

**H B**

**68**

**FILE 2**

the type of abuses that are here alleged, does not weigh in favor of the application of "harmless error" analysis. "A petit jury determination of guilt will not moot these issues because they go beyond the question of whether the grand jury had sufficient evidence upon which to return an indictment[.]" *Taylor*, 798 F.2d at 1340, and implicate issues that go to "the fundamental fairness of the criminal proceedings." *Id.*

#### IV. Conclusion

In light of the long-standing principle that disfavors piecemeal appeals, *Hollywood Motor Car Co.*, 458 U.S. at 264-65, 102 S.Ct. at 3082-83, we read *Mechanik* as establishing a limited principle and not as creating an additional exception to the final judgment rule. *Cf. United States v. The LaRouche Campaign*, 829 F.2d 250, 254 (1st Cir.1987) ("[W]e cannot conclude that the Supreme Court intended the effect of *Mechanik* to be to render denials of motions alleging unfairness in the grand jury process routinely immediately appealable."). Further, it is inconceivable to us that the Supreme Court intended *Mechanik* to preclude appellate courts from exercising post-conviction review of the denial of motions that have alleged fundamental error in the grand jury process. Accordingly, we hold that there is no jurisdictional basis for the interlocutory review of the order denying Johns's motions to dismiss the indictment, and we will, therefore, dismiss this appeal.<sup>4</sup>



4. Pursuant to Fed.R.App.P. 41(a), we will direct

UNITED STATES of America; South Carolina Department of Health and Environmental Control, Plaintiffs-Appellees,

v.

MONSANTO COMPANY; Allied Corporation; E.M. Industries, Inc.; Defendants-Appellants,

American Insurance Association; Chemical Manufacturers Association  
Amici Curiae.

and

SOUTH CAROLINA RECYCLING AND DISPOSAL, INC.; Columbia Organic Chemical Company; Oscar Seidenberg; Harvey Hutchinson; Eaton Corporation; Rad Services, Inc.; Aquair Corporation; Defendants,

v.

G.D. SEARLE & COMPANY; Will Ross, Inc., Third Party  
Defendants.

UNITED STATES of America; South Carolina Department of Health and Environmental Control, Plaintiffs-Appellees,

v.

Oscar SEIDENBERG; Harvey Hutchinson; Defendants-Appellants,

American Insurance Association; Chemical Manufacturers Association.  
Amici Curiae.

and

MONSANTO COMPANY; Allied Corporation; Aquair Corporation; E.M. Industries, Inc.; South Carolina Recycling and Disposal, Inc.; Columbia Organic Chemical Company; Eaton Corporation; Rad Services, Inc., Defendants,

v.

G.D. SEARLE & COMPANY; Will Ross, Inc., Third Party  
Defendants.

the clerk to issue the mandate forthwith.

UNITED STATES of America  
Plaintiff-Appellant,  
and

South Carolina Department of Health  
and Environmental Control, Plaintiff,

v.

MONSANTO COMPANY; Allied Corpo-  
ration; E.M. Industries Inc.; South  
Carolina Recycling and Disposal, Inc.;  
Oscar Seidenberg; Harvey Hutchinson;  
Defendants-Appellees,

American Insurance Association; Chem-  
ical Manufacturers Association,  
Amici Curiae.

and

COLUMBIA ORGANIC CHEMICAL  
COMPANY; Eaton Corporation; Rad  
Services, Inc.; Aquair Corporation, De-  
fendants,

v.

G.D. SEARLE & COMPANY; Will  
Ross, Inc., Third Party  
Defendants.

Nos. 86-1261, 86-1263 and 86-1265.

United States Court of Appeals,  
Fourth Circuit.

Argued Oct. 8, 1987.

Decided Sept. 7, 1988.

Federal and state governments brought action to recover response costs following release and threatened releases of hazardous material at waste storage facility. The United States District Court for the District of South Carolina, at Columbia, Charles E. Simons, Jr., Senior District Judge, 653 F.Supp. 984, found defendants jointly and severally liable as owners, operators, and generators of hazardous waste, and defendants appealed. The Court of Appeals, Sprouse, Circuit Judge, held that: (1) landowners, who entered into lease with company which stored hazardous waste on land, were liable; (2) companies generating hazardous waste at facility failed to establish affirmative defense to liability; (3) volume of hazardous waste could not be used to establish effective contribution of each generator to harm at site; and (4)

remand was necessary to determine whether governments were entitled to prejudgment interest on response costs.

Affirmed in part, vacated in part, and remanded.

Widener, Circuit Judge, concurred in part, dissented in part, and filed opinion.

### 1. Health and Environment ¶25.5(5.5)

Landowners, who entered into lease with company which stored hazardous waste on land, were liable under Comprehensive Environmental Response, Compensation, and Liability Act for state and federal governments' costs for partial removal of hazardous waste from lands, although landowners claimed they were innocent absentee landlords; statute imposes strict liability in that it extends liability to owners of waste facilities regardless of their degree of participation subsequent to disposal of hazardous waste, landowners did not dispute their ownership of land, and landowners did not dispute that hazardous waste releases occurred on land during their period of ownership. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

### 2. Health and Environment ¶25.5(5.5)

In arriving at equitable allocation of costs of cleanup, degree of involvement by parties in generation, transportation, treatment, storage, or disposal of hazardous substances may be considered. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, §§ 107(a), (a)(2), 113(f), (f)(1), 42 U.S.C.A. §§ 9607(a), (a)(2), 9613(f), (f)(1).

### 3. Health and Environment ¶25.5(5.5)

Comprehensive Environmental Response, Compensation, and Liability Act's limited affirmative defense based on complete absence of causation was not available to landowners, who entered into lease with company which stored hazardous waste on land and who were liable under Comprehensive Environmental Response, Compensation, and Liability Act for state and federal governments' costs for partial removal of hazardous waste from land;

landowners could not establish absence of direct or indirect contractual relationship with waste storage company necessary to maintain affirmative defense, and landowners presented no evidence that they took precautionary action against foreseeable conduct of company. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(b)(3), 42 U.S.C.A. § 9607(b)(3).

#### 4. Health and Environment ⇐25.5(5.5)

Showing of chemical similarity between hazardous substances released from waste storage facility and chemical waste of defendant, who generated and stored chemical waste at facility, is sufficient to impose liability on defendant under Comprehensive Environmental Response, Compensation, and Liability Act absent proof that defendant's specific waste remained at facility at time of release; however, plaintiff must present evidence that defendant's waste was shipped to site and that hazardous substances similar to those contained in defendant's waste remained present at time of release, and defendant may in turn present evidence of affirmative defense to liability. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a, b), (b)(1, 2), 42 U.S.C.A. § 9607(a, b), (b)(1, 2).

#### 5. Health and Environment ⇐25.5(5.5)

Defendants, who generated hazardous waste which was stored at waste storage facility and who were liable under Comprehensive Environmental Response, Compensation, and Liability Act for state and federal governments' costs for partial removal of hazardous waste, failed to establish existence of affirmative defense to liability that all of their waste had been removed from facility prior to cleanup; defendants offered only conclusory allegations principally based on information and belief that their waste, prior to cleanup, was transported from facility to other sites, and there was uncontroverted proof that containers bearing each of defendants' markings remained present at site at time of cleanup. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

#### 6. Health and Environment ⇐25.5(5.5)

Although Comprehensive Environmental Response, Compensation, and Liability Act does not mandate imposition of joint and several liability, it permits it in cases of indivisible harm. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

#### 7. Torts ⇐22

Under common-law rules, when two or more persons act independently to cause single harm for which there is reasonable basis of apportionment according to contribution of each, each is held liable only for portion of harm that he causes; however, when such persons cause single indivisible harm, they are held liable jointly and severally for entire harm.

#### 8. Health and Environment ⇐25.15(5.1)

Companies, which generated hazardous waste stored at facility and which were liable under Comprehensive Environmental Response, Compensation, and Liability Act for state and federal governments' costs for partial removal of hazardous waste from facility, had burden of establishing reasonable basis for apportioning liability among responsible parties, and to meet this burden defendants had to establish environmental harm at facility was divisible among responsible parties. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

#### 9. Health and Environment ⇐25.15(5.1)

Volume of waste deposited at waste storage facility by companies, which generated waste and which were liable under Comprehensive Environmental Response, Compensation, and Liability Act for state and federal governments' costs for partial removal of hazardous waste, could not be used to establish effective contribution of each waste generator to harm at waste facility, although evidence disclosing relative toxicity, migratory potential, and synergistic capacity of hazardous substances at site would be relevant to establishing divisibility of harm; waste generators

presented no evidence showing relationship between waste volume, release of hazardous substances, and harm at waste facility. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

10. Health and Environment ⇨25.5(5.5)

Volumetric contributions of hazardous waste by generators of waste provide reasonable basis for apportioning liability under Comprehensive Environmental Response, Compensation, and Liability Act only if it can reasonably be assumed or it has been demonstrated, that independent factors had no substantial effect or harm to environment. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

11. Constitutional Law ⇨253(4)

Health and Environment ⇨21

Even if Comprehensive Environmental Response, Compensation, and Liability Act were considered retroactive, it would satisfy requirements of due process because its liability scheme is rationally related to valid legislative purpose. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a); U.S.C.A. Const.Amend. 5.

12. Constitutional Law ⇨82.5, 197

Health and Environment ⇨21

Comprehensive Environmental Response, Compensation, and Liability Act's imposition of strict, joint and several liability for cleanup costs at hazardous waste storage facility does not convert Act into bill of attainder or ex post facto law; Act does not exact punishment but creates reimbursement obligation on any person judicially determined responsible for costs of remedying hazardous conditions at waste disposal facility, and restitution of cleanup costs does not operate as criminal penalty or punitive deterrent. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a); U.S.C.A. Const. Art. 1, §§ 9, cl. 3, 10, cl. 1.

13. Federal Courts ⇨930

Remand was necessary in action under Comprehensive Environmental Response, Compensation, and Liability Act to determine whether Government was entitled to prejudgment interest on its response costs incurred in cleaning up hazardous waste site and whether defendants, who generated hazardous waste, had convincing argument not to impose interest. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a).

George Clemon Freeman, Jr. (William F. Kennedy, Alfred R. Light, Thomas E. Knauer, Hunton & Williams, Richmond, Va., on brief), Isadore S. Bernstein (Hammer & Bernstein, Columbia, S.C. on brief), for defendants-appellants.

