







Preliminary Assessments (PAs) Under CERCLA

- BACKGROUND:** Section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) required the Environmental Protection Agency (EPA) to establish criteria for determining priorities among releases or threatened releases of hazardous substances for the purpose of taking remedial action. EPA promulgated the Hazard Ranking System (HRS) for this purpose (47 FR 31180, July 16, 1982). In response to requirements of the Superfund Amendments and Reauthorization Act (SARA) the HRS has since been revised (December 14, 1990, 55 FR 51532). The HRS is Appendix A to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (55 FR 8813, March 8, 1990). A preliminary assessment (PA) is the first step in the process of evaluating a site potentially contaminated with hazardous substances or pollutants pursuant to CERCLA, the NCP, and the HRS. The purpose of the PA is to differentiate sites that pose no potential threat to human health and the environment from sites that warrant further investigation under CERCLA.
- STATUTES:** [42 U.S.C. 9601 *et. seq.*] CERCLA §105(8)(A) and (B), now §105(a)(8)(A) and (B), as amended by [Pub. L. 99-499] SARA, which added §105(c)(1) to CERCLA; [Pub. L. 94-580] RCRA.
- REGULATIONS:** NCP, 40 CFR Part 300.410 - 300.420; HRS, Appendix A to 40 CFR Part 300.
- REFERENCES:**
1. *Superfund Implementation*, Executive Order 12580, January 23, 1987.
 2. *CERCLA Requirements*, DOE Order 5400.4, October 6, 1989.
 3. "CERCLA Federal Agency Hazardous Waste Compliance Docket and the Revised Hazard Ranking System," EH-231 memorandum, July 25, 1991.
 4. "Federal Facility Site Definition," EPA memorandum from Solid Waste and Emergency Response Division, to Site Assessment Branch, Office of Solid Waste and Emergency Response, August 13, 1991.
 5. *Guidance for Performing Preliminary Assessments Under CERCLA*, EPA/540/G-91/013, September 1991.
 6. *PA-Score Software, Users Manual, and Tutorial*, EPA/540/P-91/010, September 1991.
 7. "Guidance for Performing Preliminary Assessments Under CERCLA," EH-231 memorandum, July 7, 1992.
 8. "Federal Agency Hazardous Waste Compliance Docket ('docket')," EH-231 Information Brief, EH-231-011/0192, January 1992.
 9. *Guidance for Performing Site Inspections Under CERCLA*, EPA/540-R-92-021, September 1992.
 10. "Site Inspections (SIs) Under CERCLA," EH-231 Information Brief, EH-231-013/0693 (June 1993).

When and at what type of site is a PA required?

EPA maintains the CERCLA Information System (CERCLIS) as a computerized inventory and tracking system for actual or potential releases of hazardous substances, pollutants, and contaminants reported to EPA and requiring CERCLA response. Each site in CERCLIS must undergo a remedial PA. As required by CERCLA Sect. 120(c), Federal facilities are *also* entered on a second, separate list — the Federal Agency Hazardous Waste Compliance Docket (or "docket"). DOE and other Federal agencies, must report facilities with hazardous waste activities or releases of hazardous substances for inclusion on the docket (Ref. 8). EPA policy is that Federal facilities must conduct a PA within 18 months of listing on the docket (57 FR 31758, July 17, 1992). Depending on the results of the PA, a site inspection (SI) may also be required.

Who's responsible for conducting PAs?

PAs at industrial and commercial sites are conducted by EPA or by States operating under cooperative agreements with EPA. However, Federal agencies are responsible for conducting PAs at their own sites and reporting results to EPA. Regional EPA reporting requirements may vary; to facilitate compliance, PAs at DOE facilities should be coordinated with the Site Assessment Manager in the EPA Regional Office.

What are the basic elements of a PA?

During a PA information about a site is collected in order to evaluate the potential for, or actual release of, hazardous sub-

stances, pollutants, or contaminants (Section 300.420 of the NCP). EPA evaluates the collected information according to a streamlined version of the HRS designed to be used for the limited information typically available at the PA stage of investigation.

Following the structure of the HRS, during the PA information is collected in order to evaluate four hazardous substance migration and exposure pathways: ground water, surface water, air, and soil exposure. Each pathway is evaluated according to the likelihood that a hazardous substance has been, or could be, released to the pathway; the quantity and characteristics of wastes available to the pathway; and the presence and potential exposure levels of human and environmental receptors (targets). The PA emphasizes collecting information on targets and site history.

Typically, PA data collection includes a search of facility and regulatory agency files, "desktop" data collection from reference materials and telephone interviews, a survey of the local environs, and a site reconnaissance. Depending on site accessibility and potential dangers to personnel health and safety, the reconnaissance may be conducted either on-site or as an off-site perimeter survey. Environmental and waste media sampling for lab analysis is generally beyond the scope of a PA; however, existing analytical data can often be useful.

Following data collection, DOE facilities submit to EPA either the data or a completed PA by following EPA guidance (Ref. 5). PA reporting requirements include a brief narrative report and a completed "Potential Hazardous Waste Site Preliminary Assessment Form" (EPA form 2050-0095, September 1991). EPA uses

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this information to formulate a projected HRS score. EPA has developed PA scoresheets, as described in Appendix A of Ref. 7, as well as a computerized scoring package, *PA-Score Software, Users Manual, and Tutorial*, and a PA Score telephone "helpline" operated by EPA Headquarters.

Are all PAs alike?

