

US EPA ARCHIVE DOCUMENT



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# Results-Based Approaches and Tailored Oversight Guidance

for Facilities Subject to Corrective Action Under  
Subtitle C of the Resource Conservation and  
Recovery Act

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### **RCRA Corrective Action GPRA Goals**

The GPRA goals for the RCRA corrective action program are that, by 2005, EPA and authorized states will have verified that 95% of 1,714 RCRA GPRA Cleanup Baseline facilities have met the Current Human Exposures Under Control environmental indicator and that 70% of baseline facilities have met the Migration of Contaminated Groundwater Under Control environmental indicator.

For more information regarding the RCRA Cleanup Baseline.

For more information concerning environmental indicators.

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<sup>1</sup> Activities at permitted and/or interim status facilities that treat, store or dispose of hazardous wastes (TSD facilities) have sometimes resulted in releases of hazardous waste or hazardous constituents into soil, groundwater, surface water, sediments, or air. The RCRA Corrective Action Program requires such facilities to conduct investigations and cleanup actions as necessary to protect human health and the environment. See, e.g., RCRA Sections 3004(u)(v), and 3008(h) and 40 C.F.R. Section 264.101.

<sup>2</sup> Results-based approaches was a fundamental message of the 1996 Advanced Notice of Proposed Rulemaking (ANPR; EPA, 1996) which the Agency still views as key operating guidance for the RCRA Corrective Action Program.

groups as regulators, facilities, and the public, respectively. Sometimes, we will refer to all three groups collectively as “stakeholders.”

This document provides guidance to EPA Regional and State corrective action authorities, as well as to facility owners or operators, and the general public on how EPA intends to exercise its discretion in implementing the statutory and regulatory provisions that concern RCRA corrective action. The RCRA statutory provisions and EPA regulations described in this document contain legally binding requirements. This document does not substitute for those provisions or regulations, nor is it a regulation itself. Thus, it does not impose legally-binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decisionmakers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. Any decisions regarding a particular facility will be made based on the applicable statutes and regulations. Therefore, interested parties are free to raise questions and objections about the substance of this guidance, and the appropriateness of the application of this guidance to a particular situation. EPA will consider whether or not the recommendations or interpretations in the guidance are appropriate in that situation.

## **II. Results-Based Approaches for RCRA Corrective Action**

### **What do we mean by “results-based approaches” for RCRA Corrective Action?**

The purpose of the Corrective Action program is to address releases of hazardous waste and hazardous constituents at RCRA facilities in a timely and protective manner. Results-based approaches emphasize outcomes, or results, in cleaning up releases, and strive to tailor process requirements to the characteristics of the specific corrective action. Results-based approaches involve, where appropriate, setting goals, providing procedural flexibility in how goals are met, inviting innovative technical approaches, focusing data collections, and letting owner/operators undertake cleanup action with reduced Agency oversight. Under such approaches, facilities are held fully accountable for the results they agree to achieve.

EPA's results-based strategy conveyed in this guidance provides a recommended framework for RCRA program implementors to run programs that effectively use available corrective action cleanup tools and private party and regulatory agency resources to address environmental problems. We recommend regulators weigh the facility-specific circumstances, including the cooperativeness and technical capability of the facilities, in deciding the specific approaches to be taken at a given facility.

### **What are the benefits of results-based corrective action?**

- U Encourages regulators and facilities to design approaches and processes that are appropriate for their particular facilities;
- U Generally achieves faster environmental results;
- U Provides opportunities for resource savings to both the facility and regulatory agency; and
- U Maximizes efficiency of a cleanup

### **What are EPA's expected program results?**

The overarching goal of the corrective action program is to clean up contaminated facilities as necessary to protect human health and the environment.

In the short-term, the corrective action program generally focuses on preventing unacceptable exposures to humans and prevent the further migration of contaminated groundwater. To ensure long-term protection, EPA recommends that regulators and facilities use the following threshold criteria as general goals for final cleanups and as screening tools for potential remedies:

1. Achieve media cleanup objectives<sup>3</sup>; and
2. Control the source(s) of release so as to reduce or eliminate, to the extent practicable, further releases of hazardous waste or hazardous constituents that may pose a threat to human health and the environment.