David Carlisle Shilton, Dept. of Justice (F. Henry Habicht, II, Asst. Atty. Gen., Myles E. Flint, Deputy Asst. Atty. Gen., Washington, D.C., Vinton D. Lide, U.S. Atty., Mary G. Slocum, Asst. U.S. Atty., Columbia, S.C., Jacques B. Gelin, Dept. of Justice, Washington, D.C., Walton J. McLeod, III, Gen. Counsel, Walterboro, S.C., William T. Lavender, Jr., Dennis N. Cannon, Jr., Staff Counsel, South Carolina Dept. of Health & Environmental Control, Columbia, S.C., Charles De Saillan, Dov Weitman, E.P.A., Washington, D.C., on brief), for plaintiffs-appellees.

(Edward W. Warren, David G. Norrell, Amy R. Sabrin, Kirkland & Ellis, David F. Zoll, Washington, D.C., Barbara A. Hindin, Los Angeles, Cal., on brief), for amicus curiae Chemical Mfrs. Ass'n.

(Thomas W. Brunner, Laura A. Foggan, Piper & Marbury, Washington, D.C., on brief) for amicus curiae American Ins. Ass'n.

Before WIDENER, SPROUSE and ERVIN, Circuit Judges.

SPROUSE, Circuit Judge:

Oscar Seidenberg and Harvey Hutchinson (the site-owners) and Allied Corporation, Monsanto Company, and EM Indus-

pending completing the surface cleanup at Bluff Road.

In response, the site-owners contended that they were innocent absentee landlords unaware of and unconnected to the waste disposal activities that took place on their land. They maintained that their lease with COCC did not allow COCC (or SCRDI) to store chemical waste on the premises, but they admitted that they became aware of waste storage in 1977 and accepted lease payments until 1980.

The generator defendants likewise denied liability for the governments' response costs.<sup>6</sup> Among other defenses, they claimed that none of their specific waste materials contributed to the hazardous conditions at Bluff Road, and that retroactive imposition of CERCLA liability on them was unconstitutional. They also asserted that they could establish an affirmative defense to CERCLA liability under section 107(b)(3), 42 U.S.C. § 9607(b)(3), by showing that the harm at the site was caused solely through the conduct of unrelated third parties. All parties thereafter moved for summary judgment.

After an evidentiary hearing, the district court granted the governments' summary judgment motion on CERCLA liability. The court found that all of the defendants were responsible parties under section 107(a), and that none of them had presented sufficient evidence to support an affirmative defense under section 107(b).<sup>7</sup> The court further concluded that the environmental harm at Bluff Road was "indivisible," and it held all of the defendants jointly and severally liable for the governments' response costs. *United States v. South Carolina Recycling & Disposal, Inc.*, 653 F.Supp. 984 (D.S.C.1984) (SCRDI).

6. Section 101(25) of CERCLA provides that "'respond' or 'response' means remove, removal, remedy, and remedial action, all such terms (including the terms 'removal' and 'remedial action') include enforcement activities related thereto." 42 U.S.C.A. § 9601(25) (West Supp. 1987). The terms "remove" and "removal," and "remedy" and "remedial action" are in turn defined at sections 101(23) and 101(24), 42 U.S.C. A. §§ 9601(23), (24) (West Supp.1987).

As to the site-owners' liability, the court found it sufficient that they owned the Bluff Road site at the time hazardous substances were deposited there. *Id.* at 993 (interpreting 42 U.S.C.A. § 9607(a)(2) (West Supp.1987)). It rejected their contentions that Congress did not intend to subject "innocent" landowners to CERCLA liability. The court similarly found summary judgment appropriate against the generator defendants because it was undisputed that (1) they shipped hazardous substances to the Bluff Road facility; (2) hazardous substances "like" those present in the generator defendant's waste were found at the facility; and (3) there had been a release of hazardous substances at the site. *SCRDI*, 653 F.Supp. at 991-93 (interpreting 42 U.S.C.A. § 9607(a)(3) (West Supp.1987)). In this context, the court rejected the generator defendants' arguments that the governments had to prove that their specific waste contributed to the harm at the site, and it found their constitutional contentions to be "without force." *SCRDI*, 653 F.Supp. at 992-93, 995-98. Finally, since none of the defendants challenged the governments' itemized accounting of response costs, the court ordered them to pay the full \$1,813,624 that had been requested. *Id.* at 1009, 1014. It refused, however, to add prejudgment interest to the amount owed. *Id.* at 1009. This appeal followed.

## II.

The site-owners and the generator defendants first contest the imposition of CERCLA liability *vel non*, and they challenge the propriety of summary judgment in light of the evidence presented to the trial court. The site-owners also reassert the "innocent landowner" defense that the district court rejected, and claim that the court erroneously precluded them from

7. In its initial summary judgment order, the court refused to hold COCC liable for response costs. After subsequent proceedings, however, the court found that COCC was engaged in a joint venture with SCRDI and therefore shared its liability for the governments' costs. COCC has not appealed from that ruling.

presenting evidence of a valid affirmative defense under section 107(b)(3), 42 U.S.C. § 9607(b)(3). The generator defendants likewise repeat their arguments based on the governments' failure to establish a nexus between their specific waste and the harm at the site. They also claim that the trial court ignored material factual issues relevant to affirmative defenses to liability. We address these contentions sequentially, but pause briefly to review the structure of CERCLA's liability scheme.

In CERCLA, Congress established "an array of mechanisms to combat the increasingly serious problem of hazardous substance releases." *Dedham Water Co. v. Cumberland Farms Dairy, Inc.*, 805 F.2d 1074, 1078 (1st Cir.1986).<sup>8</sup> Section 107(a) of the statute sets forth the principal mechanism for recovery of costs expended in the cleanup of waste disposal facilities. At the time the district court entered judgment,<sup>9</sup> section 107(a) provided in pertinent part:

(a) Covered persons; scope

Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in subsection (b) of this section—

....

(2) any person who at the time of disposal of any hazardous substance owned

8. As one district court has stated, the statute provides the federal government with "the tools necessary for a prompt and effective response to problems of national magnitude resulting from hazardous waste disposal," and it evinces congressional intent "that those responsible for problems caused by the disposal of chemical poisons bear the costs and responsibility for remedying the harmful conditions they created." *United States v. Reilly Tar & Chemical Corp.*, 546 F.Supp. 1100, 1112 (D.Minn.1982).

9. Congress amended section 107(a) in 1986, Pub.L. No. 99-499, 100 Stat. 1628-30, 1692, 1693, 1705-06 (1986), but the changes are not material to the issues presented in this part of the appeal.

10. Many courts have provided succinct analyses of CERCLA's legislative history, see generally *Dedham Water Co. v. Cumberland Farms Dairy, Inc.*, 805 F.2d 1074, 1080-82 (1st Cir.1986); *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1039-42 (2d Cir.1985); *United States v. Shell Oil Co.*, 605 F.Supp. 1064, 1068-79 (D.Colo.1985), which are instructive but need not be repeated here because of the clarity of the liability provisions

or operated any facility at which such hazardous substances were disposed of, [and]

(3) any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility owned or operated by another party or entity and containing such hazardous substances, and

(4) ... from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable for—

(A) all costs of removal or remedial action incurred by the United States Government or a State not inconsistent with the national contingency plan.

42 U.S.C.A. § 9607(a) (West Supp.1987).

In our view, the plain language of section 107(a) clearly defines the scope of intended liability under the statute and the elements of proof necessary to establish it.<sup>10</sup> We agree with the overwhelming body of precedent that has interpreted section 107(a) as establishing a strict liability scheme.<sup>11</sup> Further, in light of the evidence

at issue. See *Blum v. Stenson*, 465 U.S. 886, 896, 104 S.Ct. 1541, 1548, 79 L.Ed.2d 891 (1984) ("Where ... resolution of a question of federal law turns on a statute and the intention of Congress, we look first to the statutory language and then to the legislative history if the statutory language is unclear.").

11. See, e.g., *Levin Metals Corp. v. Parr-Richmond Terminal Co.*, 799 F.2d 1312, 1316 (9th Cir.1986); *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1042 (2d Cir.1985); *Violet v. Picillo*, 648 F.Supp. 1283, 1290 (D.R.I.1986) (and cases cited therein); see also *United States v. Northeastern Pharmaceutical & Chemical Co.*, 810 F.2d 726, 732 n. 3 (8th Cir.1986), cert. denied, — U.S. —, 108 S.Ct. 146, 98 L.Ed.2d 102 (1987) (dictum).

In addition to the unanimous judicial viewpoint that Congress intended CERCLA liability to be strict, we observe that CERCLA section 101(32), 42 U.S.C.A. § 9601(32) (West Supp. 1987), provides that the standard of liability applicable to CERCLA actions shall be that which governs actions under section 311 of the Clean Water Act, 33 U.S.C. § 1321. In *Stewart*

presented here, we are persuaded that the district court correctly held that the governments satisfied all the elements of section 107(a) liability as to both the site-owners and the generator defendants.

#### A. Site-Owners' Liability

[1, 2] In light of the strict liability imposed by section 107(a), we cannot agree with the site-owners contention that they are not within the class of owners Congress intended to hold liable. The traditional elements of tort culpability on which the site-owners rely simply are absent from the statute. The plain language of section 107(a)(2) extends liability to owners of waste facilities regardless of their degree of participation in the subsequent disposal of hazardous waste.

Under section 107(a)(2), any person who owned a facility at a time when hazardous substances were deposited there may be held liable for all costs of removal or remedial action if a release or threatened release<sup>12</sup> of a hazardous substance occurs. The site-owners do not dispute their ownership of the Bluff Road facility, or the fact

*Transportation Co. v. Allied Towing Corp.*, 596 F.2d 609, 613 (4th Cir.1979), we held that the standard of liability under section 311 is strict liability.

12. The statute defines "release" to include "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)." 42 U.S.C.A. § 9601(22) (West Supp.1987).

13. The site-owners' relative degree of fault would, of course, be relevant in any subsequent action for contribution brought pursuant to 42 U.S.C.A. § 9613(f) (West Supp.1987). Congress, in the Superfund Amendments and Reauthorization Act of 1986, Pub.L. 99-499, § 113, 100 Stat. 1613, 1647 (1986) [hereafter SARA], established a right of contribution in favor of defendants sued under CERCLA section 107(a). Section 113(f)(1) provides:

Any person may seek contribution from any other person who is liable or potentially liable under section 9607(a) of this title, during or following any civil action under section 9606 of this title or under section 9607(a) of this title. Such claims shall be brought in accord-

with this section and the Federal Rules of Civil Procedure, and shall be governed by Federal law. In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate. Nothing in this subsection shall diminish the right of any person to bring an action for contribution in the absence of a civil action under section 9606 or section 9607 of this title.

