



RCRA Facility Stabilization Initiative

BACKGROUND: Corrective Action is the U.S. Environmental Protection Agency's (EPA's) primary mechanism for addressing releases of hazardous wastes and hazardous constituents from solid waste management units (SWMUs) located at Resource Conservation and Recovery Act (RCRA) treatment storage, and disposal facilities [RCRA 3004(u)] and, where necessary, "beyond the facility property boundary..." [RCRA 3004(v)]. On July 27, 1990, EPA issued a proposed rule to codify (in 40 *CFR* Part 264, "Subpart S"), a comprehensive set of requirements for the on RCRA Corrective Action program (55 *FR* 30798). On October 7, 1999, EPA announced its decision to withdraw most of the proposed provisions (64 *FR* 54604). The EPA decided to defer to:

- the February 16, 1993, final rule on Corrective Action Management Units (CAMUs) and Temporary Units (TUs) (58 *FR* 8658) and the January 22, 2002, CAMU Amendments (67 *FR* 2962);
- the May 1, 1996, Advance Notice of Proposed Rulemaking (ANPRM) on RCRA corrective action (61 *FR* 19432);
- the November 30, 1998, final rule on Hazardous Remediation Waste Management Requirements (HWIR-Media) (63 *FR* 65874); and
- various policy and guidance documents that the Agency has issued since the 1990 "Subpart S" proposal as regulatory, policy, and guidance "tools" for implementing RCRA corrective action.

In addition, EPA indicated they may issue one or more final rules pertaining to targeted jurisdictional issues, such as the definition of the term "facility" for purposes of RCRA corrective action, and has issued supplemental guidance documents in a number of areas pertaining to RCRA corrective action.

The RCRA Facility Stabilization Initiative is a result of EPA's comprehensive evaluation of the RCRA Hazardous Waste Regulatory Program. The findings and recommendations of this evaluation led to the development of the RCRA Implementation Study (RIS), which reported on issues germane to RCRA, including the RCRA Corrective Action Program. One of the recommendations identified by the RIS for improving the Corrective Action Program involved the implementation of "stabilization" efforts at facilities having actual or imminent releases. As a further recommendation, the RIS proposed that a prioritization system be devised for identifying those facilities most in need of an interim measure, in order to provide greater near-term environmental benefits where environmental media and receptors are significantly at risk. These recommendations provided the impetus for the Stabilization Initiative, which was introduced to the EPA Regional offices in the fall of 1991, reflected in EPA's RCRA Corrective Action Plan, and reemphasized in the May 1996 ANPRM (61 *FR* 19436, 19446). This Information Brief is one of a series on RCRA corrective action. It has been revised from a previous Information Brief (EH-231-076/0295, February 1995).

STATUTES: The Stabilization Initiative is not statutorily driven, but is being implemented under RCRA policy.

REGULATIONS: No specific regulations apply; however, the stabilization philosophy is being applied in was proposed for inclusion in 40 *CFR* Part 264, Subpart S (55 *FR* 30798; July 27, 1990), comprises Chapter II of the RCRA Corrective Action Plan, and is reiterated in the May 1996 ANPRM (61 *FR* 19436, 19446).

What is the RCRA Facility Stabilization Initiative?

The RCRA Facility Stabilization Initiative was developed as a means of implementing the Corrective Action program's management goals recommended by the RIS for "stabilizing" actual or imminent releases from solid waste management units (SWMUs) that threaten human health and the environment. The overall goal of stabilization is to, as situations warrant, control or abate threats to human health and/or the environment from releases at RCRA facilities, and/or to prevent or minimize the further spread of contamination while long-term remedies are pursued.

The Stabilization Initiative is a management philosophy and should not be confused with stabilization technologies (e.g., solidification, vitrification, and other immobilizing techniques). While such technologies may effectively stabilize wastes, the focus of the Stabilization Initiative is much broader. The traditionally slow pace of implementing effective long-term remedies for releases from SWMUs has prompted EPA to consider accelerated corrective measures to reduce the risks posed by a release. Technologies to reduce risk may include any, or a combination of, treatment, containment, or exposure controls. The Stabilization Initiative measures are intended to address releases to all environmental media (i.e., air, soil, surface water, and ground water). Implementation of Stabilization Initiative activities (i.e., through the use of corrective action interim measures) will be dependent upon varying site-specific factors, such as the technical complexity of the remediation, quantities and types of waste to be addressed, media-specific characteristics, and exposure threats to various environmental receptors.

EPA's Stabilization Initiative guidance¹ identifies three conditions under which stabilization may be appropriate for a facility. These conditions include:

- Releases at the facility that pose actual or imminent exposure threats to humans or ecosystems at levels of concern;
- releases that, if not addressed expeditiously, will result in further significant contamination of environmental media in the near to mid term (e.g., 5-10 years); or
- site characteristics that suggest the site may be amenable to measures designed to control or abate imminent threats or prevent or minimize the further spread of contamination.

Generally, a determination as to whether stabilization activities will be appropriate is based upon information identified in a RCRA Facility Assessment (RFA) report. Further refinement and selection of an appropriate stabilization activity normally occur during the second phase of the corrective action process, the RCRA Facility Investigation (RFI), when specific physical and technical data concerning a release can be evaluated and considered.

[It should be noted that if there is evidence of conditions posing an imminent and substantial endangerment to health or the environment, EPA may choose to issue an order to abate those conditions as quickly as possible under the imminent hazard provisions of Sect. 7003 of RCRA instead of Sects. 3004(u), 3004(v), or 3008(h).]

Can proposed RCRA Subpart S Interim Measures be used under the Stabilization Initiative?