EPA has established minimum requirements for conducting a PA and reporting results. Complete details and instructions are available in EPA's *Guidance for Performing Preliminary Assessments Under CERCLA* (Ref. 7). Some EPA Regional requirements, however, may exceed the basic guidance. While Federal agencies are responsible for performing their own PAs and reporting results, EPA must approve each PA. DOE Environmental Restoration Program Managers (ERPMs) should coordinate with the Site Assessment Manager (SAM) in the EPA Regional Office for specific Regional requirements.

The NCP references a removal PA and a remedial PA. What is the difference?

This Information Brief focuses on the remedial PA described in NCP Section 300.420. The removal PA is described in Section 300.410 of the NCP. The principal differences between the two are purpose and initiation. The remedial PA is meant to differentiate those sites that may pose a threat to human health or the environment from those that do not. Sites that cannot be reasonably eliminated from further consideration under CERCLA are recommended for an SI. A remedial PA is generally triggered by site listing on the docket and CERCLIS. In some cases, however, a PA may not be required, such as if the facility is already listed on the NPL. In these cases it is important to consult with the EPA Regional SAM regarding EPA policy on PA requirements.

The removal PA is meant to assess the need for immediate or emergency action. CERCLA and the NCP (Section 300.415) authorize and generally define removals as actions taken to eliminate, control, or otherwise mitigate a release or threatened release of a hazardous substance. A removal PA is usually triggered by discovery of site circumstances that appear to require immediate action to eliminate a present threat or avoid a more serious future problem. Examples of such conditions include the presence of unstable hazardous materials, disposal of incompatible hazardous wastes, unrestricted public access to contaminated areas, and sources with compromised structural integrity.

Discovery of conditions that may warrant a removal action often occurs during a remedial PA. In such cases, the DOE investigator must contact the responsible DOE ERPM. The DOE ERPM in turn must contact EPA concerning removal actions. Any information gathered for the remedial PA will be useful in planning the removal activities. In other circumstances, incidental discovery and reporting of dangerous site conditions — unrelated to formal site investigation under CERCLA — trigger a removal PA. Removal actions that could be recommended by a removal PA include fencing or 24-hour security to restrict or preclude public access, stabilizing poorly-contained waste sources, and physical removal of wastes to an off-site disposal facility that is in compliance with the Resources Conservation and Recovery Act (RCRA).

What happens after a PA?

EPA concludes the PA with a recommendation as to whether further investigation under CERCLA is warranted. This recommendation is based primarily on the projected HRS score obtained by using the PA guidance (Ref. 7). A site that scores below 28.50 generally receives a "site evaluation accomplished" (SEA) recommendation, meaning that further action under CERCLA is not planned; however, DOE (or state authorities) may choose to pursue further action beyond the mandates of CERCLA. [Pursuant to DOE Order 5400.4, appropriate responses shall be taken to reduce adverse impacts on public health and the environment from re-

leases regardless of whether the DOE facility is listed on the National Priorities List (NPL)].

If EPA assigns a projected score of 28.50 or greater, the site is generally recommended for an SI. An SI requires analytical data from environmental media and waste samples to better identify the substances present at a site, and to determine whether they have been released to the environment and whether targets are contaminated (Ref. 9). Existing analytical data may need to be supplemented by additional samples. A main objective of the SI is to determine whether the site poses a threat sufficient to warrant placement on the NPL. EPA makes this determination from a clear projected HRS score based on the analytical data developed during the SI. After the SI, a site scoring 28.50 or greater is eligible for NPL proposal and EPA prepares an HRS documentation package to support NPL rulemaking.

What are the most important considerations that determine the site recommendation?

The site PA score is used to determine whether a site is recommended for an SI or is designated as SEA. The likelihood of a release, waste quantity and characteristics, and presence and potential exposure levels of targets all contribute to the evaluation. Of these, however, targets are potentially most significant. The HRS model is designed to place heavier emphasis on targets than waste characteristics and quantity or likelihood of release. Consequently, targets are often the prime driver of a PA site score. As a result, a thorough and complete evaluation of targets (within specified distance limits) is a principal requirement of the PA. This is particularly important to note in view of the traditional approach to Federal facility assessment that typically limited environmental assessment to the property within the facility boundaries.

Are multiple PAs required for facilities that may have multiple areas of potential hazardous substance contamination?

Sometimes, EPA exercises discretion on how to define sites. A site could be a portion of a facility or could extend beyond the facility boundary, depending on site-specific conditions (Ref. 4). A PA is required for each site. In some cases, a *site* is a discretely identifiable hazardous waste disposal area. In other cases, a *site* is a *facility* that may contain several hazardous waste disposal areas. The HRS (55 FR 51587, December 14, 1990) defines *site* as "area(s) where a hazardous substance has been deposited, stored, disposed, or placed, or has otherwise come to be located. Such areas may include multiple sources and may include the area between sources." *Source* is defined as "any area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance." In short, a *source* is an area where a hazardous substance is present. A *site* consists of one or more sources and areas between sources. A *facility* or *installation* could be a *site* or contain one or more *sites*, each with one or more *sources*. DOE PA investigators should consult with the EPA SAM regarding site definition at their specific facility or installation.

Questions of policy or questions requiring policy decisions will not be dealt with in EH-231 Information Briefs unless that policy has already been established through appropriate documentation. Please refer any questions concerning the subject material covered in this Information Brief to Kathleen Schmidt, RCRA/CERCLA Division, EH-231, (202) 586-5982.



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