities and milestones. An EPA region is not bound by the results of a relative risk model in establishing priorities, sequencing activities or establishing enforceable milestones when the tool is inadequate, inappropriately applied, or when the results do not reflect the best judgment of the region.

B. Role of Risk and Other Factors in Establishing the Sequence of Activities

The results of such risk evaluation and prioritization tools should serve as a starting point for sequencing site activities. Other important factors, (not in order of priority), that should also be considered, include:

- statutory and regulatory requirements (including a state's requirements);
- cultural, social and economic factors, including environmental justice concerns;
- short- and long-term ecological effects and environmental impacts in general, including damage to natural resources and lost use;
- making contaminated land available for appropriate reuse;
- acceptability of the action to states, tribes and public stakeholders;
- pragmatic considerations (such as the availability and continuity of skilled workers, labs, and cleanup contractors to complete the activity, the ability to execute cleanup projects in a given year, the feasibility of carrying out the activity in relation to other activities, etc.);
- overall cost and cost-effectiveness of the proposed activity, with special consideration given to the relative risk reduction value obtained by the proposed expenditure;
- importance of reducing infrastructure costs (i.e., costs associated with maintaining a facility);
- the availability of new or innovative technologies that might accelerate or improve the ability to achieve a permanent remedy;
- Native American Treaty, statutory rights and trust responsibilities;
- life cycle costs; and
- intrinsic and future value of affected resources (such as groundwater and fisheries).

These factors may change the relative priority of a given site activity (but will not affect its relative risk score). For example, at base closure facilities, economic development may cause a site to become a higher priority due to the need for economic revitalization and job creation (assuming there is no immediate threat to human health and the environment). As a further example, there may be a leaking storage tank contaminating a water supply. Two hundred yards away, there may be another tank which needs to be removed, but is no longer a source of contamination. The first tank is deemed to be a "high" relative risk, the second a "low" relative risk. Rather than have the tank contractor mobilize twice to pull the tanks, combining the two actions, which will yield cost savings, makes better technical and project management sense. Based on this approach, a "low" risk site is taken out of what would be its normal sequence, all other factors being equal. In any case, factor(s) causing a change in the relative priority should be identified and fully discussed with public stakeholders.

Whatever the risk ranking or categorization of a contaminated site, it is EPA's clear expectation that the federal agencies will sequence activities based on full consideration of the views of the regulators, and input from public stakeholdes, as appropriate. At NPL sites, these cleanup schedules should be incorporated into an interagency agreement, as required by statute.

C. Application of Risk and Activity Sequencing in Enforceable Milestones

Having established the relative risk information for the site, and then having generally decided on the sequence of activities based on a risk plus other factors approach, the stage is set to make decisions on what activities are to be funded within a given fiscal year. At this juncture, funding requirements along with anticipated funding levels should be considered. Budget targets or federal appropriations may affect the number and/or scope of activities that can be funded in any given fiscal year, which underscores the importance of establishing priorities.

Where possible, the results of this approach should be considered in the establishment or revision of milestones in enforceable agreements. In setting or modifying milestones, EPA regions should recognize federal fiscal constraints. However, nothing in this policy should be interpreted to mean that federal agencies are relieved of their obligations under Executive Order 12088 to request funding from OMB to meet their cleanup and compliance requirements. Under no circumstances do the regulatory agencies give up their enforcement discretion. When considering revisions to existing agreements, regions should refer to EPA policy on federal facility budgeting processes[3].

Milestones should generally correlate with the relative priority of an activity and availability of funding. That is, in general, higher priority activities should be started first and as early as possible. Additional time should be provided for lower priority projects as long as the ultimate completion date is not inconsistent with the CERCLA Section 120(e) mandate that remedial actions at federal facilities subject to interagency agreements shall be completed "as expeditiously as practicable". Availability of funding and other activity information is necessary for the regulators and the public stakeholders to accept proposed milestone dates and potential changes to such dates. While milestones, in-and-of-themselves, will not be driven by the budget targets provided by an individual agency, command or field office, given the inter-dependent nature of milestones and the budget, consideration of budget constraints as milestones are set and modified is appropriate.

D. EPA Involvement in Federal Agency Risk Ranking and Priority Setting Events

Regions should participate with the federal agencies in facility-specific, cross-state, cross-regional, cross-command and/or cross-Service efforts to ensure consistency in risk categorization or ranking, in setting facility priorities, in budget formulation and in responding to Congressional appropriation decisions. Where the facility has not contacted EPA, regional offices should initiate dialogue with the facility.