Protecting human health and the environment is the mandate of the RCRA statute and regulations; therefore, it is appropriate that remedies should meet the criteria outlined above as a means to demonstrate progress toward achieving the overall mandate to protect human health and the environment.

For further information with regards to RCRA guidance documents, Section VI has a listing of specific reference documents which are available on-line.

### **What are some approaches to results-based corrective action?**

Below are brief descriptions of five core results-based approaches that we recommend facilities and regulators consider at any corrective action site to promote results-based corrective action. Also described are four supplemental results-based approaches that may expedite cleanups. Because they are more dependent on the presence of specific site factors, the supplemental approaches are not expected to be applicable as often as the core approaches. Section III of this document provides more detailed guidance on "Tailored Oversight" because we believe this concept is generally a very effective approach to expediting cleanups and ensuring that facilities achieve cleanup goals. We recommend that any tailored oversight approach chosen be consistent with any permit, order or other enforceable mechanism that

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<sup>3</sup> Media cleanup objectives for final remedies typically includes the more specific concepts of media cleanup levels, points of compliance, and cleanup time frames. In previous guidance (EPA, 1996a - page 19449), EPA referred to media cleanup objectives as media cleanup standards; we now use media cleanup objectives to avoid confusion over the term "standard" that is often associated just with numeric values.

applies to a facility.

### **Results-Based Approaches We Recommend Considering at All Corrective Action Facilities**

**Tailored oversight** - Oversight, in general, is the responsibility of the lead regulator<sup>4</sup> to ensure the facility implements corrective action. Tailored oversight is an oversight plan developed based on facility-specific conditions such as site complexity, compliance history, and financial and technical capability of the facility. In addition to discussing and using results-based approaches with facilities, we recommend regulators evaluate the facility-specific conditions and develop a plan with an appropriate level of oversight that will enhance timely, efficient, and protective cleanups. Tailored oversight may result in the elimination of administrative or technical steps, usually for facilities who have agreed to, and have demonstrated that they are capable of, meeting the environmental objectives and specific requirements established for their facility. In some instances, an analysis of facility capabilities may result in greater oversight to ensure environmental results are achieved in a timely manner.

**Holistic Approach** - The 1996 ANPR states, “In general, EPA believes that a holistic approach to corrective action, could increase cleanup efficiency and reduce transaction costs.” (61 FR 19432, May 1, 1996, 19456). The term “holistic” in this context means taking a “big picture” look so facility representatives and regulators can prioritize their resources based on risk<sup>5</sup> to human health and the environment. For example, in a situation where there are many on-site sources of contamination contributing to an off-site plume of contaminated groundwater, a holistic approach could first focus on identifying and controlling, in the near-term, current risks to humans from the site as a whole. Subsequent to controlling these risks, the facility could then conduct additional focused investigations to help evaluate additional cleanup activities needed to achieve other short- and long-term cleanup objectives associated with individual sources. EPA believes that viewing corrective action sites holistically is particularly appropriate to help meet Environmental Indicator goals. Ultimately, the facility would still be responsible for meeting final remedy corrective action goals.

**Procedural flexibility** - Regulators and facilities place their primary focus on environmental results and ensure that each corrective action-related activity at a given facility directly supports cleanup goals at that site. Corrective action is generally structured around seven elements common to most cleanups: initial facility assessment, site characterization, short-term (interim) actions, remedy evaluation and selection, remedy implementation, remedy completion and public participation. EPA emphasizes that no individual results-based approach that implements these

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<sup>4</sup> A “lead regulator” is typically the first-line staff person for the government authority that is responsible for ensuring that a facility implements corrective action as necessary to meet facility-specific corrective action goals. The lead regulator, could depending on the circumstances, either be a federal employee working in an EPA regional office or an employee of a particular State or Territory (EPA, 2001).

<sup>5</sup> “Risk-based decision making is especially important in the corrective action program, where it should be used to ensure that corrective action activities are fully protective given reasonable exposure assumptions and consistent with the degree of threat to human health and the environment at a given facility.” (EPA, 1996; page 19441)

cleanup elements is likely to be appropriate for all corrective action facilities. EPA continues to encourage regulators and facilities to focus on the desired result of cleanup rather than a predetermined (or “generic”) step-by-step cleanup process that does not reflect site-specific circumstances. We recommend these seven elements be viewed as evaluations generally necessary to make good cleanup decisions. By focusing on results, regulators are encouraged to use the most effective approaches for facility management and oversight.