[3] The site-owners nonetheless contend that the district court's grant of summary judgment improperly denied them the opportunity to present an affirmative defense under section 107(b)(3). Section 107(b)(3) sets forth a limited affirmative defense based on the complete absence of causation. *See Shore Realty*, 759 F.2d at 1044. It requires proof that the release or threatened release of hazardous substances and resulting damages were caused solely by "a third party other than . . . one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant. . . ." 42 U.S.C. § 9607(b)(3). A second element of the defense requires proof that the defendant "took precautions against foreseeable

ance with this section and the Federal Rules of Civil Procedure, and shall be governed by Federal law. In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate. Nothing in this subsection shall diminish the right of any person to bring an action for contribution in the absence of a civil action under section 9606 or section 9607 of this title.

42 U.S.C.A. § 9613(f) (West Supp.1987). The legislative history of this amendment suggests that in arriving at an equitable allocation of costs, a court may consider, among other things, the degree of involvement by parties in the generation, transportation, treatment, storage, or disposal of hazardous substances. H.R.Rep. No. 253(III), 99th Cong., 1st Sess. 19 (1985), reprinted in 1986 U.S.Code Cong. & Admin. News 2835, 3038, 3042.

14. Congress, in section 101(35) of SARA, acknowledged that landowners may affirmatively avoid liability if they can prove they did not know and had no reason to know that hazardous substances were disposed of on their land at the time they acquired title or possession. 42 U.S.C.A. § 9601(35) (West Supp.1987). This explicitly drafted exception further signals Congress' intent to impose liability on landowners who cannot satisfy its express requirements.

acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions." *Id.* We agree with the district court that under no view of the evidence could the site-owners satisfy either of these proof requirements.

First, the site-owners could not establish the absence of a direct or indirect contractual relationship necessary to maintain the affirmative defense. They concede they entered into a lease agreement with COCC. They accepted rent from COCC, and after SCRDI was incorporated, they accepted rent from SCRDI. *See United States v. Northern Plating Co.*, 670 F.Supp. 742, 747-48 (W.D.Mich.1987) (owner who leased facility to disposing party could not assert affirmative defense). Second, the site-owners presented no evidence that they took precautionary action against the foreseeable conduct of COCC or SCRDI. They argued to the trial court that, although they were aware COCC was a chemical manufacturing company, they were completely ignorant of all waste disposal activities at Bluff Road before 1977. They maintained that they never inspected the site prior to that time. In our view, the statute does not sanction such willful or negligent blindness on the part of absentee owners. The district court committed no error in entering summary judgment against the site-owners.

#### B. Generator Defendants' Liability

The generator defendants first contend that the district court misinterpreted section 107(a)(3) because it failed to read into the statute a requirement that the governments prove a nexus between the waste they sent to the site and the resulting environmental harm. They maintain that the statutory phrase "containing such hazardous substances" requires proof that the specific substances they generated and sent to the site were present at the facility

at the time of release. The district court held, however, that the statute was satisfied by proof that hazardous substances "like" those contained in the generator defendants' waste were found at the site. *SCRDI*, 653 F.Supp. at 99'-92. We agree with the district court's interpretation.

[4] Reduced of surplus language, sections 107(a)(3) and (4) impose liability on off-site waste generators who:

"arranged for disposal ... of hazardous substances ... at any facility ... containing such hazardous substances ... from which there is a release ... of a hazardous substance."

42 U.S.C.A. §§ 9607(a)(3), (4) (West Supp. 1987) (emphasis supplied). In our view, the plain meaning of the adjective "such" in the phrase "containing such hazardous substances" is "[a]like, similar, of the like kind." *Black's Law Dictionary* 1284 (5th ed. 1979). As used in the statute, the phrase "such hazardous substances" denotes hazardous substances alike, similar, or of a like kind to those that were present in a generator defendant's waste or that could have been produced by the mixture of the defendant's waste with other waste present at the site. It does not mean that the plaintiff must trace the ownership of each generic chemical compound found at a site. Absent proof that a generator defendant's specific waste remained at a facility at the time of release, a showing of chemical similarity between hazardous substances is sufficient.<sup>15</sup>

The overall structure of CERCLA'S liability provisions also militates against the generator defendants' "proof of ownership" argument. In *Shore Realty*, the Second Circuit held with respect to site-owners that requiring proof of ownership at any time later than the time of disposal would go far toward rendering the section 107(b) defenses superfluous. *Shore Realty*, 759 F.2d at 1044. We agree with the court's

15. CERCLA plaintiffs need not perform exhaustive chemical analyses of hazardous substances found at a disposal site. *See SCRDI*, 653 F.Supp. at 993 n. 6. They must, however, present evidence that a generator defendant's waste was shipped to a site and that hazardous

substances similar to those contained in the defendant's waste remained present at the time of release. The defendant, of course, may in turn present evidence of an affirmative defense to liability.

reading of the statute and conclude that its reasoning applies equally to the generator defendants' contentions. As the statute provides—"[n]otwithstanding any other provision or rule of law"—liability under section 107(a) is "subject *only* to the defenses set forth" in section 107(b). 42 U.S.C.A. § 9607(a) (West Supp.1987) (emphasis added). Each of the three defenses<sup>16</sup> established in section 107(b) "carves out from liability an exception based on causation." *Shore Realty*, 759 F.2d at 1044. Congress has, therefore, allocated the burden of disproving causation to the defendant who profited from the generation and inexpensive disposal of hazardous waste. We decline to interpret the statute in a way that would neutralize the force of Congress' intent.<sup>17</sup>

Finally, the purpose underlying CERCLA's liability provisions counsels against the generator defendants' argument. Throughout the statute's legislative history, there appears the recurring theme of facilitating prompt action to remedy the environmental blight of unscrupulous waste disposal.<sup>18</sup> In deleting causation language from section 107(a), we assume as have many other courts, that Congress knew of the synergistic and migratory capacities of leaking chemical waste, and the technological infeasibility of tracing im-

properly disposed waste to its source.<sup>19</sup> In view of this, we will not frustrate the statute's salutary goals by engrafting a "proof of ownership" requirement, which in practice, would be as onerous as the language Congress saw fit to delete. See *United States v. Wade*, 577 F.Supp. 1326, 1332 (E.D.Pa.1983) ("To require a plaintiff under CERCLA to 'fingerprint' wastes is to eviscerate the statute.").

[5] The generator defendants next argue that the trial court ignored evidence that established genuine factual issues as to the existence of an affirmative defense to liability. They maintain that summary judgment was inappropriate because they presented some evidence that all of their waste had been removed from Bluff Road prior to cleanup. We agree with the trial court, however, that the materials on which the generator defendants rely were insufficient to create a genuine issue of material fact.

The generator defendants offered only conclusory allegations, principally based "on information and belief," that their waste, originally deposited at Bluff Road, was at some time prior to 1979 transported from that facility to other sites operated by SCRDI.<sup>20</sup> To withstand summary judg-

*Bliss*, 667 F.Supp. 1298, 1309 (E.D.Mo.1987) ("traditional tort notions, such as proximate cause, do not apply"); *Violet v. Picillo*, 648 F.Supp. 1283, 1290-93 (D.R.I.1986) (minimal causal nexus); *United States v. Conservation Chemical Co.*, 619 F.Supp. 162, 190 (W.D.Mo. 1985); *United States v. Wade*, 577 F.Supp. 1326, 1331-34 (E.D.Pa.1983).

16. In addition to the limited third-party defense discussed above, sections 107(b)(1) and (2) respectively allow defendants to avoid liability by proving that the release and resulting damages were "caused solely" by an act of God or an act of war. 42 U.S.C. § 9607(b)(1), (2).

17. In fact, Congress specifically declined to include a similar nexus requirement in CERCLA. As the Second Circuit in *Shore Realty* observed, an early House version of what ultimately became section 107(a) limited liability to "any person who caused or contributed to the release or threatened release." 759 F.2d at 1044 (quoting H.R.Rep. 7020, 96th Cong., 2d Sess. § 3071(a) (1980), reprinted in *2 A Legislative History of the Comprehensive Environmental Response, Compensation and Liability Act of 1980* at 438. As ultimately enacted after House and Senate compromise, however, CERCLA "imposed liability on classes of persons without reference to whether they caused or contributed to the release or threat of release." *Shore Realty*, 759 F.2d at 1044. The legislature thus eliminated the element of causation from the plaintiff's liability case. *Id.*; see also *United States v.*

18. The legislative history underlying the Superfund Amendments and Reauthorization Act of 1986 echoed this theme with even greater force than that underlying CERCLA's original enactment in 1980.

19. In advancing their arduous proof requirements, the generator defendants make little mention of the fact that leaking chemicals may combine to form new compounds or escape into the atmosphere before proper response action can be taken. See cases cited *supra* note 17.

20. The generator defendants offered the following materials:

1. An officer of the company that oversaw the final cleanup at Bluff Road testified that he

ment under section 107(b)(3), however, the generator defendants had to produce specific evidence creating a genuine issue that all of their waste was removed from the site prior to the release of hazardous substances there. See 42 U.S.C. § 9607(b)(3).<sup>21</sup> In light of the uncontroverted proof that containers bearing each of the defendants' markings remained present at the site at the time of cleanup and the fact that hazardous substances chemically similar to those contained in the generators' waste were found, the generator defendants' affidavits and deposition testimony simply failed to establish complete removal as a genuine issue. See *Celotex v. Catrett*, 477 U.S. 317, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986) (summary judgment appropriately granted against nonmoving party who failed to produce evidence supporting an element essential to its case on which it bore burden of proof at trial).

### III.

The appellants next challenge the district court's imposition of joint and several liability

did not know whether drums bearing Allied's label actually contained Allied's waste when they were removed from the site.

2. An officer of EM Industries averred that SCRDI assured him prior to 1980 that none of EM Industries' waste had been deposited at Bluff Road.

3. An officer of Monsanto averred that two of his employees inspected the site in 1979, and while they "did not explore all areas of the site, upon information and belief they did not observe any drums of material taken from [Monsanto's plant]."

4. An officer of Allied averred that SCRDI's site manager at Bluff Road told him in 1979 that all of Allied's waste was removed from the site before 1977.

