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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300
[FRL 3724-6]

National Priorities List for Uncontrolled Hazardous Waste Sites

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY:

The Environmental Protection Agency ("EPA") is amending the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR part 300, which was promulgated on July 16, 1982, pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"). CERCLA has since been amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA") and is implemented by Executive Order 12580 (52 FR 2923, January 29, 1987). CERCLA requires that the NCP include a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States, and that the list be revised at least annually. The National Priorities List ("NPL"), initially promulgated as appendix B of the NCP on September 8, 1983 (48 FR 40658), constitutes this list and is being revised today by the addition of 71 sites, including 14 Federal facility sites. Based on a review of public comments on these sites, EPA has decided that they meet the eligibility requirements of the NPL and are consistent with the Agency's listing policies. In addition, today's action removes one site from the proposed NPL. Information supporting these actions is contained in the Superfund Public Dockets.

This rule results in a final NPL of 1,081 sites, 93 of them in the Federal section; 137 sites are proposed to the NPL, 24 of them in the Federal section. Final and proposed sites now total 1,218.

EFFECTIVE DATE:

The effective date for this amendment to the NCP shall be March 23, 1990. CERCLA section 305 provides for a legislative veto of regulations promulgated under CERCLA. Although *INS v. Chadha*, 462 U.S. 919, 103 S. Ct. 2764 (1983), cast the validity of the legislative veto into question, EPA has transmitted a copy of this regulation to the Secretary of the Senate and the Clerk of the House of Representatives. If any action by Congress calls the effective date of this regulation into question, the Agency will publish a notice of clarification in the **Federal Register**.

ADDRESSES:

Addresses for the Headquarters and Regional dockets follow. For further details on what these dockets contain, see Section I of the "**SUPPLEMENTARY INFORMATION**" portion of this preamble.

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I. Introduction

Background

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601-9657 ("CERCLA" or the "Act"), in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act ("SARA"), Public Law No. 99-499, stat. 1613*et seq.* To implement CERCLA, the Environmental Protection Agency ("EPA" or "the Agency") promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR part 300, on July 16, 1982 (47 FR 31180) pursuant to CERCLA section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On December 21, 1988 (53 FR 51394), EPA proposed revisions to the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include "criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable taking into account the potential urgency of such action, for the purpose of taking removal action." Removal action involves cleanup or other actions that are taken in response to releases or threats of releases on a short-term or temporary basis (CERCLA section 101(23)). Remedial action tends to be long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA section 101(24)). Criteria for determining priorities for possible remedial actions financed by the Trust Fund established under CERCLA are included in the Hazard Ranking System ("HRS"), which EPA promulgated as appendix A of the NCP (47 FR 31219, July 16, 1982).

On December 23, 1988 (53 FR 51962), EPA proposed revisions to the HRS in response to CERCLA section 105(c), added by SARA. EPA intends to issue the revised HRS as soon as possible. However, until the revised HRS is in effect, EPA will continue to use the current HRS in accordance with CERCLA section 105(c)(1) and Congressional intent, as explained in 54 FR 13299 (March 31, 1989).

Based in large part on the HRS criteria, and pursuant to section 105(a)(8)(B) of CERCLA, as amended by SARA, EPA prepared a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States (the "National Priorities List" or "NPL"). The list has been promulgated as Appendix B of the NCP. A site can undergo CERCLA-financed remedial action only after it is placed on the NPL, as provided in the NCP at 40 CFR 300.66(c)(2) and 300.68(a).

As is stated in CERCLA section 105(a)(8)(b), the NPL is a listing of "releases or threatened releases" of hazardous substances, pollutants, or contaminants. For simplicity, the discussion below may refer to these "releases or threatened releases" simply as "releases," "facilities," or "sites."

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). Pursuant to CERCLA section 105(a)(8)(B), which requires that the NPL be revised at least annually, the NPL has been updated periodically, most recently on November 21, 1989 (54 FR 48184). The Agency also has proposed adding new sites to the NPL, most recently on October 26, 1989 (54 FR 43778).

EPA may delete sites from the NPL when no further response is appropriate, as provided in the NCP at 40 CFR 300.66(c)(7). To date, the Agency has deleted 28 sites from the final NPL, most recently on September 22, 1989 (54 FR 38994), when Cecil Lindsey, Newport, Arkansas, was deleted.

This rule adds 71 sites, including 14 Federal facility sites, to the NPL, and drops 1 site from the proposed NPL. EPA has carefully considered public comments submitted for the sites in today's final rule and has made certain modifications in response to those comments. This rule results in a final NPL of 1,081 sites, 93 of them in the Federal section; 137 sites remain in proposed status, 24 of them in the Federal section. In addition, today's final rule removes 1 site from the proposed NPL. With these changes, final and proposed sites now total 1,218.

Information Available to the Public

The Headquarters and Regional public dockets for the NPL (see **ADDRESSES** portion of this notice) contain documents relating to the evaluation and scoring of sites in this final rule. The dockets are available for viewing, by appointment only, after the appearance of this notice. The hours of operation for the Headquarters docket are from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Federal holidays. Please contact individual Regional dockets for hours.

The Headquarters docket contains HRS score sheets for each final site; a Documentation Record for each site describing the information used to compute the score; pertinent information for any site affected by special study waste or other requirements, or Resource conservation and Recovery Act or other listing policies; a list of documents referenced in the Documentation Record; comments received; and the Agency's response to those comments. The Agency's responses are contained in the "Support Document for the Revised National Priorities List - Final Rule, February 1990."

Each Regional docket includes all information available in the Headquarters docket for sites in that Region, as well as the actual reference documents, which contain the data principally relied upon by EPA in calculating or evaluating the HRS scores for sites in that Region. These reference documents are available only in the Regional dockets. They may be viewed, by appointment only, in the appropriate Regional Docket or Superfund Branch office. Requests for copies may be directed to the appropriate Regional docket or Superfund Branch.

An informal written request, rather than a formal request, should be the ordinary procedure for obtaining copies of any of these documents.

II. Purpose and Implementation of the NPL

Purpose

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Senate Committee on Environment and Public Works, Senate Rep. No. 96-959, 96th Cong., 2d Sess. 60 (1980)):

The priority lists serve primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government action in the form of remedial actions or enforcement actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The purpose of the NPL, therefore, is primarily to serve as an informational and management tool. The initial identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the public health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation.

Federal facility sites are eligible for the NPL pursuant to the NCP at 40 CFR 300.66(c)(2). However, section III(e)(3) of CERCLA, as amended by SARA, limits the expenditure of CERCLA moneys at Federally owned facilities. Federal facility sites also are subject to the requirements of CERCLA section 120, added by SARA.

Implementation

A site may undergo remedial action financed by the Trust Fund established under CERCLA ("Superfund") only after it is placed on the final NPL as outlined in the NCP at 40 CFR 300.66(c)(2) and 300.68(a). However, EPA may take enforcement actions under CERCLA or other applicable statutes against responsible parties regardless of whether the site is on the NPL, although, as a practical matter, the focus of EPA's enforcement actions has been and will continue to be on NPL sites. Similarly, in the case of removal actions, EPA has the authority to act at any site, whether listed or not, that meets the criteria of the NCP at 40 CFR 300.65-67.