**Performance Standards** - The regulator, working (as appropriate) with the facility, develops general performance standards to prescribe the scientific, technical, and administrative requirements the facility must fulfill in order to implement and ultimately complete corrective action. Under this approach, it is anticipated that the facility, not the regulator, is responsible for determining the methods by which the performance standards are attained, *e.g.*, designing a remedy that will meet the required performance standard. That is, the regulator establishes clear, reasonable, and protective performance standards, while the facility (with an appropriate level of regulatory oversight) determines how those standards are met.

**Targeted (or Focused) Data Collection** - As described in the 1996 ANPR, there are a variety of results-based approaches that regulators and facilities might use to focus data gathering efforts to identify and implement appropriate responses at a corrective action facility. For example, EPA encourages facilities and regulators to develop and use a conceptual site model<sup>6</sup> (CSM) to identify and prioritize data needs based on a particular corrective action goal. Additionally, facilities might dramatically improve the effectiveness and efficiency of data collection by taking advantage of numerous innovative site characterization techniques.<sup>7</sup> Also, EPA recommends using data quality objectives<sup>8</sup> (DQOs) to identify the amount, type, and quality of data needed to support corrective action decisions (EPA, 1994; page 19445).

### Supplemental Results-Based Approaches

**Presumptive Remedies** - As EPA worked through hundreds of individual cleanups, the Superfund program found that similar remedies were successfully used to address many similar sites. This makes sense because certain types of sites, such as wood treater sites, used similar processes which resulted in similar contamination problems. EPA calls the similar approaches used to address these similar sites “presumptive remedies”<sup>9</sup> and has developed a series of presumptive remedy guidance documents for particular categories of sites (*e.g.*, landfills, metals

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<sup>6</sup> A Conceptual Site Model is a three-dimensional representation of what is known or suspected about the sources, releases, and release mechanisms, contaminant fate and transport, exposure pathways and potential receptors, and risk.

<sup>7</sup> To access detailed information, guidance and other resources pertaining to innovative site characterization tools and approaches, see <http://www.clu-in.org/char1.cfm>.

<sup>8</sup> The overall degree of data quality or uncertainty that a decision maker is willing to accept is referred to as the Data Quality Objective (DQO) for a decision.

<sup>9</sup> EPA defines presumptive remedies as preferred technologies for common categories of sites, based on historical patterns of remedy selection and EPA’s scientific and engineering evaluation of how well technologies perform (EPA, 1993).



in soils, volatile organics in soils, contaminated groundwater, wood treaters). As stated in the 1996 ANPR, EPA recommends presumptive remedies be used at “...appropriate sites, including RCRA facilities, to help ensure consistency in remedy selection and implementation, and to reduce the cost and time required to investigate and cleanup similar types of sites.” EPA’s guidance on presumptive remedies is available at

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<http://www.epa.gov/superfund/policy/remedy/presump/pol.htm>.

**Innovative Technologies** - EPA recommends regulators and facilities use innovative technologies when they offer the potential for comparable or superior treatment performance or implementability, fewer adverse impacts, or lower costs for equivalent levels of performance when compared to more conventional technologies. When results-based cleanups allow for innovative approaches, we recommend the overseeing agency require the owner or operator to document the agreed-upon results. We believe that results-based approaches can provide for this kind of flexibility to incorporate many different technical solutions and approaches to facility management. EPA’s Office of Superfund Remediation and Technology Innovation maintains a website (<http://www.clu-in.org/>) that offers a number of resources related to innovative technologies.

**Phased Approach** - Facilities and regulators may improve efficiencies by phasing corrective action to focus first on areas that represent the greatest short-term threat to human health and/or the environment. For example, a phased approach might first focus the facility on meeting corrective action environmental indicators (EIs), then after meeting EIs, the regulator and facility can discuss cleanup time frames and how to achieve intermediate milestones, where appropriate, or final cleanup goals using a phased approach. Phased approaches may also benefit situations where the facility is interested in selling or redeveloping parts of their property.