None of these largely second-hand allegations were supported by evidence tending to show that any of the generators' waste materials were actually taken away from the site. "The mere existence of a scintilla of evidence in support of the [nonmoving party's] position will be insufficient [to avoid summary judgment]; there must be evidence on which the [finder of fact] could reasonably find for the [nonmoving party]." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 106 S.Ct. 2505, 2512, 91 L.Ed.2d 202 (1986).

21. Had they produced such evidence, it would have created an issue as to whether the "release or threat of release of a hazardous substance

ity for the governments' response costs."<sup>22</sup> The court concluded that joint and several liability was appropriate because the environmental harm at Bluff Road was "indivisible" and the appellants had "failed to meet their burden of proving otherwise." *SCRDI*, 653 F.Supp. at 994. We agree with its conclusion.

[6] While CERCLA does not mandate the imposition of joint and several liability, it permits it in cases of indivisible harm. See *Shore Realty*, 739 F.2d at 1042 n. 13; *United States v. Chem-Dyne*, 572 F.Supp. 802, 810-11 (S.D. Ohio 1983). In each case, the court must consider traditional and evolving principles of federal common law,<sup>23</sup> which Congress has left to the courts to supply interstitially.

[7] Under common law rules, when two or more persons act independently to cause a single harm for which there is a reasonable basis of apportionment according to the contribution of each, each is held liable only for the portion of harm that he causes.

and the damages resulting therefrom were caused solely by ... an act or omission of a third party." 42 U.S.C. § 9607(b)(3).

22. The site-owners limit their joint and several liability argument to the contention that it is inequitable under the circumstances of this case, i.e., their limited degree of participation in waste disposal activities at Bluff Road. As we have stated, however, such equitable factors are relevant in subsequent actions for contribution. They are not pertinent to the question of joint and several liability, which focuses principally on the divisibility among responsible parties of the harm to the environment.

23. As many courts have noted, a proposed requirement that joint and several liability be imposed in all CERCLA cases was deleted from the final version of the bill. See, e.g., *Chem-Dyne*, 572 F.Supp. at 806. "The deletion," however, "was not intended as a rejection of joint and several liability," but rather "to have the scope of liability determined under common law principles." *Id.* at 808. We adopt the *Chem-Dyne* court's thorough discussion of CERCLA's legislative history with respect to joint and several liability. We note that the approach taken in *Chem-Dyne* was subsequently confirmed as correct by Congress in its consideration of SARA's contribution provisions. See H.R. Rep. No. 253(I), 99th Cong. 2d Sess., 79-80 (1985), reprint-

*Edmonds v. Compagnie Generale Transatlantique*, 443 U.S. 256, 260 n. 8, 99 S.Ct. 2753, 2756 n. 8, 61 L.Ed.2d 521 (1979). When such persons cause a single and indivisible harm, however, they are held liable jointly and severally for the entire harm. *Id.* (citing Restatement (Second) of Torts § 483A (1965)). We think these principles, as reflected in the Restatement (Second) of Torts, represent the correct and uniform federal rules applicable to CERCLA cases.

Section 433A of the Restatement provides:

- (1) Damages for harm are to be apportioned among two or more causes where
  - (a) there are distinct harms, or
  - (b) there is a reasonable basis for determining the contribution of each cause to a single harm.
- (2) Damages for any other harm cannot be apportioned among two or more causes.

Restatement (Second) of Torts § 433A (1965).

Placing their argument into the Restatement framework, the generator defendants concede that the environmental damage at Bluff Road constituted a "single harm," but contend that there was a reasonable basis for apportioning the harm. They observe that each of the off-site generators with whom SCRDI contracted sent a potentially identifiable volume of waste to the Bluff Road site, and they maintain that

*ed in 1986 U.S.Code Cong. & Admin.News at 2835, 2861-62.*

24. Section 433(B)(2) of the Restatement provides:

Where the tortious conduct of two or more actors has combined to bring about harm to the plaintiff, and one or more of the actors seeks to limit his liability on the ground that the harm is capable of apportionment among them, the burden of proof as to the apportionment is upon each such actor.

Restatement (Second) of Torts § 433(B)(2) (1965).

25. At minimum, such evidence was crucial to demonstrate that a volumetric apportionment scheme was reasonable. The governments presented considerable evidence identifying numerous hazardous substances found at Bluff Road. An EPA investigator reported, for example, that in the first cleanup phase RAD Services encountered substances "in every hazard class,

liability should have been apportioned according to the volume they deposited as compared to the total volume disposed of there by all parties. In light of the conditions at Bluff Road, we cannot accept this method as a basis for apportionment.

[8-10] The generator defendants bore the burden of establishing a reasonable basis for apportioning liability among responsible parties. *Chem-Dyne*, 572 F.Supp. at 810; Restatement (Second) of Torts § 433B (1965).<sup>24</sup> To meet this burden, the generator defendants had to establish that the environmental harm at Bluff Road was divisible among responsible parties. They presented no evidence, however, showing a relationship between waste volume, the release of hazardous substances, and the harm at the site.<sup>25</sup> Further, in light of the commingling of hazardous substances, the district court could not have reasonably apportioned liability without some evidence disclosing the individual and interactive qualities of the substances deposited there. Common sense counsels that a million gallons of certain substances could be mixed together without significant consequences, whereas a few pints of others improperly mixed could result in disastrous consequences.<sup>26</sup> Under other circumstances proportionate volumes of hazardous substances may well be probative of contributory harm.<sup>27</sup> In this case, however, volume could not establish the effect-

including explosives such as crystallized dynamite and nitroglycerine. Numerous examples were found of oxidizers, flammable and non-flammable liquids, poisons, corrosives, containerized gases, and even a small amount of radioactive material." Under these circumstances, volumetric apportionment based on the overall quantity of waste, as opposed to the quantity and quality of hazardous substances contained in the waste would have made little sense.

26. We agree with the district court that evidence disclosing the relative toxicity, migratory potential, and synergistic capacity of the hazardous substances at the site would be relevant to establishing divisibility of harm.

27. Volumetric contributions provide a reasonable basis for apportioning liability only if it can be reasonably assumed, or it has been demonstrated, that independent factors had no substantial effect on the harm to the environment.

tive contribution of each waste generator to the harm at the Bluff Road site.

Although we find no error in the trial court's imposition of joint and several liability, we share the appellants' concern that they not be ultimately responsible for reimbursing more than their just portion of the governments' response costs.<sup>28</sup> In its refusal to apportion liability, the district court likewise recognized the validity of their demand that they not be required to shoulder a disproportionate amount of the costs. It ruled, however, that making the governments whole for response costs was the primary consideration and that cost allocation was a matter "more appropriately considered in an action for contribution between responsible parties after plaintiff has been made whole." *SCRDI*, 653 F.Supp. at 995 & n. 8. Had we sat in place of the district court, we would have ruled as it did on the apportionment issue, but may well have retained the action to dispose of the contribution questions. See 42 U.S.C.A. § 9613(f) (West Supp.1987). That procedural course, however, was committed to the trial court's discretion and we find no abuse of it. As we have stated, the defendants still have the right to sue responsible parties for contribution, and in that action they may assert both legal and equitable theories of cost allocation.<sup>29</sup>

Cf. Restatement (Second) of Torts § 433A comment d, illustrations 4, 5 (1965).

28. The final judgment holds the defendants liable for slightly less than half of the total costs incurred in the cleanup, while it appears that the generator defendants collectively produced approximately 22% of the waste that SCRDI handled. Other evidence indicates that agencies of the federal government produced more waste than did generator defendant Monsanto, and suggests that the amounts contributed by the settling parties do not bear a strictly proportionate relationship to the total costs of cleaning the facility. We note, however, that a substantial portion of the final judgment is attributable to litigation costs. We also observe that the EPA has contributed upwards of \$50,000 to the Bluff Road cleanup, and that any further claims against the EPA and other responsible government instrumentalities may be resolved in a contribution action pursuant to CERCLA section 113(f).

29. Contrary to the generator defendants' request, it would be premature for us to interpret the effect of settlement on the rights of nonset-

#### IV.

The generator defendants raise numerous constitutional challenges to the district court's interpretation and application of CERCLA. They contend that the imposition of "disproportionate" liability without proof of causation violated constitutional limitations on retroactive statutory application and that it converted CERCLA into a bill of attainder and an *ex post facto* law. They further assert, along with the site-owners, that the trial court's construction of CERCLA infringed their substantive due process rights.

[11] The district court held that CERCLA does not create retroactive liability, but imposes a prospective obligation for the post-enactment environmental consequences of the defendants' past acts. *SCRDI*, 653 F.Supp. at 996. Alternatively, the court held that even if CERCLA is understood to operate retroactively, it nonetheless satisfies the dictates of due process because its liability scheme is rationally related to a valid legislative purpose. *Id.* at 997-98. We agree with the court's latter holding, and we find no merit to the generator defendants' bill of attainder and *ex post facto* arguments.<sup>30</sup>

ting parties in contribution actions under CERCLA section 113(f)(2), 42 U.S.C.A. § 9613(f)(2) (West Supp.1987). We observe, however, that the possibility this subsection precludes contribution actions against settling parties signals legislative policy to encourage settlement in CERCLA cleanup actions. At the same time, we recognize that the language of CERCLA's new contribution provisions reveals Congress' concern that the relative culpability of each responsible party be considered in determining the proportionate share of costs each must bear.

30. The generator defendants also assert, for the first time on appeal, that the district court's interpretation of CERCLA violated the separation of powers doctrine. They argue that the court's imposition of strict liability without proof of factual causation departed from Congress' intent, and that the court strayed from common-law principles in holding the defendants jointly liable. These arguments constitute little more than a repackaging of the statutory interpretation contentions we have already considered and rejected. Because we perceive no

Many courts have concluded that Congress intended CERCLA's liability provisions to apply retroactively to pre-enactment disposal activities of off-site waste generators. They have held uniformly that retroactive operation survives the Supreme Court's tests for due process validity.<sup>31</sup> We agree with their analyses.