EPA's policy is to pursue cleanup of NPL sites using the appropriate response and/or enforcement actions available to the Agency, including authorities other than CERCLA. Listing a site will serve as notice to any potentially responsible party that the Agency may initiate CERCLA-financed remedial action. The Agency will decide on a site-by-site basis whether to take enforcement or other action under CERCLA or other authorities, proceed directly with CERCLA-financed response actions and seek to recover response costs after cleanup, or do both. To the extent feasible, once sites are on the NPL, EPA will determine high-priority candidates for Superfund-financed response action and/or enforcement action through both State and Federal initiatives. These determinations will take into account which approach is more likely to most expeditiously accomplish cleanup of the site while using CERCLA's limited resources as efficiently as possible.

Remedial response actions will not necessarily be funded in the same order as a site's ranking on the NPL - that is, its HRS score. The information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. EPA relies on further, more detailed studies in the remedial investigation/feasibility study (RI/FS) to address these concerns.

The RI/FS determines the nature and extent of the threat posed by the release or threatened release. It also takes into account the amount of contaminants in the environment, the risk to affected populations and environment, the cost to correct problems at the site, and the response actions that have been taken by potentially responsible parties or others. Decisions on the type and extent of action, if any, to be taken at these sites are made in accordance with the criteria contained in Subpart F of the NCP. After conducting these additional studies, EPA may conclude that it is not desirable to initiate a CERCLA remedial action at some sites on the NPL because of more pressing needs at other sites, or because a private party cleanup is already underway pursuant to an enforcement action. Given the limited resources available in the Trust Fund, the Agency must carefully balance the relative needs for response at the

numerous sites it has studied. It is also possible that EPA will conclude after further analysis that the site does not warrant remedial action.

Revisions to the NPL such as today's rulemaking may move some previously listed sites to a lower position on the NPL. However, if EPA has initiated action such as an RI/FS at a site, it does not intend to cease such actions to determine if a subsequently listed site should have a higher priority for funding. Rather, the Agency will continue funding site studies and remedial actions once they have been initiated, even if higher-scoring sites are later added to the NPL.

RI/FS at Proposed Sites

An RI/FS may be performed at proposed sites (or even non-NPL sites) pursuant to the Agency's removal authority under CERCLA, as outlined in the NCP at 40 CFR 300.68(a)(1). Section 101(23) of CERCLA defines "remove" or "Removal" to include "such actions as may be necessary to monitor, assess and evaluate the release or threat of release ***." The definition of "Removal" also includes "action taken under section 104(b) of this Act. ***," which authorizes the Agency to perform studies, investigations, and other information-gathering activities.

Although an RI/FS generally is conducted at a site after the site has been placed on the NPL, in a number of circumstances the Agency elects to conduct an RI/FS at a proposed NPL site in preparation for a possible CERCLA-financed remedial action, such as when the Agency believes that a delay may create unnecessary risks to human health or the environment. In addition, the agency may conduct an RI/FS to assist in determining whether to conduct a removal or enforcement action at a site.

Facility (Site) Boundaries

The Agency, on occasion, has received inquiries concerning whether EPA could (or would) revise NPL "site boundaries." The issue frequently arises where a landowner seeks to sell an allegedly uncontaminated portion of an NPL site. The Agency's position is that the NPL does not describe releases in precise geographical terms, and that it would be neither feasible nor consistent with the limited purpose of the NPL (as the mere identification of releases), for it to do so.

CERCLA section 105(a)(8)(B) directs EPA to list national priorities among the known "releases or threatened releases" of hazardous substances. Thus, the purpose of the NPL is merely to identify releases of hazardous substances that are priorities for further evaluation. Although a CERCLA "facility" is broadly defined to include any area where a hazardous substance release has "come to be located" (CERCLA section 101(9)), the listing process itself is not intended to define or reflect the boundaries of such facilities or releases.¹ Of course, HRS data upon which the NPL placement was based will, to some extent, describe which release is at issue; that is, the NPL site would include all releases evaluated as part of that HRS analysis (including noncontiguous releases evaluated under the NPL aggregation policy, see 48 FR 40663 (September 8, 1983)).

EPA regulations do provide that the "nature and extent of the threat presented by a release" will be determined by an RI/FS as more information is developed on site contamination (40 CFR 300.68(d)). During the RI/FS process, the release may be found to be larger or smaller than was originally known, as more is learned about the source and the migration of the contamination. However, this inquiry focuses on an evaluation of the threat posed; the boundaries of the release need not be defined, and in any event are independent of the NPL listing. Moreover, it generally is impossible to discover the full extent of where the contamination "has come to be located" before all necessary studies and remedial work are completed at a site; indeed, the boundaries of the contamination can be expected to change over time. Thus, in most cases, it will be impossible to describe the boundaries of a release with certainty.

Because the Agency does not formally define the geographic extent of releases (or sites) at the time of listing, there is no administrative process to "delist" allegedly uncontaminated areas of an NPL site (or to expand sites to follow the contamination where it has come to be located).² Such a process would be time-consuming, subject to constant reverification, and wasteful of resources. For the same reason, the NPL need not be amended if further research into the extent of the contamination expands the apparent boundaries of the release. Further, the NPL is only of limited significance, as it does not assign liability to any party or to the owner of any specific property. See Report of the Senate Committee on Environment and Public Works, Senate Rep. No. 96-848, 96th Cong., 2d Sess. 60 (1980), quoted at 48 FR 40659 (September 8, 1983). If a party contests liability for releases on discrete parcels of property, it

may do so if and when the Agency brings an action against that party to recover costs or to compel a response action at that property.

At the same time, however, the RIFS or the Record of Decision (which defines the remedy selected) may offer a useful indication to the public of the areas of contamination at which the Agency is considering taking a response action, based on information known at that time. For example, EPA may evaluate (and list) a release over a 400-acre area, but the Record of Decision may select a remedy over 100 acres only. This information may be useful to a landowner seeking to sell the other 300 acres, but it would result in no formal change in the fact that a release is included on the NPL. The landowner (and the public) also should note in such a case that if further study (or the remedial construction itself) reveals that the contamination is located on or has spread to other areas, the Agency may address those areas as well.

This view of the NPL as an initial identification of a release that is not subject to constant re-evaluation is consistent with the Agency's policy of not rescoring NPL sites:

EPA recognizes that the NPL process cannot be perfect, and it is possible that errors exist or that new data will alter previous assumptions. Once the initial scoring effort is complete, however, the focus of EPA activity must be on investigating sites in detail and determining the appropriate response. New data or errors can be considered in that process.*** [T]he NPL serves as a guide to EPA and does not determine liability or the need for response. (49 FR 37081 (September 21, 1984)).³

¹ Although CERCLA section 101(9) sets out the definition of "facility" and not "release," those terms are often used interchangeably. (See CERCLA section 105(a)(8)(B), which defines the NPL as a list of "releases" as well as of the highest priority "facilities.") (For ease of reference, EPA also uses the term "site" interchangeably with "releases" and "facility.")