**Facility-Lead (or Voluntary) Corrective Action Agreements** - A facility-lead corrective action agreement is typically a letter from the regulatory agency to the facility that generally (1) outlines the intent of the facility to undertake corrective action, and (2) contains broad performance standards that provide a framework to guide corrective action. The advantage of this approach is that it can provide an opportunity to expedite corrective action activities and reduce the amount of resources expended by facilities and regulators. In the normal case, this letter is non-binding, but may appeal to a facility who wants to sell its property or conduct corrective action requirements prior to a permit, order or other enforceable mechanism being implemented. Facilities interested in a facility-lead approach should contact the regulator if they are interested in this option. Under facility-lead corrective action, as in any corrective action approach, it is important for all parties to understand what environmental results are expected by the regulator and how the facility should go about meeting the results with the appropriate level of oversight. We recommend the facility provide meaningful opportunities for public participation. In our experience, this is typically crucial in order for it to be a success. In particular, we recommend the public be provided an opportunity to review and comment on the cleanup activities.

### III. Tailored Oversight

#### What is tailored oversight?

As stated previously, oversight, in general, is the responsibility of the lead regulator to ensure the facility implements corrective action in accordance with applicable requirements. Under a tailored oversight approach, regulators and facilities (where appropriate) develop a plan that allows for the appropriate level of oversight for a particular facility rather than a pre-determined “one size fits all” process. We recommend the regulator base the oversight plan on, among other appropriate factors, facility-specific conditions and facility capabilities.

We recommend that state and federal regulators, as appropriate, evaluate and implement tailored oversight at facilities requiring corrective action. Tailored oversight is a significant tool in the overall diversified strategy of results-based project management. EPA recommends program implementers use tailored oversight to help run programs that effectively and efficiently use resources to address environmental problems.

This guidance does not supersede EPA’s previous guidance (January 1992) that addressed the subject of tailored oversight at corrective action facilities; rather, it reaffirms and expands the previous guidance to recommend that regulators tailor oversight to facility-specific circumstances. Both this and the 1992 guidance stress that there are flexible approaches to oversee cleanups.

### **What are the benefits of tailored oversight?**

The potential benefits of tailored oversight are:

- U Focuses stakeholders on goals;
- U Provides an opportunity for resource savings for both the implementing agency and the facility;
- U May lead to faster results because expectations are clearly communicated and documented;
- U Streamlines administrative steps such as interim deliverables and duplicative federal/state reviews;
- U Tailors oversight resources to site-specific factors; and
- U Provides a high level of certainty to stakeholders because corrective action objectives and the oversight approach is discussed at the beginning of corrective action activities.

### **Does tailored oversight result in less protective cleanups?**

No. EPA’s goal remains the same – that is, protection of human health and the environment. Tailored oversight does not change the overall expected results of the RCRA Corrective Action program. It simply offers opportunities, where appropriate, for a facility to reach those results faster. Achieving protection of human health and the environment more efficiently is a benefit to all stakeholders.

### **How does a regulator use tailored oversight?**

EPA recommends that regulators consider the following factors<sup>10</sup> when tailoring their

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<sup>10</sup> Recommended factors are based on experience of EPA regional and state personnel overseeing corrective action, and previous EPA guidance (EPA, 1992; EPA, 1996b; EPA, 1997a; and, EPA 2001e)

oversight at a particular facility.

- Severity of risk (see Highlight box) to human health and/or the environment;
- Site complexity;
- Compliance history of the facility;
- Public interest or facility’s record on public involvement;
- Existence of incentives and motivation to expeditiously and willingly clean up the facility; and
- Demonstrated technical capability of facility

In determining the appropriate level of oversight, we recommend regulators consider each factor against the site-specific conditions that exist at the facility. For example, a reduced oversight approach might be appropriate for even a complex site where the facility is undertaking significant stakeholder outreach, has gained the trust of the community, is cooperative with the overseeing agency, and has a good compliance record.

In our experience, compliance history has been a key factor regulators use in determining the level of oversight for a given corrective action facility. For example, oversight might be reduced where a facility has demonstrated a willingness and ability to cooperatively perform necessary cleanup activities. For non-compliant facilities, oversight might need to be increased to help bring these parties back into, or ensure future compliance.

Another element in analyzing how to tailor oversight is the facility’s active participation in developing a tailored oversight approach. In addition, in our experience, a facility’s willingness and motivation to achieve short term measures or final cleanup increase the likelihood of a successful outcome using tailored oversight. Again, we recommend regulators determine an appropriate level of oversight based on the previously recommended factors.