In *Usery v. Turner Elkhorn Mining Co.*, 428 U.S. 1, 96 S.Ct. 2882, 49 L.Ed.2d 752 (1976), the Supreme Court, in a different context, rejected a due process challenge to the retroactive operation of the liability provisions in the Black Lung Benefits Act of 1972. The Court stated that "a presumption of constitutionality" attaches to "legislative Acts adjusting the burdens and benefits of economic life," and that "the burden is on one complaining of a due process violation to establish that the legislature has acted in an arbitrary and irrational way." *Id.* at 15, 96 S.Ct. at 2892. It reasoned that although the Act imposed new liability for disabilities developed prior to its enactment, its operation was "justified as a rational measure to spread the costs of the employees' disabilities to those who have profited from the fruits of their labor." *Id.* at 13, 96 S.Ct. at 2893.<sup>32</sup>

The reasoning of *Turner Elkhorn* applies with great force to the retroactivity contentions advanced here. While the generator defendants profited from inexpensive waste disposal methods that may have been technically "legal" prior to CERCLA's enactment, it was certainly foreseeable at the time that improper disposal could cause enormous damage to the environment. CERCLA operates remedially to spread the costs of responding to improper waste disposal among all parties

exceptional circumstances, we decline to review the separation of powers contention *de novo*.

31. See, e.g., *United States v. Northeastern Pharmaceutical & Chemical Co., Inc.*, 810 F.2d 726, 732-34 (8th Cir.1986), *cert. denied*, — U.S. —, 108 S.Ct. 146, 98 L.Ed.2d 102 (1987) (*NEPACCO*); *United States v. Hooker Chemicals & Plastics Corp.*, 680 F.Supp. 546 (W.D.N.Y.1988); *United States v. Shell Oil Co.*, 605 F.Supp. 1064, 1069-73 (D.Colo.1985). These decisions hold that CERCLA's legislative history and the past-tense language of section 107(a) evince congressional intent to apply CERCLA retroactively.

that played a role in creating the hazardous conditions. Where those conditions are indivisible, joint and several liability is logical, and it works to ensure complete cost recovery. We do not think these consequences are "particularly harsh and oppressive," *United States Trust Co. v. New Jersey*, 431 U.S. 1, 17 n. 13, 97 S.Ct. 1505, 1515 n. 13, 52 L.Ed.2d 92 (1977) (retrospective civil liability not unconstitutional unless it is particularly harsh and oppressive), and we agree with the Eighth Circuit that retroactive application of CERCLA does not violate due process. *United States v. Northeastern Pharmaceutical & Chemical Co., Inc.*, 810 F.2d 726, 734 (8th Cir. 1986), *cert. denied*, — U.S. —, 108 S.Ct. 146, 98 L.Ed.2d 102 (1987).

[12] Nor does the imposition of strict, joint and several liability convert CERCLA into a bill of attainder or an *ex post facto* law. *United States v. Conservation Chemical Co.*, 619 F.Supp. 162, 214 (W.D. Mo.1985); *United States v. Tyson*, 25 Env't.Rep.Cas. (BNA) 1897 (E.D.Pa.1986) [available on WESTLAW, 1986 WL 9250]. The infliction of punishment, either legislatively or retrospectively, is a *sine qua non* of legislation that runs afoul of these constitutional prohibitions. See *Nixon v. Administrator of General Services*, 433 U.S. 425, 473-84, 97 S.Ct. 2777, 2805-11, 53 L.Ed.2d 867 (1977) (bill of attainder analysis); *Weaver v. Graham*, 450 U.S. 24, 28-30, 101 S.Ct. 960, 963-65, 67 L.Ed.2d 17 (1981) (*ex post facto* law analysis). CERCLA does not exact punishment. Rather it creates a reimbursement obligation on any person judicially determined responsible for the costs of remedying hazardous condi-

32. Similarly, in *Pension Benefit Guaranty Corp. v. R.A. Gray & Co.*, the Court stated:

Provided that the retroactive application of a statute is supported by a legitimate legislative purpose furthered by rational means, judgments about the wisdom of such legislation remain within the exclusive province of the legislative and executive branches.

... [Due process is satisfied] simply by showing that the retroactive application is itself justified by a rational legislative purpose. 467 U.S. 717, 729, 730, 104 S.Ct. 2709, 2717, 2718, 81 L.Ed.2d 601 (1984).

tions at a waste disposal facility. The restitution of cleanup costs was not intended to operate, nor does it operate in fact, as a criminal penalty or a punitive deterrent. *Cf. Tull v. United States*, 481 U.S. 412, 107 S.Ct. 1831, 1838, 95 L.Ed.2d 365 (1987) (distinguishing civil penalties under Clean Water Act from equitable remedy of restitution). Moreover, as this case amply demonstrates, Congress did not impose that obligation automatically on a legislatively defined class of persons.<sup>33</sup>

## V.

[13] The United States contends on cross-appeal that the district court erred in denying its request for prejudgment interest on its response costs. At the time the court issued its decision, CERCLA contained no explicit provision for the award of prejudgment interest.<sup>34</sup> Since then, however, Congress has added the following language to section 107(a):

The amounts recoverable in an action under this section shall include interest on the amounts recoverable under subparagraphs (A) through (D). Such interest shall accrue from the later of (i) the date payment of a specified amount is demanded in writing, or (ii) the date of the expenditure concerned. The rate of interest on the outstanding unpaid balance of the amounts recoverable under this section shall be the same rate as is specified for interest on investments of

the Hazardous Substance Superfund established under subchapter A of chapter 98 of Title 26. For purposes of applying such amendments to interest under this subsection, the term "comparable maturity" shall be determined with reference to the date on which interest accruing under this subsection commences.

42 U.S.C.A. 9607(a) (West Supp.1987). Because of this addition to the law, we look to the Supreme Court's decision in *Bradley v. Richmond School Board*, 416 U.S. 696, 94 S.Ct. 2006, 40 L.Ed.2d 476 (1974), for the principles controlling application of later-enacted amendments to previously accrued statutory liability. We conclude under *Bradley* that the case must be remanded for reconsideration of the interest question pursuant to the terms of amended statute.

In *Bradley*, the Supreme Court ruled that when Congress amends a law while a case is pending on direct appeal, the general rule is that the appellate court should apply the law as amended unless so doing would result in manifest injustice or would contravene statutory direction or legislative history to the contrary<sup>35</sup>. *Id.* at 711, 94 S.Ct. at 2016; see *Nilson Van & Storage Co. v. Marsh*, 755 F.2d 362, 365 (4th Cir.), *cert. denied*, 474 U.S. 818, 106 S.Ct. 65, 88 L.Ed.2d 53 (1985). Here, the language and legislative history of the 1986 amendment reveal no statutory direction or congressional intent to delay its application,<sup>36</sup> and the defendants have failed to

33. The existence of joint and several liability in cases of indivisible harm does not transform an otherwise constitutional obligation into one that exacts punishment. "Where there are opportunities for contribution . . . as well as for joinder or impleader of responsible parties (Fed.R. Civ.P. Rules 14, 20 and 21), it can hardly be said that imposition of joint and several liability would be unconstitutional." *Conservation Chemical*, 619 F.Supp. at 214-15.

34. Although some courts had found implicit authority within section 107(e)(2), 42 U.S.C. § 9607(e)(2), for awarding interest, the district court denied the government's request, concluding that the defendants had not sought to delay the litigation and had not been recalcitrant, deceptive or unreasonable.

35. In *Bradley*, the district court granted an award of attorneys fees to civil rights plaintiffs, despite the absence of explicit statutory authori-

zation. While the case was pending on appeal before this court, Congress authorized such fee awards in the Education Act Amendments of 1972. Although a majority of the en banc court reversed the award on other grounds, *Bradley v. School Board*, 472 F.2d 318 (4th Cir.1972) (en banc), Judge Winter in dissent stated that the new law should apply to cases pending on appeal. *Id.* at 335 (Winter, J. dissenting). In a unanimous reversal, the Supreme Court largely adopted the reasoning of Judge Winter's dissent.

36. The Third Circuit in *United States v. Union Gas Co.*, 832 F.2d 1343 (3rd Cir.1987), *cert. granted*, — U.S. —, 108 S.Ct. 1219, 99 L.Ed.2d 423 (1988) recently applied another section of the 1986 Superfund Amendments to a case that was pending on appeal when the amendments were enacted. The court stated, "[t]o the extent that the added language serves to 'clarify' CERCLA, it amounts to a subsequent declaration of

demonstrate any "manifest injustice" that would arise from its immediate operation.

The generator defendants contend, however, that Congress' use of the word "shall" in the phrase "amounts recoverable . . . shall include interest" does not of itself make the award of interest mandatory. Following fourth circuit precedent, we must agree with this contention as far as it goes. See generally *United Hospital Center, Inc. v. Richardson*, 757 F.2d 1445, 1453 (4th Cir.1985) ("in a proper case 'shall' may properly be construed as permissive"). We think, however, in light of CERCLA's restitutive purposes and Congress' intent to facilitate complete reimbursement, the amendment generally establishes interest as an element of recovery—"absent a convincing argument to the contrary." *Sterling Forest Associates v. Barnett-Range Corp.*, 840 F.2d 249, 252 (4th Cir.1988). Such an argument should be made in the first instance to the district court. Accordingly, we must remand the case for reconsideration of the interest question under the terms and purposes sought to be achieved by the amended statute.

## VI.

In view of the above, the judgment of the district court as to the CERCLA liability of the site-owners and generator defendants is affirmed. The case is remanded, however, for reconsideration of the question of prejudgment interest.

**AFFIRMED IN PART, VACATED IN PART, AND REMANDED.**

**WIDENER**, Circuit Judge, concurring and dissenting:

I concur in the majority opinion in all respects save its decision not to require the district court to treat the issue of allocation of costs of cleanup among the various defendants, at 172-173, and, as to that, I respectfully dissent. While it may be true that a subsequent suit for contribution may adequately apportion the damages among the defendants, I am of opinion that the district court, as a court of equity, is re-

quired to retain jurisdiction and answer that question now.

So far as I know, it is now and has been the general law without any variance that when a court of equity has jurisdiction it "will decide all matters in dispute and decree complete relief," e.g. *Alexander v. Hillman*, 296 U.S. 222, 242, 56 S.Ct. 204, 211, 80 L.Ed. 192 (1935), see *Pomeroy's Equity Jurisprudence*, 3rd Ed (1905) § 181, 231, and that a court of equity should dispose of a case "so as to end litigation, not to foster it; to diminish suits, not to multiply them." *Payne v. Hook*, 74 U.S. (7 Wall) 425, 432, 19 L.Ed. 260, 262 (1869). In *Payne*, a case which should control here, even if the statute does not, the Supreme Court held that once a court of equity had jurisdiction to determine liability for an estate administrator's misconduct, it also had the duty to determine the amount the sureties would pay in the event the administrator could not satisfy the judgment. In the face of the admitted liability of the sureties in a separate action at law, 19 L.Ed. at 262, the Court nevertheless required the lower court in equity to ascertain the liability of the sureties in the same suit in order that the matter, should the administrator be unable to pay, not be "... turned over to a court of law, to renew the litigation with his sureties." 19 L.Ed. at 262. Thus, almost the same situation pertained in *Payne* which is present here, but with opposite result.