² The Agency has already discussed its authority to follow contamination as far as it goes, and then to consider the release or facility for response purposes to be the entire area where the hazardous substances have come to be located (54 FR 13298, March 31, 1989).

³ See also *City of Stoughton, Wisc. v. U.S. EPA*, 858 F.2d 747, 751 (D.C. Cir. 1988): Certainly EPA could have permitted further comment or conducted further testing (on proposed NPL sites). Either course would have consumed further assets of the Agency and would have delayed a determination of the risk priority associated with the site. Yet... "the NPL is simply a rough list of priorities, assembled quickly and inexpensively to comply with Congress' mandate for the Agency to take action straightaway." *Eagle-Picher (Industries v. EPA) II*, 759 F.2d [921,] at 932[(D.C. Cir. 1985)].

III. NPL Update Process

There are three mechanisms for placing sites on the NPL. The principal mechanism is the application of the HRS. The HRS serves as a screening device to evaluate the relative potential of uncontrolled hazardous substances to cause human health or safety problems, or ecological or environmental damage. The HRS score is calculated by estimating risks presented in three potential "pathways" of human or environmental exposure: ground water, surface water, and air. Within each pathway of exposure, the HRS considers three categories of factors "that are designed to encompass most aspects of the likelihood of exposure to a hazardous substance through a release and the magnitude or degree of harm from such exposure":

1. Factors that indicate the presence or likelihood of a release to the environment;
2. factors that indicate the nature and quantity of the substances presenting the potential threat; and
3. factors that indicate the human or environmental "targets" potentially at risk from the site.

Factors within each of these three categories are assigned a numerical value according to a set scale. Once numerical values are computed for each factor, the HRS uses mathematical formulas that reflect the relative importance and

interrelationships of the various factors to arrive at a final site score on a scale of 0 to 100. The resultant HRS score represents an estimate of the relative "probability and magnitude of harm to the human population or sensitive environment from exposure to hazardous substances as a result of the contamination of ground water, surface water, or air" (47 FR 31180, July 16, 1982). Those sites that score 28.50 or greater on the HRS are eligible for the NPL.

Under the second mechanism for adding sites to the NPL, each State may designate a single site as its top priority, regardless of the HRS score. This mechanism is provided by section 105(a)(8)(B) of CERCLA, as amended by SARA, which requires that, to the extent practicable, the NPL include within the 100 highest priorities, one facility designated by each State representing the greatest danger to public health, welfare, or the environment among known facilities in the State.

The third mechanism for listing, included in the NCP at 40 CFR 300.66(b)(4) (50 FR 37624, September 16, 1985), has been used only in rare instances. It allows certain sites with HRS scores below 28.50 to be eligible for the NPL if all of the following occur:

- The Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Department of Health and Human Services has issued a health advisory that recommends dissociation of individuals from the release.
- EPA determines that the release poses a significant threat to public health.
- EPA anticipates that it will be more cost-effective to use its remedial authority than to use its removal authority to respond to the release.

All of the sites in today's final rule have been placed on the NPL based on their HRS scores.

States have the primary responsibility for identifying non-Federal sites, computing HRS scores, and submitting candidate sites to the EPA Regional Offices. EPA Regional Offices conduct a quality control review of the States' candidate sites, and may assist in investigating, sampling, monitoring, and scoring sites. Regional Offices also may consider candidate sites in addition to those submitted by States. EPA Headquarters conducts further quality assurance audits to ensure accuracy and consistency among the various EPA and State offices participating in the scoring. The Agency then proposes the sites that meet one of the three criteria for listing (as well as statutory requirements and EPA's listing policies) and solicits public comment on the proposal. Based on these comments and further review by EPA, the Agency determines final HRS scores and places those sites that still qualify on the final NPL.

IV. Statutory Requirements and Listing Policies

CERCLA restricts EPA's authority to respond to certain categories of releases of hazardous substances, pollutants, or contaminants by expressly excluding some substances, such as petroleum, from the response program. In addition, CERCLA section 105(a)(8)(B) directs EPA to list priority sites "among" the known releases or threatened releases of hazardous substances, pollutants, or contaminants, and section 105(a)(8)(A) directs EPA to consider certain enumerated and "other appropriate" factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types or releases. For example, EPA has chosen not to list sites that result from contamination associated with facilities licensed by the Nuclear Regulatory Commission (NRC), on the grounds that NRC has the authority and expertise to clean up releases from those facilities (48 FR 40661, September 8, 1983). Where other authorities exist, placing the site on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen to defer certain types of sites from the NPL even though CERCLA may provide authority to respond. If, however, the Agency later determines that sites deferred as a matter of policy are not being properly responded to, the Agency may place them on the NPL.

The Agency has solicited comment on a policy to expand deferral to other Federal and State authorities (53 FR 51415, December 21, 1988); however, that policy is not currently in effect and has not been applied to sites in this rule. The Agency has committed not to implement any part of an expanded deferral policy until public and Congressional concerns have been fully reviewed and analyzed, and a decision reached on whether or not to implement such a policy.

The listing policies and statutory requirements of relevance to this final rule cover Resource Conservation and Recovery Act (RCRA) (U.S.C. 6901-6991i) sites, Federal facility sites with "special study wastes," and mining waste sites. These and other listing policies and statutory requirements have been explained in previous rulemakings, the latest being October 4, 1989 (54 FR 41000).

Releases From Resources Conservation and Recovery Act (RCRA) Sites

On June 10, 1986 (51 FR 21054), EPA announced a decision on components of a policy for the listing or the deferral from listing on the NPL of several categories of non-Federal sites subject to RCRA subtitle C corrective action authorities. Under the policy, sites not subject to RCRA Subtitle C corrective action authorities will continue to be placed on the NPL. Examples of such sites include:

- Facilities that ceased treating, storing, or disposing of hazardous waste prior to November 19, 1980 (the effective date of Phase I of the Subtitle C regulations) and to which the RCRA corrective action or other authorities of Subtitle C cannot be applied.
- Sites at which only materials exempted from the statutory or regulatory definition of solid waste or hazardous waste are managed.
- Contamination areas resulting from the activities of RCRA hazardous waste handlers to which RCRA subtitle C corrective action authorities do not apply, such as hazardous waste generators or transporters, which are not required to have Interim Status or a final RCRA permit.

Further, the policy stated that certain RCRA sites at which Subtitle C corrective action authorities are available also may be listed if they meet the criterion for listing (i.e., an HRS score of 28.50 or greater) and they fall within one of the following categories:

- Facilities whose owners have demonstrated an inability to finance corrective action as evidenced by their invocation of the bankruptcy laws.
- Facilities that have lost authorization to operate, and for which there are additional indications that the owner or operator will be unwilling to undertake corrective action.
- Facilities, analyzed on a case-by-case basis, whose owners or operators have a clear history of unwillingness to undertake corrective action.