**What are some of the general questions we generally ask when we evaluate risk at a facility?**

What is/are the:

- actual or potential exposures of nearby populations, animals, or plants to hazardous constituents
- actual or potential contamination of drinking water supplies or sensitive ecosystems
- other situations that may pose threats to human health or the environment.
- presence of hazardous wastes or hazardous constituents in drums, barrels, or bulk storage containers that may pose a threat of release
- risks of fire or explosion or the potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system
- presence of high levels of hazardous constituents in soils at or near the surface that may migrate
- further degradation of the affected media that may occur if remedial action is not initiated expeditiously
- weather conditions that may cause releases of hazardous constituents or migration of existing contamination
- the time required to develop and implement a final remedy

Regardless of the level of oversight used at a facility, we recommend that the overseeing agency ensure that the facility is required to attain and document results. Clear and measurable results (e.g., Environmental Indicators, final cleanup levels, public participation opportunities, performance standards), established at the beginning, should help the facility demonstrate that the remedy meets RCRA requirements.

**How does EPA recommend results-based corrective action objectives be established under**

## tailored oversight approaches?

In EPA's experience, the cornerstone of effective oversight of corrective action activities is a clear – and documented – understanding of facility-specific cleanup goals<sup>11</sup>. Clear goals can greatly enhance the prospect of achieving results that will satisfy EPA or the State. We recommend that regulators and facilities describe goals in all key decision documents and reports, and ensure that the public has access to this information. Tailored oversight, without clearly defined goals, is susceptible to unfocused investigations, irrelevant data, slow cleanups, and added costs.

### What are some examples of situations where a regulator might tailor his/her oversight?

Regulators and facilities should be aware that the level of needed oversight might change throughout the course of corrective action based on facility-specific issues. Furthermore, we recommend that regulators and facilities, where appropriate, balance streamlining objectives with public information needs when developing tailored oversight plans. Once the overall level of oversight is established, specific levels of oversight can be determined for specific activities. For example, general expectations for low, medium, and high levels of oversight might be:

**Low Oversight** - minimal role of the regulator that primarily consists of establishing performance standards and verifying that the facility has achieved these standards, after certification by the facility. When there are compliance schedules in a permit that extend beyond a year, refer to 40CFR § 264.100.

**Medium Oversight** - increased role of regulator, including increased informal discussions, facility visits, inspections, and more stringent review and verification of an increased number of submittals.

**High Oversight** - the regulator directly oversees an intensive effort during which all documents are reviewed and discussed with the facility.

The following is a list of some oversight reducing activities that regulators might adapt as appropriate based on facility-specific circumstances. These include, but are not limited to:

- Eliminating duplicative state/federal reviews of documents;
- Eliminating interim deliverables while maintaining accountability of the facility to produce a measurable end product;
- Limiting review where agency approval is not required for the facility to proceed;
- Increasing the use of meetings, briefings, and other communication methods to identify and resolve issues early on rather than requiring formal documents be submitted and reviewed by the Agency;
- Limiting the number of facility visits for routine field activities when the facility demonstrates competence in achieving remedial results;
- Establishing performance standards that define clear and attainable results;
- Using briefings, conversations, and progress reports from the facility to replace some of the

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<sup>11</sup> Refer to Section II of this document for an overview of short- and long-term cleanup goals for RCRA Corrective Action.

formal interim deliverables while still making this information publicly available where appropriate; and,

- Encouraging communication among the regulator, facility and the community (e.g., make up-to-date facility information available at publically accessible locations). EPA believes public participation is a key component of the corrective action process

### **How does tailored oversight affect formal reporting?**

Under a tailored oversight approach, the regulator might modify the number of formal reports a facility submits to the agency based on facility-specific factors and the facility's capabilities. For example, the regulator might replace some of the traditional formal reporting requirements, with informal communication approaches. In such a case, we recommend the permit, order or other enforceable mechanism be written to allow informal communication and reporting. If, however, a regulator tailors oversight at this level and the facility does not achieve the stated or agreed-upon results, the regulator might find it appropriate to alter the oversight plan (and implementing mechanism), if necessary, to include more formal reporting requirements and a higher level of oversight.