I see great danger in postponing the ultimate apportioning of the damages to a later day. As an example, a small generator which deposited a few gallons of relatively innocuous waste liquid at a site is jointly and severally liable for the entire cost of cleanup under this decision. And with that I agree. If that generator were readily available and solvent, however, the government might well, and probably would, proceed against him first in collecting its judgment. The vagaries of and delays in his subsequent suit for contribu-

congressional intent that deserves great weight." *Id.* at 1350 (citing *Red Lion Broadcasting v.*

*F.C.C.*, 395 U.S. 367, 380-82, 89 S.Ct. 1774, 1801-02, 23 L.Ed.2d 371 (1969)).

tion might result in needless financial disaster. I do not see this as a desired or even permissible result.

The statute involved, 42 U.S.C. 9613(f)(1), provides that "[a]ny person may seek contribution from any other person who is liable or potentially liable under section 9607(a) of this title during or following any civil action under section 9606 of this title or under section 9607(a) of this title." (Italics added) Thus, the statute plainly provides that discretion with respect to contribution is not in the district court to consider relief or not as the majority opinion holds; rather, it is in the generator to seek relief, for "any person" certainly includes the generators of the waste. So, since the matter was brought before the district court, that court had no discretion but to decide the question.<sup>1</sup> To repeat, the discretion is in the party to make the claim, not in the district court to defer decision. While I agree that the claims may be asserted in a separate action, if they are asserted in the main case they must be decided.

Section 9613(f)(1) is entirely in accord with *Payne*, and I think we make a mistake of no little consequence in deciding that the district court has the discretion either to decide the matter before it or to relegate the parties to a separate suit.

Not only do the statute and federal procedural law require the course I have suggested, I think that the interests of justice as well as judicial economy are best served by proceeding in that manner.



Joseph E. LIVELY, Plaintiff-Appellant,  
v.

Otis R. BOWEN, Secretary, Department  
of Health and Human Services,  
Defendant-Appellee.

No. 87-3191.

United States Court of Appeals,  
Fourth Circuit.

Submitted May 19, 1988.

Decided Sept. 13, 1988.

Social security disability claimant sought award of attorney fees and expenses under the Equal Access to Justice Act. The United States District Court for the Southern District of West Virginia, Dennis R. Knapp, Senior District Judge, summarily concluded that Secretary of Health and Human Services was substantially justified in opposing claim, and claimant appealed. The Court of Appeals, Harrison L. Winter, Chief Judge, held that: (1) for purposes of award of attorney fees to claimant under the EAJA, Secretary's position in case in which Secretary had denied benefits based on decision of second administrative law judge inconsistent with first ALJ regarding claimant's abilities was not substantially justified, and (2) although Court of Appeals would ordinarily remand case in which district court had denied award under the EAJA but failed to reveal basis on which it decided government official's litigation position was substantially justified and require district court to disclose its reasoning, Court of Appeals perceived nothing in record to constitute substantial justification for the Secretary's position, and would accordingly direct that award be made.

Reversed and remanded.

1. Federal Courts ¶830

Court of Appeals would review district court's finding that litigation position of

1. In the unlikely event that there was not sufficient evidence before the district court, it should simply have required more evidence to be tak-

en, or should on remand should my view have prevailed.

that caused the explosion, making the fire difficult to extinguish.

In 1980, the Environmental Protection Agency (EPA) inspected the Bluff Road site. Its investigation revealed that the facility was filled well beyond its capacity with chemical waste. The number of drums and the reckless manner in which they were stacked precluded access to various areas in the site. Many of the drums observed were unlabeled, or their labels had become unreadable from exposure, rendering it impossible to identify their contents. The EPA concluded that the site posed "a major fire hazard."

Later that year, the United States filed suit under section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. § 6973, against SCRDI, COCC, and Oscar Seidenberg. The complaint was filed before the December 11, 1980, effective date of CERCLA, and it sought only injunctive relief. Thereafter, the State of South Carolina intervened as a plaintiff in the pending action.

In the course of discovery, the governments identified a number of waste generators, including the generator defendants in this appeal, that had contracted with SCRDI for waste disposal. The governments notified the generators that they were potentially responsible for the costs of cleanup at Bluff Road under section 107(a) of the newly-enacted CERCLA. As a result of these contacts, the governments executed individual settlement agreements with twelve of the identified off-site producers. The generator defendants, however, declined to settle.

Using funds received from the settlements, the governments contracted with Triangle Resource Industries (TRI) to con-

duct a partial surface cleanup at the site. The contract required RAD Services, Inc., a subsidiary of TRI, to remove 75% of the drums found there and to keep a log of the removed drums. RAD completed its partial cleanup operation in October 1982. The log it prepared documented that it had removed containers and drums bearing the labels or markings of each of the three generator defendants.

The EPA reinspected the site after the first phase of the cleanup had been completed. The inspection revealed that closed drums and containers labeled with the insignia of each of the three generator defendants remained at the site. The EPA also collected samples of surface water, soil, and sediment from the site. Laboratory tests of the samples disclosed that several hazardous substances<sup>4</sup> contained in the waste the generator defendants had shipped to the site remained present at the site.<sup>5</sup>

Thereafter, South Carolina completed the remaining 25% of the surface cleanup. It used federal funds from the Hazardous Substances Response Trust Fund (Superfund), 42 U.S.C. § 9631, as well as state money from the South Carolina Hazardous Waste Contingency Fund, S.C.Code Ann. § 44-56-160, and in-kind contribution of other state funds to match the federal contribution.

In 1982, the governments filed an amended complaint, adding the three generator defendants and site-owner Harvey Hutchinson, and including claims under section 107(a) of CERCLA against all of the non-settling defendants. The governments alleged that the generator defendants and site-owners were jointly and severally liable under section 107(a) for the costs ex-

4. The term "hazardous substance" is defined in section 101(14) of CERCLA, 42 U.S.C.A. § 9601(14) (West Supp.1987). The definition incorporates by reference the substances listed as hazardous or toxic under the Clean Water Act, 33 U.S.C.A. §§ 1317(a), 1321(b)(2)(a) (West 1986), the Clean Air Act, 42 U.S.C. § 7412(b), the Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. § 6921 (West 1983 & Supp. 1987), and the Toxic Substances Control Act, 15 U.S.C. § 2606. Section 102(a) of CERCLA also authorizes EPA to list additional substances that

"may present substantial danger to the public health or welfare or the environment." 42 U.S.C.A. § 9602(a) (West Supp.1987).

5. It is undisputed that hazardous substances of the sort contained in each of the generator defendants' waste materials were found at the site. These substances included 1,1,1-Trichloroethane, acetone, phenol, cresol (methyl phenol), chlorophenol, and 2,4-dichlorophenol.

tries, Inc. (the generator defendants),<sup>1</sup> appeal from the district court's entry of summary judgment holding them liable to the United States and the State of South Carolina (the governments) under section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). 42 U.S.C.A. § 9607(a) (West Supp.1987). The court determined that the defendants were liable jointly and severally for \$1,813,624 in response costs accrued from the partial removal of hazardous waste from a disposal facility located near Columbia, South Carolina. The court declined, however, to assess prejudgment interest against the defendants. We affirm the district court's liability holdings, but we vacate and remand for reconsideration its denial of prejudgment interest.

#### I.

In 1972, Seidenberg and Hutchinson leased a four-acre tract of land they owned to the Columbia Organic Chemical Company (COCC), a South Carolina chemical manufacturing corporation. The property, located along Bluff Road near Columbia, South Carolina, consisted of a small warehouse and surrounding areas. The lease was verbal, on a month-to-month basis, and according to the site-owners' deposition testimony, was executed for the sole purpose of allowing COCC to store raw materials and finished products in the warehouse. Seidenberg and Hutchinson received monthly lease payments of \$200, which increased to \$350 by 1980.

In the mid-1970s, COCC expanded its business to include the brokering and recycling of chemical waste generated by third parties. It used the Bluff Road site as a waste storage and disposal facility for its new operations. In 1976, COCC's principals incorporated South Carolina Recycling and Disposal Inc. (SCRDI), for the purpose

of assuming COCC's waste-handling business, and the site-owners began accepting lease payments from SCRDI.

SCRDI contracted with numerous off-site waste producers for the transport, recycling, and disposal of chemical and other waste. Among these producers were agencies of the federal government and South Carolina,<sup>2</sup> and various private entities including the three generator defendants in this litigation. Although SCRDI operated other disposal sites, it deposited much of the waste it received at the Bluff Road facility. The waste stored at Bluff Road contained many chemical substances that federal law defines as "hazardous."

Between 1976 and 1980, SCRDI haphazardly deposited more than 7,000 fifty-five gallon drums of chemical waste on the four-acre Bluff Road site. It placed waste laden drums and containers wherever there was space, often without pallets to protect them from the damp ground. It stacked drums on top of one another without regard to the chemical compatibility of their contents. It maintained no documented safety procedures and kept no inventory of the stored chemicals. Over time many of the drums rusted, rotted, and otherwise deteriorated. Hazardous substances leaked from the decaying drums and oozed into the ground. The substances commingled with incompatible chemicals that had escaped from other containers, generating noxious fumes, fires, and explosions.

On October 26, 1977, a toxic cloud formed when chemicals leaking from rusted drums reacted with rainwater. Twelve responding firemen were hospitalized.<sup>3</sup> Again, on July 24, 1979, an explosion and fire resulted when chemicals stored in glass jars leaked onto drums containing incompatible substances. SCRDI'S site manager could not identify the substances

control also contracted with SCRDI for waste disposal.

1. Originally a named generator defendant in this case, Aquair Corporation has entered into a settlement agreement with the plaintiffs.
2. The federal instrumentalities that contracted with SCRDI included the Environmental Protection Agency, the Army, the Air Force, and the Center for Disease Control. The South Carolina Department of Health and Environmental Con-

3. This incident sparked substantial publicity, and the site-owners concede that as of June 1977 they were aware of hazardous waste disposal activities taking place on their Bluff Road property.

## RESEARCH GUIDE

**Am Jur:**

25 Am Jur 2d, Drugs § 32.5.

61A Am Jur 2d, Pollution Control § 289.

**Law Review Articles:**

International Regulation of Toxic Substances: A Discussion. 73 Am Soc Int L Proc 76, April, 1979.