On August 9, 1988 (53 FR 30005), EPA announced a policy for determining whether RCRA facilities are unwilling to perform corrective actions, and therefore should be proposed to the NPL. Additionally, on August 9, 1988 (53 FR 30002). EPA requested comment on a draft policy for determining when an owner/operator should be considered unable to pay for addressing the contamination at a RCRA-regulated site; that draft policy is still under review.

On June 24, 1988 (53 FR 23978), EPA announced its intent to list several other categories of RCRA facilities that the Agency considers appropriate for the NPL. These categories are non- or late filers, converters (i.e., facilities whose part A permits have been withdrawn), protective filers, and sites holding RCRA permits issued before enactment of the Hazardous and Solid Waste Amendments (HSWA) of 1984. (Further definition of these terms is contained in the June 24, 1988 policy announcement.) Consistent with this policy, 23 RCRA sites were placed on the final NPL on October 4, 1989 (54 FR 41000).

In this final rule, EPA is adding to the NPL six sites that are subject to RCRA subtitle C corrective action authorities. These sites are not appropriate for deferral under the NPL/RCRA deferral because policy either the site owners are unable to finance corrective action, as evidenced by their invocation of the bankruptcy laws, or the sites are converters.

Releases from Federal Facility Sites

On March 13, 1989 (54 FR 10520), the Agency announced a policy for listing Federal facility sites on the NPL if they meet the prescribed eligibility criteria (e.g., an HRS score of 28.50 or greater), even if the Federal facility also is subject to the corrective action authorities of RCRA subtitle C. In that way, cleanup, if appropriate, could be effected at those sites under CERCLA.

Federal facility sites are placed in a separate section of the NPL. This rule adds 14 Federal facility sites to the final NPL, bringing the total number of final Federal facility sites to 93. Currently, 24 Federal facility sites are proposed to the NPL.

Releases of Special Study Wastes

Section 105(g) of CERCLA, as amended by SARA, requires EPA to consider certain factors before adding sites involving RCRA "special study wastes" to the NPL. Section 105(g) applies to sites that (1) were not on or proposed for the NPL as of October 17, 1986 and (2) contain significant quantities of special study wastes as defined under RCRA sections 3001(b)(2) [drilling fluids], 3001(b)(3)(A)(ii) [mining wastes], and 3001(b)(3)(A)(iii) (cement kiln dusts). Before these sites can be added to the NPL, section 105(g) requires that the following information be considered.

- The extent to which the HRS score for the facility is affected by the presence of the special study waste at or released from the facility.
- Available information as to the quantity, toxicity, and concentration of hazardous substances that are constituents of any special study waste at, or released from, the facility; the extent of or potential for release of such hazardous constituents; the exposure or potential exposure to human population and environment; and the degree of hazard to human health or the environment posed by the release of such hazardous constituents at the facility.

This final rule includes one site containing or potentially containing special study wastes subject to section 105(g). EPA has placed in the dockets an addendum that evaluates for the site the information called for in section 105(g). The addendum indicates that the special study waste presents a threat to human health and the environment, and that the site should be added to the NPL.

CERCLA section 125, as amended by SARA, addresses specific special study wastes described in RCRA section 3001(b)(3)(A)(i) (fly ash and related wastes). No sites in this rule are subject to section 125.

Response to Public Comments on Special Study Waste Sites

When EPA proposed to include on the NPL the special study waste site in today's final rule, the Agency received several public comments. The Agency's responses to site-specific comments are contained in the "Support Document for the Revised National Priorities List - Final Rule, February 1990." (See Section V in today's final rule.)

EPA also received general (i.e., non-site-specific) comments from one organization concerning the Agency's evaluation of coal tar special study waste sites. A summary of the issues raised in these comments and the Agency's response follow. EPA's response generally applies to all special study waste sites, not just to the one in today's final rule.

The commenter said that "it can be argued" that coal tar wastes, found at the special study waste site in today's rule (see Section V), are "generated primarily from the combustion of coal or other fossil fuels" and, therefore, could be considered the type of special study waste governed by CERCLA section 125. However, the commenter said that, "[f]or purposes of these comments, we concur with EPA's categorization" of coal tar waste as a waste from the "extraction, beneficiation, and processing of ores and minerals" governed by CERCLA section 105(g).

In response, EPA has stated that wastes produced in the coal gasification process are subject to CERCLA section 105(g), not section 125. See 54 FR 15319, April 17, 1989; 54 FR 36642, September 1, 1989; and 54 FR 39301-2, September 25, 1989. The Agency's interpretation of RCRA section 3001(b)(3)(A)(ii), and, therefore, CERCLA section 105(g), as applying to wastes generated in the coal gasification process, also was stated in a September 15, 1987 memorandum from Marcia Williams, then the Director of EPA's Office of Solid Waste, and Christina Kaneen, EPA

Assistant General Counsel for RCRA, to Robert Duprey, Director of the Waste Management Division in EPA Region 8. (This memorandum is included in the Superfund docket for this final rule.) Therefore, the site with coal tar wastes in today's rule was evaluated as a CERCLA section 105(g) special study waste site.

The commenter also questioned EPA's interpretation of statutory requirements in evaluating special study waste sites. The commenter criticized "EPA's apparent position" that the requirements imposed on the Agency by CERCLA section 125 for listing sites with special study wastes described in RCRA section 3001(b)(3)(A)(i) [fly ash and related wastes] are equivalent to those imposed by CERCLA section 105(g) for listing other special study waste sites. The commenter stated that CERCLA section 125 imposes "burdens beyond those imposed by section 105(g) with respect to listing fossil fuel combustion waste sites pending revision of the HRS."

In response, in EPA's view, the sites referred to by the commenter do not contain substantial volumes of wastes subject to CERCLA section 125. If, in the future, EPA proposes to include such a site on the NPL using the current HRS, the Agency will carefully evaluate and comply with the requirements of that section, and respond to the specific concerns raised by the commenter regarding the difference between sections 125 and 105(g). (No such sites have been listed to date since the enactment of section 125.)

The commenter also stated that section 105(g) requires EPA to "consider the enumerated site-specific factors to determine whether the HRS score overestimates the actual risks posed by the site." He stated that if risks are overestimated, EPA must reassess its initial decision to list a site. He suggested that this reassessment could be done by revising the inputs used to score the site or by making a new listing decision based on an analysis of site-specific factors listed in section 105(g). The commenter stated that the HRS scoring packages, including the special study waste addenda, did not indicate that such a reassessment had been made.

In response, EPA notes that CERCLA section 105(g) requires that certain factors (listed earlier in this preamble) be "considered" in ranking facilities containing special study wastes, but does not set forth a specific procedure to be followed in doing so. As required by section 105(g)(2)(A), EPA reviewed each site included in this final rule to determine whether the presence of any special study waste at, or release of such waste from the site may have had an effect on the HRS score. As noted above, only one site in today's final rule was affected. The information referred to in section 105(g)(2)(B), to the extent available within the meaning of that section, was gathered as reflected in the addendum to the scoring package.