At a minimum, EPA regions should meet annually with the facility environmental staff and managers to: 1) review overall cleanup progress to date; 2) consider new site information on contamination, funding, risks, economic development, etc.; 3) review other information that may affect the sequencing of activities; and 4) make every effort to reach agreement on priorities. This process needs to occur well in advance of annual formulation of the federal budget for the short term (current and upcoming fiscal year) and the longer term (Fiscal Year plus 2 and beyond), usually in the late winter or early spring. Efforts should be taken to include states and or tribes, as appropriate, in these deliberations.

There are at least four discrete steps in the process when the EPA region should be involved. The first is at the facility-level when out year budgets are being developed, and when the upcoming fiscal

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[3]More specific guidance on budgetary concerns is the subject of the following EPA policies entitled: Guidance for EPA participation in DOE FY 1998 Environmental Management Budget Formulation (May 16, 1996) and Federal Facility Enforcement Policy in Response to DoD Cleanup Funding Shortfalls (imminent).

year budget for the facility is being formulated based on the cleanup requirements. The second is when the congressional appropriation is allocated to the facility. The third is when the facility's risk ranking or categorization of sites is updated since this may affect the sequence of activities. The fourth is when decisions are made internal to the federal agency that would adversely affect the ability to achieve milestones. Each of these junctures has the potential to impact milestones and consequently require EPA input. However, no milestones can be modified without the consent of EPA and the state, where the state is a party to an enforceable agreement.

E. Federal Agency Responsibilities in Risk Ranking, Priority Setting and Budget Development

As discussed earlier, it is EPA's expectation that federal agencies will seek full EPA region, state, tribal and public stakeholder involvement when applying risk ranking tools. All parties should strive to develop consensus views in the risk ranking process and the setting of priorities. EPA should be consulted prior to the implementation of any risk ranking tool by a federal agency. This will help to minimize later questions about methodology, data quality, and outcomes. Active, ongoing consultation during the process is essential both to regulator acceptance of the outcomes, and to helping ensure that the regulators are in a position to answer questions the community may direct to them. Therefore, the results should be discussed with the regulator(s) prior to any presentation to the community or the advisory boards.

EPA expects the federal facilities to seek funding in the federal agency's internal budget-building/budget justification processes that reflects the input provided by the regulators and stakeholders regarding priorities and milestones. This is particularly true when such priorities appear to diverge from the results of the relative risk categorization process or rankings. For example, if a region takes the position that an activity that scores low on relative risk is a higher priority for other reasons, then any written rationale provided by EPA should be included in the federal agency's internal budget deliberations process. (This is consistent with the recommendations in the FFERDC report.)

F. Role of Public Stakeholders

Although it is the lead federal agency's responsibility to initiate and maintain public local stakeholder involvement in cleanup decision making, including risk ranking and priority setting, EPA should support and encourage timely stakeholder input. This may include meeting with stakeholders, providing technical staff support, and helping the community to learn about and understand both the risks posed by the contamination on a facility as well as any response efforts intended to address the contamination. EPA expects federal agencies to make extensive efforts to involve communities in the risk ranking and priority setting processes. Appropriate mechanisms include, but are not limited to, widely announced community meetings, restoration advisory board/site-specific advisory board meetings (RAB/SSAB), public announcements, fact sheets, or any other avenues consistent with the facility's community relations plan.

The degree of stakeholder input, whether to assist in, or simply to review the results of, activity or site ranking, ultimately is decided by the stakeholders. Stakeholders may also be involved in other related ways by:

- providing information for use in ranking sites and setting priorities;
- developing alternative or additional tools to evaluate risks and other factors;
- commenting on the federal agency's budget development and appropriation and recision distribution; and

- helping to reconcile budgets across state and regional boundaries, military commands, and services.

Clearly, public involvement is strongly recommended. EPA believes that the public should be informed of any efforts to negotiate formal cleanup agreements between regulated and regulating agencies (e.g., Interagency Agreements as per Section 120 of CERCLA). In addition, the agencies conducting the negotiations should make an effort to ensure that their negotiators are kept informed of community concerns and issues. This involvement may be achieved by advisory boards or any other appropriate mechanism for information exchange. Appropriate information to be shared includes any risk assessments having bearing on the negotiated cleanup, schedules for cleanup activities and their associated costs, priorities for cleanup that should be considered for enforceable milestones, and provisions for interaction with the public and advisory board in future decisions. (See chapter 4 of the FFERDC Final Report.)