Berger and Riskin, Economic and Technological Feasibility in Regulating Toxic Substances Under the Occupational Safety and Health Act. 7 Ecology L Q 285, 1978.

Doniger, Federal Regulation of Vinyl Chloride: A Short Course in the Law and Policy of Toxic Substances Control. 7 Ecology L Q 497, 1978.

Caruso, Protection of Trade Secrets Under the Toxic Substances Control Act. 7 Rutgers J Computers Tech &amp; L 213, 1979.

Merrill, Regulation of Toxic Chemicals. 58 Tex L Rev 463, Feb., 1980.

## INTERPRETIVE NOTES AND DECISIONS

There was no substantial evidence that EPA regulations exempting certain totally enclosed uses of polychlorinated biphenyls (PCBs) would insure that any exposure of human beings or environment to PCBs would be insignificant, pursuant to 15 USCS § 2605(e)(2)(C), where, under current regulations, agency had no idea which PCB uses were intact or nonleaking, nor did agency have any procedures for inspection or even self-reporting of leaks or other forms of contamination. *Environmental Defense Fund, Inc. v Environmental Protection Agency* (1980) 205 App DC 139, 636 F2d 1267, 10 ELR 20972.

Mandate of 15 USCS §§ 2605(e) requires EPA to regulate all levels polychlorinated biphenyl (PCB); there was no substantial evidence to support agency's decision to establish regulatory cutoff of permissible concentrations of PCBs at 50 ppm, § 2605(e) being intended to regulate point sources of contamination, where agency found that any release of PCBs into environment would have adverse effects, and agency's arbitrary concentration limit, aimed at exempting ambient levels of PCBs, would still permit some industrial source of contamination. *Environmental Defense Fund, Inc. v Environmental Protec-*

*tion Agency* (1980) 205 App DC 139, 636 F2d 1267, 10 ELR 20972.

EPA properly applied 15 USCS § 2605(c)(1) criteria in making unreasonable risk determinations under 15 USCS § 2605(e)(2)(B), regarding regulations governing use of polychlorinated biphenyls (PCBs), where although scientific knowledge of risk was incomplete, agency set forth specific policy considerations explaining final regulations. *Environmental Defense Fund, Inc. v Environmental Protection Agency* (1980) 205 App DC 139, 636 F2d 1267, 10 ELR 20972.

Toxic Substances Control Act (15 USCS §§ 2601 et seq.) does not preclude EPA from using § 2605(c)(1) criteria in making "unreasonable risk determinations" under § 2605(e). *Environmental Defense Fund, Inc. v Environmental Protection Agency* (1980) 205 App DC 139, 636 F2d 1267, 10 ELR 20972.

Toxic Substances Control Act (15 USCS § 2601 et seq.) vests exclusive jurisdiction over any attempt to secure pre-enforcement judicial review of rule promulgated under 15 USCS § 2605 in Courts of Appeals, and District Courts thereby lack jurisdiction over such subject matter. *Dow Chemical Co. v Costle* (1980, DC Del) 484 F Supp 101.

**§ 2606. Imminent hazards**

(a) **Actions authorized and required.** (1) The Administrator may commence a civil action in an appropriate district court of the United States—

(A) for seizure of an imminently hazardous chemical substance or mixture or any article containing such a substance or mixture,

(B) for relief (as authorized by subsection (b)) against any person who manufactures, processes, distributes in commerce, or uses, or disposes of, an imminently hazardous chemical substance or mixture or any article containing such a substance or mixture, or

(C) for both such seizure and relief.

A civil action may be commenced under this paragraph notwithstanding the existence of a rule under section 4, 5, or 6 [15 USCS §§ 2603-2605] or an order under section 5 [15 USCS § 2604], and notwithstanding the pendency of any administrative or judicial proceeding under any provision of this Act [15 USCS §§ 2601 et seq.].

(2) If the Administrator has not made a rule under section 6(a) [15 USCS § 2605(a)] immediately effective (as authorized by subsection 6(d)(2)(A)(i) [15 USCS § 2605(d)(2)(A)(i)]) with respect to an imminently hazardous chemical substance or mixture, the Administrator shall commence in a district court of the United States with respect to such substance or mixture or article containing such substance or mixture a civil action described in subparagraph (A), (B), or (C) of paragraph (1).

(b) Relief authorized. (1) The district court of the United States in which an action under subsection (a) is brought shall have jurisdiction to grant such temporary or permanent relief as may be necessary to protect health or the environment from the unreasonable risk associated with the chemical substance, mixture, or article involved in such action.

(2) In the case of an action under subsection (a) brought against a person who manufactures, processes, or distributes in commerce a chemical substance or mixture or an article containing a chemical substance or mixture, the relief authorized by paragraph (1) may include the issuance of a mandatory order requiring (A) in the case of purchasers of such substance, mixture, or article known to the defendant, notification to such purchasers of the risk associated with it; (B) public notice of such risk; (C) recall; (D) the replacement or repurchase of such substance, mixture, or article; or (E) any combination of the actions described in the preceding clauses.

(3) In the case of an action under subsection (a) against a chemical substance, mixture, or article, such substance, mixture, or article may be proceeded against by process of libel for its seizure and condemnation. Proceedings in such an action shall conform as nearly as possible to proceedings in rem in admiralty.

(c) Venue and consolidation. (1)(A) An action under subsection (a) against a person who manufactures, processes, or distributes a chemical substance or mixture or an article containing a chemical substance or mixture may be brought in the United States District Court for the District of Columbia or for any judicial district in which any of the defendants is found, resides, or transacts business; and process in such an action may be served on a defendant in any other district in which such defendant resides or may be found. An action under subsection

AND TRADE

73 Am

Regulat-  
th Act. 7se in the  
97, 1978.  
stances

:b., 1980.

DC 139, 636 F2d

JSCS § 2605(c)(1)  
le risk determina-  
(2)(B), regarding  
polychlorinated bi-  
h scientific knowl-  
agency set forth  
explaining final  
ense Fund. Inc v  
gency (1980) 205  
0 ELR 20972

Act (15 USCS  
clude EPA from  
making "unreason-  
er § 2605(e). Envi-  
v Environmental  
App DC 139, 636

Act (15 USCS  
jurisdiction over  
forcement judicial  
under 15 USCS  
nd District Courts  
such subject mat-  
le (1980, DC Del)

ay commence  
States—  
substance or  
ixture,

(a) against a chemical substance, mixture, or article may be brought in any United States district court within the jurisdiction of which the substance, mixture, or article is found.

(B) In determining the judicial district in which an action may be brought under subsection (a) in instances in which such action may be brought in more than one judicial district, the Administrator shall take into account the convenience of the parties.

(C) Subpoenas [Subpoenas] requiring attendance of witnesses in an action brought under subsection (a) may be served in any judicial district.

(2) Whenever proceedings under subsection (a) involving identical chemical substances, mixtures, or articles are pending in courts in two or more judicial districts, they shall be consolidated for trial by order of any such court upon application reasonably made by any party in interest, upon notice to all parties in interest.

(d) Action under 15 USCS § 2605. Where appropriate, concurrently with the filing of an action under subsection (a) or as soon thereafter as may be practicable, the Administrator shall initiate a proceeding for the promulgation of a rule under section 6(a) [15 USCS 2605(a)].

(e) Representation. Notwithstanding any other provision of law, in any action under subsection (a), the Administrator may direct attorneys of the Environmental Protection Agency to appear and represent the Administrator in such an action.

(f) Definition. For the purposes of subsection (a), the term "imminently hazardous chemical substance or mixture" means a chemical substance or mixture which presents an imminent and unreasonable risk of serious or widespread injury to health or the environment. Such a risk to health or the environment shall be considered imminent if it is shown that the manufacture, processing, distribution in commerce, use, or disposal of the chemical substance or mixture, or that any combination of such activities, is likely to result in such injury to health or the environment before a final rule under section 6 [15 USCS § 2605] can protect against such risk.

(Oct. 11, 1976, P. L. 94-469, § 7, 90 Stat. 2026.)

#### HISTORY; ANCILLARY LAWS AND DIRECTIVES

##### Explanatory notes:

The bracketed word "Subpoenas" is inserted in subsec. (c)(1)(C) to reflect the probable intent of Congress.

##### Effective date of section:

Section 31 of Act Oct. 11, 1976, which appears as 15 USCS § 2601 note, provides that this section shall take effect on Jan. 1, 1977.

#### CROSS REFERENCES

This section is referred to in 15 USCS §§ 2603-2605, 2607, 2608, 2611, 2612, 2614, 2619; 42 USCS §§ 9601, 9606.

ered and  
bdivision  
gaged in

bia, the  
merican  
Islands;  
y person  
3) in the  
t owning  
the case  
operated

n, and a

azardous  
ch other  
e to the  
shellfish,

or to be  
ntion on

mitted to,  
or under,

n, on, or  
y facility  
tates and  
ssel or a

ed grave

enheit;  
rsuant to

ing oil in  
ers of the

rs of the  
ial sea is  
art of the

e United  
by virtue  
tation or

numbering, or as provided for by international agreement to which the United States is a party.

(b) Congressional declaration of policy against discharges of oil or hazardous substances; designation of hazardous substances; study of higher standard of care incentives and report to Congress; liability; penalties; civil actions; penalty limitations, separate offenses, jurisdiction, mitigation of damages and costs, recovery of removal costs and alternative remedies. (1) The Congress hereby declares that it is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976).

(2)(A) The Administrator shall develop, promulgate, and revise as may be appropriate, regulations designating as hazardous substances, other than oil as defined in this section, such elements and compounds which, when discharged in any quantity into or upon the navigable waters of the United States or adjoining shorelines or the waters of the contiguous zone or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976), present an imminent and substantial danger to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, shorelines, and beaches.

(B) The Administrator shall within 18 months after the date of enactment of this paragraph, conduct a study and report to the Congress on methods, mechanisms, and procedures to create incentives to achieve a higher standard of care in all aspects of the management and movement of hazardous substances on the part of owners, operators, or persons in charge of onshore facilities, offshore facilities, or vessels. The Administrator shall include in such study (1) limits of liability, (2) liability for third party damages, (3) penalties and fees, (4) spill prevention plans, (5) current practices in the insurance and banking industries, and (6) whether the penalty enacted in subclause (b) of clause (iii) of subparagraph (B) of subsection (b)(2) of section 311 of Public Law 92-500 should be enacted.