EPA is satisfied that, in considering this and other special study waste sites, it has complied with the directive in section 105(g) to consider factors relating to special study waste sites. In the absence of specific direction from Congress as to the process by which those factors should be considered, EPA assembles the available information on each of those factors and summarizes that information in the addendum for each site. Where the HRS evaluation for a site is based at least in part on the presence of special study wastes or contaminants found in special study wastes, the Agency includes in the addendum a qualitative analysis related to the risks posed by the site to complement the HRS evaluation. That analysis includes an evaluation of the toxicity of the contaminants present, an evaluation of potential or actual human exposures, and an assessment of the potential hazards at any possible points of exposure. In the case of the special study waste site included in today's final rule, based on information assembled in the addendum, EPA has concluded that the site presents a threat to human health and the environment and that inclusion on the NPL is warranted (53 FR 23992, June 24, 1988).

EPA notes that the requirements for consideration of special study wastes in CERCLA section 105 differ significantly from those in CERCLA section 125, which applies only to sites containing waste described in RCRA section 3001(b)(3)(A)(i) (fly ash and certain other fossil fuel combustion wastes). Section 125, added by SARA, specifically prohibits EPA from including on the NPL any site for which the ranking was based principally on volume and not concentration of the constituents of the section 3001(b)(3)(A)(i) waste. No such prohibition is contained in section 105(g), also added by SARA. The legislative history of section 105(g) demonstrates that Congress had considered and rejected language similar to that used in section 125 in an earlier version of section 105(g). The intentional revision of section 105(g) to distinguish it from section 125 demonstrates that Congress decided to give EPA wide discretion in adding special study waste facilities to the NPL. In particular, section 105(g) permits sites to be listed even if the ranking is based principally on total waste volume.

The commenter also stated that EPA has failed to comply with CERCLA section 105(g) in proposing special study waste sites for the NPL, because EPA did not estimate quantities of hazardous constituents at each site. The commenter said that any decision to list such a site must "be based on an assessment of the actual risks posed by the hazardous constituents of the wastes ***"

In response, where data on factors such as quantity or concentration of hazardous substance constituents are not readily available, EPA is not required by SARA to collect new information. SARA directs EPA to consider only "available information," and the Report to SARA explains that "[i]n the course of determining whether to add facilities containing special study wastes to the NPL in the interim period, if the President has sampling data from past or present on-site or off-site examination of the facility or releases from the facility available, he shall consider it" (H.R. Rep. No. 962, 99th Cong., 2d Sess. 202 (1986)).

At sites where information on hazardous constituent quantity is available, EPA does consider that information, as discussed above. However, the Conference Report cited above emphasizes that although EPA is required to "consider" available information, this consideration should not involve "the conduct of risk assessments." Thus, at those sites where some concentration data are available, the Agency has broad discretion in determining how the available information will be considered in listing decisions.

The commenter also stated that the analysis of special study waste sites should not focus on the highest concentration of hazardous constituents but should consider the range of concentrations.

In response, SARA directs EPA only to consider "available information" on "concentrations of hazardous substances" in special study wastes; it does not specify in further detail how to analyze the site where multiple samples show differing levels of concentration, and that decision is therefore within the Agency's discretion. The commenter is correct in noting that EPA generally uses the highest concentrations found in order to ensure that the most severe threats identified are taken into account. Many of the hazardous constituents of the special study wastes have been found at high concentrations at the coal tar waste sites referred to by the commenter. Listing such sites is not inconsistent with the Congressional concern that "high volume, low toxicity waste sites posing low risk ****" not be listed on the NPL (131 Cong. Rec. S 11681, September 18, 1985). Furthermore, because data generally are limited at the site inspection stage, high concentrations of certain hazardous substances in some samples may indicate that more extensive sampling later at the remedial stage will reveal elevated levels of these or other hazardous substances. These factors, taken together, justify EPA's approach of using the highest concentration data. This approach is consistent with EPA's approach to other similar scoring issues: for example, where multiple contaminants are found at a site, the most toxic constituent is used for scoring purposes.

The commenter also stated that EPA has failed to consider readily available site-specific information on the direction of ground water flow in preparing special study waste addenda.

In response, the Agency does not believe that section 105(g) requires assessing site-specific information on ground water flow direction. Nowhere in the statutory language or the legislative history of section 105 or other provisions of CERCLA, as amended, does Congress instruct EPA to consider the direction of ground water flow in scoring sites with special study wastes. Rather, Congress gives the Agency broad discretion to "rank sites as accurately as the agency believes is feasible, using information from preliminary assessments and site inspections, *** and identification of potentially and actually contaminated water supplies for sensitive environments" (H.R. Rep. No. 962, 99th Cong., 2d Sess. 200 (1986)).

The principal concern of Congress in enacting section 105(g) was that the current HRS may "introduce a bias in the hazard ranking system against large quantities of waste with the presence of trace toxic metals, such as typical mining wastes" (Senate Rep. No. 99-11, 99th Cong., 1st Sess. 40 (1985)). Ground water flow direction is unrelated to this concern. In any case, at the site inspection stage, determining the extent of population actually exposed or threatened based on ground water flow information generally is not practicable (47 FR 31190, July 16, 1982). In many instances, this information is not available, and in others, the flow direction varies over time. Requiring a precise measure of the affected population would substantially delay the listing of sites and substantially increase the costs associated with scoring sites. As stated in the legislative history for section 105, "[n]either the revised Hazard Ranking System required by this section nor any other provision of law or regulation requires the conduct of risk assessments at unlisted or listed facilities" (H.R. Rep. No. 962, 99th Cong., 2d Sess. 202 (1986)).

In analyzing any site, the Agency generally uses a radius of 3 miles or less around a site when determining the distance to the nearest well in the contaminated aquifer and the population at risk due to actual or potential contamination. This methodology is reasonable because it recognizes the potential for future population growth at locations downgradient from the site and for new data that indicate a different flow direction. Furthermore, the purpose of the HRS is not only to protect current ground water users, but more broadly to identify and protect valuable ground water resources.