The overall objectives of the Stabilization Initiative and corrective action interim measures are basically the same; that is, to mitigate near-term threats to human health and the environment by preventing or minimizing further spread of contamination until a final remedy may be implemented. As such, interim measures are one of the types of tools used under the Stabilization Initiative. Conditional remedies and voluntary actions may also be used under the Stabilization Initiative.

Conditional remedies are intended to phase in remedies over a period of time and, therefore, may include activities intended to control the future migration of wastes onsite and to expedite cleanup of releases that have migrated

beyond the facility boundary. Voluntary corrective actions may be conducted by facility owners/ operators who wish to initiate stabilization activities rather than wait for the EPA to begin actively pursuing corrective action at the facility. The Stabilization Initiative is intended to work in harmony with the overall RCRA Corrective Action program by prioritizing corrective action needs and by taking stabilization actions as appropriate, based on prioritization and other factors.

The key to the prioritization effort is the National Corrective Action Prioritization System (NCAPS). NCAPS is based upon information provided from the Corrective Action Stabilization Questionnaire, which evaluates data collected from facility RFAs. NCAPS will allow EPA Regions to establish a means of objectively determining which facilities (and specific SWMUs) need the most immediate attention. This “worst case” approach allows EPA to direct program resources for achieving stabilization goals more efficiently, to concentrate upon releases posing the most significant threats, and to more clearly assess the level of oversight needed at facilities that have lower priority.

How is the Stabilization Initiative implemented by regulatory agencies?

- A stabilization measure is imposed by EPA or an authorized State and will be implemented through a six-step process:
- assignment of a priority level for corrective action and stabilization based on the NCAPS;
- evaluation of facility and contamination releases to determine whether they can be addressed through stabilization;
- modification of the permit compliance schedule in a permit or enforcement order to include clauses requiring stabilization;
- collection of data needed to select and design the stabilization measures;

- selection and design of stabilization measures (i.e., interim measures); and
- implementation of stabilization measures.

If the facility implements stabilization activities upon its own discretion, the process would be different and would have to be modified. For example, because the regulatory agency assigns the NCAPS priority on a program-wide basis, this step is meaningless when the facility initiates stabilization itself. By taking the initiative, the facility believes stabilization is necessary regardless of how it is prioritized under NCAPS.

How could the Stabilization Initiative be implemented at DOE facilities?

The Stabilization Initiative is initiated by EPA Regions or authorized States as part of existing facility permit requirements, enforcement orders, or compliance agreements. EPA intends to develop flexible schedules of compliance through these mechanisms that allow stabilization-focused data gathering and subsequent implementation of stabilization activities prior to completion of an RFI. The DOE is committed to complying with all environmental laws and regulations that apply to its program and operations, and generally supports all initiatives that further this commitment in an efficient and effective manner.

Given DOE’s evolving role and responsibilities regarding environmental issues, Environmental Restoration Project Managers may wish to implement the goals of the Stabilization Initiative where circumstances or conditions permit by incorporating interim measures into correction action activities at DOE facilities (i.e., as part of accelerated cleanup and closure). Such actions are encouraged by EPA as a means to further expedite the overall goal of remediation.

Will the Stabilization Initiative result in new regulatory requirements?

The Stabilization Initiative is solely a management strategy and will not create a

formal regulatory or administrative process. The goals of the Stabilization Initiative are being incorporated and implemented through the RCRA Corrective Action Program and are applied using interim measures.

When is the Stabilization Initiative considered complete?

The success or failure of any stabilization measure is based upon a determination of whether the interim measure(s) employed reduce the near-term hazard posed to human health and the environment and/or further contain waste migration. Another indicator of a successful stabilization action is the compatibility between the interim measure initiated and the final corrective measure selected for implementation. While an interim measure is generally intended to be a short-term action to mitigate releases of hazardous wastes or constituents, it may, in some cases, be suitable to serve as the final remedy for corrective action if it can be demonstrated that the interim measure is as protective of human health and the environment he requirements as a “final remedy” would be. Regardless of the situation, the ultimate success of a remedial action is based upon the sum of the actions taken to achieve the final goal. In the case of stabilization, the contribution a given action makes in the overall cleanup is the true measure of the effectiveness and success of the Stabilization Initiative.

References

- [1] “Managing the Corrective Action Program for Environmental Results: The RCRA Facility Stabilization Effort,” US. Environmental Protection Agency, OSWER Memorandum to Region I-X Waste Management Division Directors, October 25, 1991.
- [2] *The RCRA Implementation Study*, U.S. Environmental Protection Agency, EPA/530-SW-90- 069, July 1990.
- [3] “RCRA Corrective Action Plan Guidance (Final),” US. Environmental Protection

Agency, OSWER Directive 9902.3-2A, May 1994.

- [4] *RCRA Corrective Action Interim Measures*, U.S. Department of Energy, Office of Pollution Prevention and Resource Conservation Policy and Guidance (EH-43), RCRA Information Brief, EH-231-024/0793, (July 1993).
- [5] *National Corrective Action Prioritization System (NCAPS)*, U.S. Department of Energy, Office of Pollution Prevention and Resource Conservation Policy and Guidance (EH-43), RCRA Information Brief, EH-413-070/1296, [December 1996 (updated 3/97)].
- [6] *RCRA Corrective Action Stabilization Technologies*, U.S. Environmental Protection Agency, Proceedings, EPA/625®-92/014, October 1992.
- [7] *Stabilization Technologies for RCRA Corrective Actions Handbook*, U.S. Environmental Protection Agency, EPA/625/6-91/026, August 1991.
- [8] “Final Guidance On Completion of Corrective Action Activities at RCRA Facilities” (68 *FR* 8757), U. S. Environmental Protection Agency, Office of Solid Waste, February 25, 2003.

Questions of policy or questions requiring policy decisions will not be dealt with in EH-43 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:

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