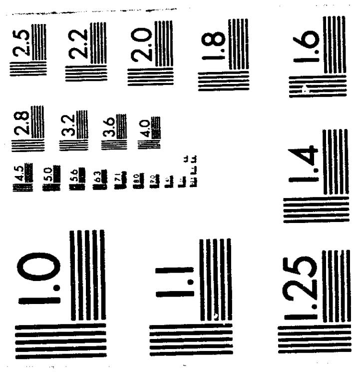
2.5
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1 of 1

Site Inspections (SIs) Under CERCLA

BACKGROUND: **The U.S. Environmental Protection Agency (EPA) revised the procedures for evaluating sites contaminated with hazardous substances and pollutants under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA). Revised procedures include substantial changes to the Hazard Ranking System (HRS), the scoring system EPA uses to assess a site's relative threat to human health and the environment and subsequent inclusion on the National Priorities List (NPL). A preliminary assessment (PA) is the first step in evaluating a site pursuant to CERCLA, the National Contingency Plan (NCP), and the HRS. Site inspection (SI)—the second step—is conducted when the PA indicates that further investigation under CERCLA is needed. This Information Brief provides an overview of the SI process and its relationship to the HRS and other site activities under CERCLA and the Resource Conservation and Recovery Act (RCRA), and the information required to develop the HRS score for a site. A companion Information Brief (EH-231-016/0593) provides an overview of the PA process.**

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: ***Code of Federal Regulations*, Section 40 (40 CFR), Part 300, as amended, 55 *FR* 8666, March 8, 1990; 40 CFR, Part 300, Appendix A, "Hazard Ranking System; Final Rule", 55 *FR* 51532, December 14, 1990; Executive Order 12316, August 20, 1981; Executive Order 12580, January 23, 1987; DOE Order 5400.4.**

REFERENCES:

1. *Comprehensive Environmental Response, Compensation, and Liability Act Requirements*, DOE Order 5400.4, October 6, 1989.
2. *The Revised Hazard Ranking System: Evaluating Sites After Waste Removals*, EPA Publication 9345.1-03FS, October 1991.
3. "Federal Agency Hazardous Waste Compliance Docket ("docket")," EH-231 Information Brief, EH-231-011/0192, January 1992.
4. *Guidance for Performing Site Inspections Under CERCLA*, EPA Publication PB92-963375, EPA/540-R-92-021, September 1992.
5. "U.S. EPA Guidance for Performing Site Inspections Under CERCLA and Follow-up EPA Training Workshops," EH-231 memorandum, December 16, 1992.
6. "Guidance for Performing Site Inspections Under CERCLA and Follow-up EPA Training Workshops," EH-231 memorandum, December 6, 1992.
7. "Preliminary Assessments (PAs) Under CERCLA," EH-231 Information Brief, EH-231-016/0593, May 1993.
8. "Executive Order 12580: Superfund Implementation," EH-231 Information Brief, EH-231-015/0593, May 1993.

Where does the SI fit into EPA's CERCLA site assessment process?

Site assessment typically involves two investigative steps: the preliminary assessment (PA) and the site inspection (SI). The SI is conducted when the PA for the site indicates that there is a need for further investigation under CERCLA. *The main objectives of the SI are to determine whether releases have occurred and to gather sufficient information for HRS scoring.* At the completion of the SI, EPA applies the HRS evaluation process to derive a site score and determine whether or not the site appears to pose a sufficient threat to human health or the environment to qualify for listing on the National Priorities List (NPL).

The samples and analytical data collected during the SI are used to verify assumptions made during the PA evaluation (reference 7) and to supply additional information required for more detailed HRS evaluation. Types of releases, HRS pathways of concern, and types of threats that must be investigated differ widely among sites and require different sampling and data collection strategies. Thus, the SI sampling plan must be tailored to meet site specific scoring situations.

How do the SIs relate to site assessments required by RCRA corrective action or States?

Specific SI requirements are dictated largely by HRS data requirements. Assessments done to meet other objectives are unlikely to contain all of the information needed for a CERCLA SI. There may be overlap, however, and some data requirements may be similar. Planning and data collection activities for all required site assessments should be coordinated closely.

How do changes in the revised HRS affect SIs?

Two changes have greatly affected SI requirements. First, the revised HRS places greater weight on "targets" (e.g., people, sensitive environments) actually exposed to or located near sources of contamination. This requires complete information on the location of targets relative to sources and a determination of whether or not contamination has reached these targets. Second, the revised HRS evaluates threats from actually or potentially contaminated soil, human food chain organisms, and sensitive environments; at many sites this will require different types of samples or data than would have been collected for the original HRS.

DISCLAIMER

What is the typical scope of an SI?