V. Disposition of Sites in Today's Final Rule

This final rule promulgates 71 sites (table 1) and drops 1 site from several proposed rulemakings. These 72 sites are from the following proposed updates:

- Update # 2 (49 FR 40320, October 15, 1984): 1 site
- Update # 3 (50 FR 14115, April 10, 1985): 1 site
- Update # 4 (50 FR 37950, September 18, 1985): 3 sites
- Update # 5 (51 FR 21099, June 10, 1986): 4 sites
- Update # 6 (52 FR 2492, January 22, 1987): 6 sites
- Update # 7 (53 FR 23988, June 24, 1988): 4 sites
- Update # 9 (54 FR 29820, July 14, 1989): 8 sites

Table 1
National Priorities List, New Final Sites (by Rank), February 1990

NPL Gr ¹	NPL Rank	State	Site Name	City/County
2	70	WA	ALCOA (Vancouver Smelter)	Vancouver
3	143	KY	Brantley Landfill	Island
3	150	VT	Parker Sanitary Landfill	Lyndon
4	163	DE	E.I. Du Pont (Newport Plant Lf)	Newport
4	197	MI	Hi-Mill Manufacturing Co.	Highland
5	211	TN	Carrier Air Conditioning Co.	Collierville
6	280	OK	Oklahoma Refining Co.	Cyril
7	318	WA	Pasco Sanitary Landfill	Pasco
8	363	MA	Atlas Tack Corp.	Fairhaven
8	370	FL	Airco Plating Co.	Miami
8	380	WA	Pacific Car & Foundry Co.	Renton
8	381	IA	John Deere (Ottumwa Works Lndfls)	Ottumwa
8	384	IN	Himco Dump	Elkhart
8	391	PA	Avco Lycoming (Willamsport Div)	Williamsport
8	396	MI	State Disposal Landfill, Inc.	Grand Rapids
9	412	GA	Cedartown Industries, Inc.	Cedartown
10	457	SC	Rock Hill Chemical Co.	Rock Hill
10	483	IL	Amoco Chemicals (Joliet Landfill)	Joliet
10	486	OR	Allied Plating, Inc.	Portland

NPL Gr ¹	NPL Rank	State	Site Name	City/County
11	515	FL	Beulah Landfill	Pensacola
11	524	OK	Mosley Road Sanitary Landfill	Oklahoma City
11	537	NC	FCX, Inc. (Statesville Plant)	Statesville
11	539	MI	Michigan Disposal (Cork Street Lf)	Kalamazoo
12	553	SC	Sangamo/Twelve-Mile/Hartwell PCB	Pickens
12	563	MI	Bendix Corp./Allied Automotive	St. Joseph
12	567	VA	Arrowhead Assoc/Scovill Corp.	Montross
12	568	VA	Atlantic Wood Industries, Inc.	Portsmouth
12	598	SC	Townsend Saw Chain Co.	Pontiac
13	602	VA	Suffolk City Landfill	Suffolk
13	622	IL	DuPage Cty Ldf/Blackwell Forest	Warrenville
13	636	NY	Niagara Mohawk Power (Saratoga Sp.)	Saratoga Springs
13	648	KS	29th & Mead Ground Water Contamin.	Wichita
14	677	IL	H.O.D. Landfill	Antioch
14	695	MI	Kaydon Corp.	Muskegon
14	700	MI	Muskegon Chemical Co.	Whitehall
15	713	DE	Tyler Refrigeration Pit	Smyrna
15	723	SC	Helena Chemical Co. Landfill	Fairfax
15	739	NY	Carroll & Dubies Sewage Disposal	Port Jervis
15	744	CT	Linemaster Switch Corp.	Woodstock
16	754	NY	Jones Chemicals, Inc.	Caledonia
16	755	PA	Saegertown Industrial Area	Saegertown
16	762	CA	CTS Printex, Inc.	Mountain View
16	770	CA	Sola Optical USA, Inc.	Petaluma
16	781	KY	General Tire/Rubber (Mayfield Lnf)	Mayfield
16	789	WI	Madison Metro Sewer District Lag	Blooming Grove
16	795	SC	Beaunit Corp (Circular Knit & Dye)	Fountain Inn
17	831	CA	TRW Microwave, Inc. (Building 825)	Sunnyvale
18	861	MO	Missouri Electric Works	Cape Girardeau
18	867	FL	Piper Aircraft/Vero Beach Wtr&Swr	Vero Beach
18	871	FL	Anodyne, Inc.	North Miami Beach
18	880	AL	Redwing Carriers, Inc. (Saraland)	Saraland
18	897	WA	Northwest Transformer (S Harkness)	Everson

NPL Gr ¹	NPL Rank	State	Site Name	City/County
19	933	CA	Hewlett-Packard(620-40 Page Mill)	Palo Alto
19	939	ME	Saco Municipal Landfill	Saco
19	947	WA	Old Inland Pit	Spokane
20	966	PA	North Penn--Area 12	Worcester
20	977	MI	Metal Working Shop	Lake Ann

Number of New Final Sites: 57. ¹ Sites are placed in groups (Gr) corresponding to groups of 50 on the final NPL.

National Priorities List, Federal Facility Sites, New Final (by Rank), February 1990

NPL Gr ¹	State	Site Name	City/County
1	CA	Riverbank Army Ammunition Plant	Riverbank
3	MD	Aber Prov Ground-Edgewood Area	Edgewood
5	WA	Naval Air Sta. Whid Is (Ault)	Whidbey Island
7	NJ	Picatinny Arsenal	Rockaway Township
9	CA	Fort Ord	Marina
10	WA	Naval Air Sta. Whid Is (Seaplane)	Whidbey Island
10	NH	Pease Air Force Base	Portsmouth/Newington
10	WY	F.E. Warren Air Force Base	Cheyenne
12	CA	El Toro Marine Corps Air Station	El Toro
13	MA	Fort Devens-Sudbury Training Ann	Middlesex County
14	ME	Loring Air Force Base	Limestone
16	CA	George Air Force Base	Victorville
17	AZ	Yuma Marine Corps Air Station	Yuma
19	MO	Weldon Spring Form Army Ord Works	St. Charles County

Number of New Final Federal Facility Sites: 14. ¹ Sites are placed in groups (Gr) corresponding to groups of 50 on the final NPL.

EPA read all comments received on these sites, including late comments. In past rules, EPA responded even to late comments. However, given the volume and number of late comments received and the need to make final decisions on all currently proposed sites prior to the date that the revised HRS takes effect, EPA was not able to respond to all late comments received for sites in this rule. EPA has responded (in the Support Document) to those comments received no later than October 31, 1988 for all sites included in this final rule that were proposed in Updates #2, 3, 4, 5, 6, and 7 and to those comments received no later than October 3, 1989 for sites in this final rule that were proposed in Update #9. (EPA had previously indicated that it may no longer be able to consider late comments (53 FR 23990, June 24, 1988 and 54 FR 19527, May 5, 1989)). Although EPA has not responded to all late comments, it has read all late comments, and has endeavored to respond in the Support Document to those late comments that bring to the Agency's attention a fundamental error in the scoring of a site. In addition, the Agency has routinely responded to late comments resulting from EPA correspondence that provided commenters with more recent data or requested that the commenters be more specific in their comments.

Based on the comments received on the proposed sites, as well as investigation by EPA and the States (generally in response to comment), EPA recalculated the HRS scores for individual sites where appropriate. Where the public comments or additional information dropped a score below 28.50, the site has been removed from the NPL. EPA's response to site-specific public comments and explanations of any score changes made as a result of such comments are addressed in the "Support Document for the Revised National Priorities List-Final Rule, February 1990."