Although EPA generally expects a facility to submit a reduced number of documents when tailored oversight is implemented, the administrative record requirements for such corrective actions remain the same for any corrective action. Agency staff should consult with their Office of Regional Counsel regarding appropriate documentation for the Agency's corrective action decisions.

The Guidance on Enforcement Approaches for Expediting RCRA Corrective Action (EPA, 2001c) provides examples of how an Agency might limit time spent negotiating consent orders and permits, establish time limits to negotiate work plans, consider fixed and flexible schedules of compliance, and limit a facility's revision opportunities.

### **Does tailored oversight mean reduced data quality?**

No. Under the tailored oversight discussed in this guidance, the regulator works with the facility to ensure the appropriate level of oversight. Part of tailoring oversight is defining the problem that the facility needs to address. Once the regulator defines the problem, he or she can help the facility develop a data gathering plan to obtain sufficient high quality data that will allow for remedy decisions. Regardless of the level of oversight, the facility has the responsibility to provide sufficient quality data to verify that the agreed upon results have been met. Documentation allows the regulator and the public to assess the decisions that the facility

performed during corrective action. EPA recommends facilities use the data quality objectives as a framework to explain their data and decisions in the context of facility goals (see EPA, 1994a).

### **Does tailored oversight mean less communication between the facility and the regulator?**

No. In fact, the tailored oversight approach is designed to result in more effective and timely communication between the regulator and the facility. As previously stated in this guidance, we generally expect that reduced oversight approaches will lead to an increase in less formal meetings, briefings and other communication methods to identify and resolve issues. This informal approach reduces the amount of formal procedure, but may provide more frequent contact between the regulator and the facility.

### **What general activities occur during a cleanup that EPA recommends a regulator discuss with a facility before, during, and after developing a tailored oversight plan?**

The general activities listed below are typically discussed in characterizing and remediating a facility. The activities do not distinguish between the regulator's or the facility's responsibility, but rather what usually happens when both work together. They may seem overly simplified, but we think that recognizing and understanding each one is a good starting point for regulators and facilities involved in a facility cleanup.

#### **General Cleanup Activities**

- Review site history;
- Determine the nature and extent of environmental contamination;
- Stabilize (i.e., control) problems if they represent a near-term unacceptable threat to human health or the environment;
- Notify and solicit input from the public at the beginning of corrective action, at key junctures, and as appropriate given site-specific circumstances;
- Work with appropriate parties to determine how decisions will be made for the following:
  - relative priority of problems
  - future land use
  - establishing cleanup goals and risk levels
- Develop reasonable alternatives to clean up priority areas of contamination, which might include consideration of appropriate presumptive remedies that might eliminate the need to evaluate multiple remedy alternatives;
- Evaluate remedy alternatives;
- Make decisions (e.g., relative priority, land use, cleanup goals and risk levels, remedy selection) using the rules you developed above that include consideration of all key stakeholder opinions and values;
- Implement the remedy; and
- Keep good records and document all key decisions throughout corrective action implementation

### **Can tailored oversight lead to resource savings?**

Yes. While the actual remedy cost (e.g., excavation and treatment) may not change,

innovative technologies, presumptive remedies, tailored interim deliverables, and other results-based tools may provide substantial cost savings in the total costs expended by the regulatory agency and facility.

### **How does tailored oversight ensure public involvement?**

EPA is committed to substantial and meaningful involvement of communities throughout RCRA corrective action activities. We recommend regulators and facilities develop and maintain effective community involvement by developing a public participation strategy at the beginning of the corrective action process.

Timely and meaningful public participation is generally key to community acceptance of the remedy. In addition to establishing the typical mandatory public involvement at critical stages of decision making in corrective action activities, EPA continues to recommend frequent, meaningful public involvement for corrective action activities in general.

EPA's general expectations for public participation, as conveyed in Chapters four and five of *The RCRA Public Participation Manual* (EPA, 1996a), are that facilities and regulators should involve the public early in corrective action and share responsibilities for public participation activities. Another rule on public participation is the *RCRA Expanded Public Participation Rule* (EPA, 1995) which contains many of the same concepts and ideas as the Public Participation Manual. Note that it might be appropriate, based on site-specific circumstances, to include additional public participation in situations where there is less regulatory oversight.