The SI is often a limited investigation in and near sources of contamination and at HRS targets, *not* a comprehensive extent-of-contamination survey. Analytical data should focus on sources of contamination and where they can have the most significant impacts (e.g., targets such as drinking water wells, wetlands). The SI often is focused on the HRS pathways of concern (i.e., ground and surface waters, soil exposure, air). Under the HRS, targets are evaluated up to 15 miles from sources, thereby requiring sampling beyond the facility boundary at many sites. EPA estimates that an SI at a typical industrial site will require 350-650 professional hours and 12-40 environmental samples (or equivalent analytical data).

What SI data should be provided to EPA?

Required data include pathway characteristics, target information, and analytical data that are sufficient for EPA to develop and fully document an HRS score for the site. Analytical data must be sufficient to identify hazardous substances in sources and to determine background levels and concentrations at key targets for HRS pathways identified as being of concern in the PA. Generally, analytical data include full-spectrum chemical analysis; targeted analysis of specific substances may be acceptable but must be justified based on site information (e.g., complete knowledge of wastes present).

Non-sampling data needs include complete, updated information on specific site parameters required for HRS scoring (e.g., aquifer structure) and all HRS targets (including off-site targets) within the distance or dilution categories used in the HRS. All data must be representative of current conditions at the site, except for some cases where removal actions have been taken (reference 2). Previously-collected data are acceptable as long as they meet the above criteria.

The EPA Site Assessment Manager (SAM) will identify specific data and documentation needs. However, SI documentation requirements generally include a comprehensive report of all facts, assumptions, and conclusions; characterization of all sources (e.g., type, size, hazardous substances present, containment); evaluation of whether a release has occurred to ground or surface waters, soil, or air; background levels of hazardous substances and levels at human and environmental targets within the HRS distance and dilution categories; and documenting analytical sampling methods, procedures, results, and QA/QC protocols. The SAM may recommend a single SI if the quality of available data and site characteristics strongly indicate a significant threat to the environment. Or, the SAM may recommend a two-phased SI approach. This will include a focused SI to screen a site to determine if further Federal CERCLA action is needed. If so, the focused SI is followed by an expanded SI, which is used to gather information to fulfill the HRS requirements for a site with a high probability of qualifying for the NPL. (reference 4). In addition, EPA has proposed the Superfund Accelerated Clean-up Model (SACM) to establish a continuous process for combining the SI and remedial investigation (RI) site characterization activities at certain sites to be listed on the NPL. DOE and EPA are conducting a joint pilot project using the SACM process at a DOE facility, and EPA will be issuing a fact sheet addressing CERCLA SI guidance under SACM in the next few months (reference 6).

What SI considerations apply at sites with potential radioactive contamination?

HRS considerations that differ for sites with radioactive substances include the criteria for establishing an observed release, evaluation of toxicity, and health-based benchmarks (toxicity criteria). Also, hazardous waste quantity is based only on radionuclide constituent or waste stream quantity, not on source volume or area. For sites containing mixed wastes, the HRS score reflects the combined potential hazards posed by both the radioactive and other hazardous substances. Section 7 of the HRS outlines these data requirements [40 CFR 300(7); 55 *FR* 51663, 1990)].

Under what circumstances should an emergency response or interim measure be considered?

CERCLA and RCRA authorize emergency response at sites posing an imminent threat to human health or the environment (e.g., contaminated drinking water supplies, fire or explosion threat). An emergency response action can be taken at any time during the site assessment process.

What happens after the SI and HRS are complete?

Sites that score below 28.50 are not proposed for the NPL and no further action is required under CERCLA. EPA gives the site a "site evaluation accomplished (SEA)" designation on the Federal Agency Hazardous Waste Docket (reference 3). However, further action may be required by states, Native American Tribes, and/or other authorities (e.g., RCRA corrective action). Pursuant to DOE Order 5400.4, appropriate responses shall be taken to reduce adverse impacts on public health and the environment from releases regardless of whether or not a DOE facility is listed on the NPL.

Sites with a score of 28.50 or greater are eligible to be placed on the NPL. EPA makes the final decision on NPL proposal. Because NPL listing is a rulemaking process requiring public notice, interested parties (e.g., states, Native American Tribes, and local residents) may submit comments. Federal agencies are required to take remedial action at NPL sites, and commence with a RI/FS within 6 months of NPL listing [CERCLA Section 120(e)]. Further, DOE will enter into Interagency Agreements (IAGs) and/or Federal Facility Agreements (FFAs) addressing ***both*** NPL and non-NPL sites, as appropriate, with Federal, state, and local entities for the execution of RI/FS and remedial actions under the requirements in DOE 5400.2A and under Section 120(e) of CERCLA [DOE 5400.4(7)(b)].

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.

DATE FILMED

4/28/94

END