RCRA Sites

Six sites are subject to Subtitle C corrective action authorities, but either the site owner has invoked the protection of the bankruptcy laws, or the Part A permit has been withdrawn (converter status). These sites are being added to the final NPL consistent with the NPL/RCRA listing policy:

- CTS Printex, Inc., Mountain View, California (converter)
- John Deere (Ottumwa Works Landfills), Ottumwa, Iowa (converter)
- Oklahoma Refining Co., Cyril, Oklahoma (bankruptcy)
- Allied Plating Inc., Portland, Oregon (bankruptcy)
- Townsend Saw Chain Co., Pontiac, South Carolina (converter)
- Carrier Air Conditioning Co., Collierville, Tennessee (converter)

Federal Facility Sites

This final rule adds 14 Federal facility sites to the NPL (Table 1).

Special Study Waste Sites

One site containing or possibly containing special study wastes is being added to the NPL in this rule:

- Niagara Mohawk Power Corp. (Saratoga Springs Plant), Saratoga Springs, New York (coal tar wastes).

Score Revisions

EPA has revised the HRS scores for 19 sites based on its review of comments and additional information developed by EPA and the States (table 2). Some of the changes have placed the sites in different groups of 50 sites. For one of these sites, the public comments have resulted in scores below the cut-off of 28.50. Accordingly, this site is being dropped from the proposed NPL at this time:

- Keyser Avenue Borehole, Scranton, Pennsylvania

**Table 2
Sites With HRS Score Changes**

State/Site Name	Location	HRS Score Proposed	HRS Score Final
AZ/Yuma Marine Corps Air Station	Yuma	29.88	32.24
CA/CTS Printex, Inc.	Mountain View	35.39	33.62
CA/El Toro Marine Corps Air Station	El Toro	40.83	37.43
CA/Sola Optical USA, Inc.	Petaluma	35.57	33.39

State/Site Name	Location	HRS Score Proposed	HRS Score Final
DE/Tyler Refrigeration Pit	Smyrna	29.41	33.94
IL/Amoco Chemicals (Joliet Landfill)	Joliet	32.47	39.44
IL/H.O.D. Landfill	Antioch	52.02	34.68
KS/29th & Mead Ground Water Contamination	Wichita	42.79	35.35
KY/Brantley Landfill	Island	58.15	52.73
MA/Atlas Tack Corp.	Fairhaven	31.89	42.60
MI/Metal Working Shop	Lake Ann	30.12	28.82
MO/Missouri Electric Works	Cape Girardeau	33.40	31.20
MO/Weldon Spring Former Army Ordnance Works.	St. Charles Co.	30.77	30.26
PA/Keyser Avenue Borehole	Scranton	30.24	00.00
SC/Rock Hill Chemical Co.	Rock Hill	49.76	40.29
TN/Carrier Air Conditioning Co.	Collierville	35.37	48.91
VA/Atlantic Wood Industries, Inc.	Portsmouth	40.77	37.14
VT/Parker Sanitary Landfill	Lyndon	46.25	52.29
WA/Naval Air Station, Whidbey Island (Ault).	Whidbey Island	48.48	47.58

Name Revisions

The name of one site addressed in this final rule has been changed in response to information received during the comment period. The change is intended to reflect more accurately the location, nature, or potential sources of contamination at the site:

- North Penn - Area 12 (proposed as Transicoil, Inc.), Worcester, Pennsylvania

VI. Disposition of All Proposed Sites/Federal Facility Sites

To date, EPA has proposed 10 major updates to the NPL. Today's rule results in a total of 113 non-Federal sites and 24 Federal facility sites that continue to be proposed pending completion of response to comment, resolution of technical issues and resolution of various policy issues (table 3). All sites that remain proposed will be considered for future final rules. Although these sites remain proposed, the comment periods have not been extended or reopened.

**Table 3
NPL Proposals**

Update No.	Date/FEDERAL REGISTER Citation	Number of Sites/Federal Facility Sites Proposed	Number of Sites/Federal Facility Sites Remaining Proposed
1	9/8/83, 48 FR 40674	132/1	1/0
2	10/15/84, 49 FR 40320	208/36	16/3

Update No.	Date/FEDERAL REGISTER Citation	Number of Sites/Federal Facility Sites Proposed	Number of Sites/Federal Facility Sites Remaining Proposed
3	4/10/85, 50 FR 14115	26/6	0/0
4	9/18/85, 50 FR 37950	38/3	0/0
5	6/10/86, 51 FR 21099	43/2	4/0
6	1/22/87, 52 FR 2492	63/1	7/0
7	6/24/88, 53 FR 23988	215/14	57/2
8	5/5/89, 54 FR 19526	10/0	5/0
9	7/14/89, 54 FR 29820	0/52	0/17
10	10/26/89, 54 FR 43778	23/2	23/2
ATSDR	8/16/89, 54 FR 33846	2/0	0/0
Total		760/117	113/24

VII. Contents of the NPL

The 71 new sites added to the NPL in today's rule (Table 1) have been incorporated into the NPL in order of their HRS scores except where EPA modified the order to reflect top priorities designated by the States, as discussed in greater detail in previous rulemakings, the most recent on March 31, 1989 (54 FR 13296).

The NPL appears at the end of this final rule and will be codified as part of Appendix B to the NCP. Sites on the NPL are arranged according to their scores on the HRS. The NPL is presented in groups of 50 sites to emphasize that minor differences in HRS scores do not necessarily represent significantly different levels of risk. Except for the first group, the score range within the groups, as indicated in the list, is less than 4 points. EPA considers the sites within a group to have approximately the same priority for response actions. For convenience, the sites are numbered.

The following three sites previously were placed on the NPL because they met the requirements of the NCP at § 300.66 (b)(4), as explained in section III of this rule:

- Forest Glen Mobile Home Subdivision, Niagara Falls, New York
- Radium Chemical Co., Inc., Woodside, New York City, New York
- Lansdowne Radiation Site, Lansdowne, Pennsylvania

These sites have HRS scores less than 28.50, and appear at the end of the list.

This rule adds 14 new sites to the Federal facility section of the NPL by group number.

VIII. Regulatory Impact Analysis

The costs of cleanup actions that may be taken at sites are not directly attributable to placement on the NPL, as explained below. Therefore, the Agency has determined that this rulemaking is not a "major" regulation under Executive Order 12291. EPA has conducted a preliminary analysis of economic implications of today's amendment to the NCP. EPA believes that the kinds of economic effects associated with this revision generally are similar to those effects identified in the regulatory impact analysis (RIA) prepared in 1982 for the revisions to the NCP pursuant to section 105 of CERCLA and the economic analysis prepared when amendments to the NCP were proposed (50 FR 5882, February 12, 1985). The Agency believes the anticipated economic effects related to adding these 71 sites to

the NPL can be characterized in terms of the conclusions of the earlier RIA and the most recent economic analysis. This rule was submitted to the Office of Management and Budget for review as required by Executive Order 12291.

Costs

EPA has determined that this rulemaking is not a "major" regulation under Executive Order 12291 because inclusion of a site on the NPL does not itself impose any costs. It does not establish that EPA necessarily will undertake remedial action, nor does it require any action by a private party or determine its liability for site response costs. Costs that arise out of site responses result from site-by-site decisions about what actions to take, not directly from the act of listing itself. Nonetheless, it is useful to consider the costs associated with responding to all sites included in this rulemaking.