While community input is strongly recommended, and may affect the risk ranking and priority setting process, neither the federal agency nor the regulator(s) is bound by it. Likewise, while community input is desirable in establishing milestones, neither the federal agency, EPA or other parties to an IAG are bound by these recommendations. EPA will not negotiate milestones through the RABs or the SSABs, as some field personnel have interpreted their relative risk guidance to require.

G. Other Issues

1) Role of Anticipated New Technology

EPA regions may consider the near-term availability of new technology in establishing milestones for remedies or for site characterization work. In making such decisions, regions should consider, among other factors, whether delay would: 1) result in continued exposure; 2) allow further significant deterioration of the environment; or 3) increase cost.

Consistent with the Administrator's August 1994 policy on innovative technologies at federal facilities, EPA should continue to promote the use of federal facilities as demonstration centers for innovative site characterization and remediation technologies. As appropriate, regions should be flexible in setting cleanup milestones and consider exercising enforcement discretion to promote this policy.

2) Role of Data Quality/Insufficient Data

EPA regions may consider the quality and adequacy of data (for example, any data gaps or uncertainty associated with the data) used to evaluate a site's relative risk. Although a site may have a lower relative risk score, the lack of confidence in the data could easily lead to the conclusion that the site is a high priority for sampling. Furthermore, to the extent that the relative risk models err toward lower risk where there are no data to support a higher risk, priority may need to be given to collecting that data, where exposure to contamination may be occurring.

V. CONCLUSION

Categorizing or ranking sites by applying a relative risk evaluation tool or methodology may be used to set priorities and establish milestones. Although these tools have the potential to assist in the cleanup process, it should be recognized that they are inherently limited. They may serve as a point of departure for deliberation on establishing the priorities and the sequencing of cleanup activities, but they do not substitute for a baseline risk assessment. Additionally, activities may be prioritized on factors other

than risk. EPA regions should be active participants in the federal agency risk ranking process to assist in its application and to better understand its outcomes.

Such involvement should help prevent disputes later. However, it is appropriate for the region to dispute a request where it is inconsistent with mutually agreed upon facility decisions.

Questions about the risk ranking issues addressed in this policy should be directed to Remi Beth Langum in the Federal Facilities Restoration and Reuse Office, Office of Solid Waste and Emergency Response at 202-260-2457, or to the general office number, (202) 260-9924. Enforcement-related questions should be directed to Darlene Boerlage of the Federal Facility Enforcement Office at (202) 564-2593.

VI. NOTICE

This policy and any internal procedures adopted for implementation are intended solely as guidance for employees of the US EPA. Such guidance and procedures do not constitute rule making by the Agency and do not create legal obligations. The extent to which EPA applies this guidance will depend on the facts of each case.

ATTACHMENT 1

Definitions

A common lexicon is important when addressing the subject of risk and priority setting. First, the term risk refers to risks to human health and the environment associated with a release or threat of a release of a hazardous substance. It is not used to apply to other kinds of "risks", such as risks of harm to the economy, to cultural or historical resources, or the risk of increased cost. Second, relative risk ranking or risk grouping of sites is a separate step on the way to setting priorities. Priority setting, or activity sequencing, is the subsequent process of using the results of risk ranking, along with other factors, to determine which activities warrant funding sooner.

Milestones, for purposes of this policy, are the dates contained in enforceable agreements by which certain activities are required to be completed. Historically, some, but not all of the milestones in agreements (or attached site management plans) are subject to stipulated penalties. The rest are interim landmarks along the way. The establishment of both enforceable and non-enforceable milestones is distinct from risk categorization or ranking and priority setting, and relies on the results of those efforts. Enforceable agreements include but are not limited to: Interagency Agreements (IAGs); Federal Facility Agreements (FFAs); RCRA Permits; Corrective Action Orders; Safe Drinking Water Act Orders; and State Enforcement Orders.

For purposes of this policy, the term site means individual areas of contamination within a facility. The term facility means the base, installation, or lands under the management control or jurisdiction of a federal agency or reservation. Federal facilities generally have numerous sites on a single facility.