In general, we recommend regulators and facilities provide opportunities for meaningful public participation throughout corrective action, as appropriate, given site-specific circumstances and community interest. We recommend public participation generally occur at the:

- Initiation of corrective action;
- Selection of significant interim measures, as appropriate;
- Selection of final remedy; and,
- Completion of corrective action

### **How will the regulatory agency use enforcement under tailored oversight approaches?**

If a facility has not met deadlines or the agreed upon results, then there are a number of enforcement options. Identifying enforcement options is likely to be especially important when tailored oversight is extended over a long period of time. For non-compliance, enforcement options might include taking formal enforcement action (e.g., enforcing the corrective action provisions of the permit, issuing an order, referring a case to the Department of Justice), collecting stipulated penalties, and putting facilities on strict oversight and compliance schedules. For additional guidance on enforcement, refer to EPA, 2001c.

**What are some examples of activities that facilities might conduct under a tailored oversight approach?**

<b>Initial Site Assessments</b>	Where RCRA Facility Assessments (RFAs) have not yet been completed, the regulator might allow facilities to choose to conduct their own site assessment or characterization, and submit the report for regulatory review. If the regulator believes the site assessment is adequate, they might approve and adopt it as the RFA for the facility.
<b>Evaluate Environmental Indicators</b>	Under a tailored oversight plan, the regulator might allow the facility to complete evaluations for the Current Human Exposures Under Control and Migration of Contaminated Groundwater Under Control environmental indicators and then submit it for Agency review and ultimate decision-making.
<b>Interim (or Short-Term) Measures</b>	The nature and scope of the interim measure may allow us to rely on simple confirmation sampling or self-documentation of achieving a particular performance standard without involving ourselves heavily in the design phase or may allow the facility to prove their capability and earn reduced oversight on later, larger project components.
<b>Public Involvement</b>	Stakeholder involvement is typically extremely important in corrective action cleanups, regardless of the levels of oversight used.
<b>Final Remedy Selection and Implementation</b>	Using a tailored oversight approach, EPA expects remedies to protect human health and the environment. Cleanup goals are generally conveyed terms of media cleanup levels, points of compliance, cleanup time frames, and source control. Public comments should be taken into account in the remedy decision.

**Once a regulator develops a tailored oversight plan for a facility, what goals and milestones does EPA recommend regulators require them to use to measure progress?**

The goal of the corrective action program is to protect human health and the environment. We recommend the specific goals and milestones that regulators, as well as facilities use to measure progress be linked to the major corrective action activities (e.g., facility-wide assessments, evaluating whether cleanup actions are needed for all releases, selecting final remedies within an acceptable risk range and hazard index, public participation throughout corrective action, and a preference for treatment of principle threats). In protecting human health and the environment, we recommend that regulators select a remedy that attains appropriate media clean-up standards, controls, where necessary, the source(s) of releases to reduce or eliminate further releases of hazardous waste, and complies with applicable standards for waste management. We recommend that regulators and the facility state these goals and milestones, where appropriate, in all key decision documents and reports.



For the near-term, we recommend the regulator and the facility focus on the two environmental indicators which are the primary short-term goals of the corrective action program. Because environmental indicators focus on results, they might, where appropriate, serve well as short-term results measures for remedial activities. While meeting these indicators is an appropriate near-term goal, we recommend regulators emphasize that final cleanup is the ultimate goal for corrective action. Additionally, we recommend the regulator and the facility establish, at the beginning, public participation milestones throughout the corrective action process.

#### **IV. Conclusion**

By focusing on tailoring process requirements to site-specific circumstances, regulators and facilities may more efficiently and cost-effectively manage facility-wide clean ups that protect human health and the environment. Results-based approaches provide the RCRA program with tools to address environmental contamination in ways that protect human health and the environment while tailoring the approaches to facility-specific factors. We recommend regulators use the results-based approaches outlined in this guidance, where appropriate, to help facilities fulfill their corrective action obligations.

Tailored oversight is an integral part of results-based corrective action. We recommend regulators look at their oversight levels on a facility-specific basis and make the appropriate adjustments. Using tailored oversight approaches, regulators eliminate administrative or technical steps, as appropriate, for facilities that have shown they are capable of meeting the environmental objectives established for their facilities. Tailored oversight is designed to help focus activities on environmental results rather than “one-site-fits-all” process steps and ensure that each corrective action-related activity, at any given facility, directly supports cleanup goals at that facility.

#### **V. Contacts**

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