The major events that follow the proposed listing of a site on the NPL are a search for potentially responsible parties and a remedial investigation/feasibility study (RI/FS) to determine if remedial actions will be undertaken at a site. Design and construction of the selected remedial alternative follow completion of the RI/FS, and operation and maintenance (O&M) activities may continue after construction has been completed.

EPA initially bears costs associated with responsible party searches. Responsible parties may bear some or all the costs of the RI/FS, remedial design and construction, and O&M, or EPA and the States may share costs.

The State cost share for site cleanup activities has been amended by section 104 of SARA. For privately-owned sites, as well as at publicly-owned but not publicly-operated sites. EPA will pay for 100% of the costs of the RI/FS and remedial planning, and 90% of the costs associated with remedial action. The State will be responsible for 10% of the remedial action. For publicly-operated sites, the State cost share is at least 50% of all response costs at the site, including the RI/FS and remedial design and construction of the remedial action selected. After the remedy is built, costs fall into two categories:

- For restoration of ground water and surface water, EPA will share in startup costs according to the criteria in the previous paragraph for 10 years or until a sufficient level of protectiveness is achieved before the end of 10 years.
- For other cleanups, EPA will share for up to 1 year the cost of that portion of response needed to assure that a remedy is operational and functional. After that, the State assumes full responsibilities for O&M.

In previous NPL rulemakings, the Agency estimated the costs associated with these activities (RI/FS, remedial design, remedial action, and O&M) on an average per site and total cost basis. EPA will continue with this approach, using the most recent (1988) cost estimates available; these estimates are presented below. However, there is wide variation in costs for individual sites, depending on the amount, type, and extent of contamination. Additionally, EPA is unable to predict what portions of the total costs responsible parties will bear, since the distribution of costs depends on the extent of voluntary and negotiated response and the success of any cost-recovery actions.

Cost category	Average total cost per site ¹
RI/FS	1,300,000
Remedial Design	1,500,000
Remedial Action	25,000,000 ²
Net present value of O&M ³	3,770,000 ²

Source: Office of Program Management, Office of Superfund Remediation Technology Innovation, U.S. EPA.¹ 1988 U.S. dollars.

² Includes State cost-share.

³ Assumes cost of O&M over 30 years. \$400,000 for the first year and 10% discount rate.

Costs to States associated with today's final rule arise from the required State cost-share of:

1. 10% of remedial actions and 10% of first-year O&M costs at privately-owned sites and sites that are publicly-owned but not publicly operated; and
2. at least 50% of the remedial planning (RI/FS and remedial design), remedial action, and first-year O&M costs at publicly-operated sites.

States will assume the cost for O&M after EPA's period of participation. Using the assumptions developed in the 1982 RIA for the NCP, EPA has assumed that 90% of the 57 non-Federal sites added to the NPL in this rule will be privately-owned and 10% will be State- or locally-operated. Therefore, using the budget projections presented above, the cost to States of undertaking Federal remedial planning and actions, but excluding O&M costs, would be approximately \$211 million. State O&M costs cannot be accurately determined because EPA, as noted above, will share O&M costs for up to 10 years for restoration of ground water and surface water, and it is not known how many sites will require this treatment and for how long. However, based on past experience, EPA believes a reasonable estimate is that it will share startup costs for up to 10 years at 25% of sites. Using this estimate, State O&M costs would be approximately \$183 million.

Placing a hazardous waste site on the final NPL does not itself cause firms responsible for the site to bear costs. Nonetheless, a listing may induce firms to clean up the sites voluntarily, or it may act as a potential trigger for subsequent enforcement or cost-recovery actions. Such actions may impose costs on firms, but the decisions to take such actions are discretionary and made on a case-by-case basis. Consequently, precise estimates of these effects cannot be made. EPA does not believe that every site will be cleaned up by a responsible party. EPA cannot project at this time which firms or industry sectors will bear specific portions of the response costs, but the Agency considers: the volume and nature of the waste at the sites; the strength of the evidence linking the wastes at the site to the parties; the parties' ability to pay; and other factors when deciding whether and how to proceed against the parties.

Economy-wide effects of this amendment to the NCP are aggregations of effects on firms and State and local governments. Although effects could be felt by some individual firms and States, the total impact of this amendment on output, prices, and employment is expected to be negligible at the national level, as was the case in the 1982 RIA.

Benefits

The real benefits associated with today's amendment placing additional sites on the NPL are increased health and environmental protection as a result of increased public awareness of potential hazards. In addition to the potential for more federally-financed remedial actions, expansion of the NPL could accelerate privately-financed, voluntary cleanup efforts. Listing sites as national priority targets also may give States increased support for funding responses at particular sites.

As a result of the additional CERCLA remedies, there will be lower human exposure to high-risk chemicals, and higher-quality surface water, ground water, soil, and air. These benefits are expected to be significant, although difficult to estimate in advance of completing the RI/FS at these sites.

IX. Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act of 1980 requires EPA to review the impacts of this action on small entities, or certify that the action will not have a significant impact on a substantial number of small entities. By small entities, the Act refers to small businesses, small government jurisdictions, and nonprofit organizations.

While modifications to the NPL are considered revisions to the NCP, they are not typical regulatory changes since the revisions do not automatically impose costs. The placing of sites on the NPL does not in itself require any action of any private party, nor does it determine the liability of any party for the cost of cleanup at the site. Further, no identifiable groups are affected as a whole. As a consequence, it is hard to predict impacts on any group. Placing a site on the NPL could increase the likelihood that adverse impacts to responsible parties (in the form of cleanup costs) will occur, but EPA cannot identify the potentially affected business at this time nor estimate the number of small businesses that might be affected.

The Agency does expect that certain industries and firms within industries that have caused a proportionately high percentage of waste site problems could be significantly affected by CERCLA actions. However, EPA does not expect

the impacts from the listing of these 57 non-Federal sites to have a significant economic impact on a substantial number of small businesses.

In any case, economic impacts would occur only through enforcement and cost-recovery actions, which are taken at EPA's discretion on a site-by-site basis. EPA considers many factors when determining what enforcement actions to take, including not only the firm's contribution to the problem, but also the firm's ability to pay.

The impacts (from cost recovery) on small governments and nonprofit organizations would be determined on a similar case-by-case basis.

List of Subjects in 40 CFR Part 300

Air pollution control, chemicals, Hazardous materials, Intergovernmental relations, Natural resources, Oil pollution, Reporting and recordkeeping requirements, Superfund, Waste treatment and disposal, Water pollution control, Water supply.

Dated: February 9, 1990.

Don R. Clay

Acting Assistant Administrator, Office of Solid Waste and Emergency Response.

40 CFR part 300 is amended as follows:

PART 300 - [AMENDED]

1. The authority citation for part 300 continues to read as follows:

Authority: 42 U.S.C. 9605; 42 U.S.C. 9620; 33 U.S.C. 1321(c)(2); E.O. 11735 (38 FR 21243); E.O. 12580 (52 FR 2923).

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