(3) The discharge of oil or hazardous substances (i) into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, or (ii) in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to,

range of total suspended solids in corn wet mill effluent and capricious, engineering plant or pilot plant to illustrate efficacy of 33 USCS § 1317 to consistently International, Inc. 532 F.2d 1329, cert den 430 U.S. 1046.

It would be made to be clear that there was presently no technology that would enable plants to meet provisions of 33 USCS § 1317 that are arbitrary and capricious. The cost of such treatment would be reasonable. An economic analysis of the cost-benefit of administrative standards of performance for achieving necessary treatment, whether that cost is limited to project costs in relation to calculating separate impact of control measures. *Renderers Assn. v EPA* (1976, CA8).

Plants are not permitted under the provision authorizing regulations establishing standards of discharge of water-polluting substances. Regulations establishing standards for new sources under 33 USCS § 1316 to be absolute and not provide variance. *E. I. Du Pont de Nemours & Co. v Train* (1976, CA4) 541 F.2d 1018, 430 U.S. 112, 51 L. Ed. 2d 204, 97 S. Ct. 965.

77 BPT (best practicable technology currently available) standards require the owner to demonstrate that the equipment or technology applied, or other measures, are the factors considered in the guidelines; the cost of implementing on request for treatment to meet cost will not be considered. *Environmental Protection Agency v E. I. Du Pont de Nemours & Co.* (1980) 449 U.S. 681, 685, 35 F.3d 295, on remand.

Regulation providing for grant of variance from 1977 effluent limitations applicable to discharge of heat from steam electric generating plant, which regulation provides that only technical and engineering factors, exclusive of cost, may be considered in granting or denying variance, is unduly restrictive and would be set aside; 1977 standards and subsequent new source limitations were not intended to be applied any less flexibly than 1983 requirements thus, upon reconsideration, EPA should come forward with meaningful variance clause applicable to existing as well as new sources, taking into consideration at least statutory factors set out in 33 USCS §§ 1311(c), 1314(b)(1)(B) and 1316(b)(1)(B). *Appalachian Power Co. v Train* (1976, CA4) 545 F.2d 1351.

#### 84. Grace period

It is not clear whether Congress intended to equate "effluent limitations" as used in 33 USCS § 1311 and defined in 33 USCS § 1362, with "standard of performance" as defined in 33 USCS § 1316, nor is it clear intent of Congress with reference to applicability of grace period to plants construction of which began after passage of Act in 1972 and before promulgation of regulations in 1974, however, except for such situations as are later determined to be within 33 USCS § 1316 grace period, plants which go on line between passage of Act and 1983 are subject to 1983 limitations. *E. I. Du Pont de Nemours & Co. v Train* (1976, CA4) 541 F.2d 1018, aff'd in part and rev'd in part on other grounds 430 U.S. 112, 51 L. Ed. 2d 204, 97 S. Ct. 965.

It is inferable from Congress' special treatment of new sources that it determined to afford protection of limited kind to new sources, under 33 USCS § 1316 provisions permitting standards of performance for new point sources to be

revised from time to time, but providing more stringent standard of performance may not be imposed on individual source for 10 years after completion of construction or until facility is fully depreciated or amortized, but not to extend same protection to existing sources or to restrict effectiveness of 33 USCS § 1317 standards even upon new sources. *Inland Steel Co. v Environmental Protection Agency* (1978, CA7) 574 F.2d 367.

33 USCS § 1316 provision providing that new sources meeting all applicable standards of performance at time of construction do not have to meet any more stringent standard of performance during specific period of time does not shield qualifying sources from more stringent performance standards set by state which is assumed administration of National Pollutant Discharge Elimination System program under 33 USCS § 1342. USEPA GCO 76-22.

#### 15. Violations by new source

Variations for individual plants are not permitted under 33 USCS § 1316, which authorizes Administrator of Environmental Protection Agency to promulgate regulations establishing standards for control of discharge of pollutants by new sources of water polluting discharges. *E. I. Du Pont de Nemours & Co. v Train* (1977) 430 U.S. 112, 51 L. Ed. 2d 204, 97 S. Ct. 965.

Since regulations entitled "Ocean Dumping" were explicitly issued pursuant to 33 USCS § 1311 et seq. and 33 USCS § 1343, and not under 33 USCS § 1316(e) allegations that regulations have been violated do not allege violation of any portion of § 1316 so as to fall within 33 USCS § 1365's waiver of 60-day notice requirement. *Save Our Sound Fisheries Assn. v Callaway* (1977, DC RI) 429 F. Supp. 1136.

### § 1317. Toxic and pretreatment effluent standards

(a) Toxic pollutant list; revision; hearing; promulgation of standards; effective date; consultation. (1) On and after the date of enactment of the Clean Water Act of 1977 [enacted Dec. 27, 1977], the list of toxic pollutants or combination of pollutants subject to this Act shall consist of those toxic pollutants listed in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives, and the Administrator shall publish, not later than the thirtieth day after the date of enactment of the Clean Water Act of 1977 [enacted Dec. 27, 1977], that list. From time to time thereafter, the Administrator may revise such list and the Administrator is authorized to add to or remove from such list any pollutant. The Administrator in publishing any revised list, including the addition or removal of any pollutant from such list, shall take into account toxicity

of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms, and the nature and extent of the effect of the toxic pollutant on such organisms. A determination of the Administrator under this paragraph shall be final except that if, on judicial review, such determination was based on arbitrary and capricious action of the Administrator, the Administrator shall make a redetermination.

(2) Each toxic pollutant listed in accordance with paragraph (1) of this subsection shall be subject to effluent limitations resulting from the application of the best available technology economically achievable for the applicable category or class of point sources established in accordance with sections 301(b)(2)(A) and 304(b)(2) of this Act [33 USCS §§ 1311(b)(2)(A), 1314(b)(2)]. The Administrator, in his discretion, may publish in the Federal Register a proposed effluent standard (which may include a prohibition) establishing requirements for a toxic pollutant which, if an effluent limitation is applicable to a class or category of point sources, shall be applicable to such category or class only if such standard imposes more stringent requirements. Such published effluent standard (or prohibition) shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on such organisms, and the extent to which effective control is being or may be achieved under other regulatory authority. The Administrator shall allow a period of not less than sixty days following publication of any such proposed effluent standard (or prohibition) for written comment by interested persons on such proposed standard. In addition, if within thirty days of publication of any such proposed effluent standard (or prohibition) any interested person so requests, the Administrator shall hold a public hearing in connection therewith. Such a public hearing shall provide an opportunity for oral and written presentations, such cross-examination as the Administrator determines is appropriate on disputed issues of material fact, and the transcription of a verbatim record which shall be available to the public. After consideration of such comments and any information and material presented at any public hearing held on such proposed standard or prohibition, the Administrator shall promulgate such standard (or prohibition) with such modification as the Administrator finds are justified. Such promulgation by the Administrator shall be made within two hundred and seventy days after publication of proposed standard (or prohibition). Such standard (or prohibition) shall be final except that if, on judicial review, such standard was not based on substantial evidence, the Administrator shall promulgate a revised standard. Effluent limitations shall be established in accordance with sections 301(b)(2)(A) and 304(b)(2) [33 USCS §§ 1311(b)(2)(A), 1314(b)(2)] for every toxic pollutant referred to in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives as soon as

ATERS

potential  
of the  
toxic  
Administrator  
review,  
of the

of this  
om the  
able for  
accor-  
USCS  
on, may  
ch may  
ollutant  
gory of  
if such  
effluent  
of the  
sence of  
affected  
ollutant  
being or  
Administrator  
ation of  
en com-  
lition, if  
standard  
Administrator  
a public  
ntations,  
ropriate  
verbatim  
of such  
y public  
ministra-  
nmodifica-  
n by the  
ays after  
ard (or  
w, such  
tor shall  
established  
3 USCS  
ed to in  
on Public  
soon as

practicable after the date of enactment of the Clean Water Act of 1977 [enacted Dec. 27, 1977], but no later than July 1, 1980. Such effluent limitations or effluent standards (or prohibitions) shall be established for every other toxic pollutant listed under paragraph (1) of this subsection as soon as practicable after it is so listed.

(3) Each such effluent standard (or prohibition) shall be reviewed and, if appropriate, revised at least every three years.

(4) Any effluent standard promulgated under this section shall be at that level which the Administrator determines provides an ample margin of safety.

(5) When proposing or promulgating any effluent standard (or prohibition) under this section, the Administrator shall designate the category or categories of sources to which the effluent standard (or prohibition) shall apply. Any disposal of dredged material may be included in such a category of sources after consultation with the Secretary of the Army.

(6) Any effluent standard (or prohibition) established pursuant to this section shall take effect on such date or dates as specified in the order promulgating such standard, but in no case, more than one year from the date of such promulgation. If the Administrator determines that compliance within one year from the date of promulgation is technologically infeasible for a category of sources, the Administrator may establish the effective date of the effluent standard (or prohibition) for such category at the earliest date upon which compliance can be feasibly attained by sources within such category, but in no event more than three years after the date of such promulgation.

(7) Prior to publishing any regulations pursuant to this section the Administrator shall, to the maximum extent practicable within the time provided, consult with appropriate advisory committees, States, independent experts, and Federal departments and agencies.

(b) **Pretreatment standards; hearing; promulgation; compliance period; revision; application to State and local laws.** (1) The Administrator shall, within one hundred and eighty days after the date of enactment of this title [enacted Oct. 18, 1972] and from time to time thereafter, publish proposed regulations establishing pretreatment standards for introduction of pollutants into treatment works (as defined in section 212 of this Act [33 USCS § 1292]) which are publicly owned for those pollutants which are determined not to be susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works. Not later than ninety days after such publication, and after opportunity for public hearing, the Administrator shall promulgate such pretreatment standards. Pretreatment standards under this subsection shall specify a time for compliance not to exceed three years from the date of promulgation and shall be established to prevent the discharge of any pollutant through treatment works (as defined in section 212 of this Act [33 USCS § 1292]) which are publicly owned, which pollutant interferes with, passes through, or otherwise is incom-

agencies in accordance with subtitle D of this Act [42 USCS §§ 6941 et seq.] other than section 4008(a)(2) or 4009 [42 USCS § 6948(a)(2) or 6949]. (Oct. 20, 1965, P. L. 89-272, Title II, Subtitle B, § 2007 [2006], as added Oct. 21, 1976, P. L. 94-580, § 2, 90 Stat. 2805; Oct. 15, 1980, P. L. 96-463, § 4(a), 94 Stat. 2055; Oct. 21, 1980, P. L. 96-482, §§ 6, 31(a), 94 Stat. 2336, 2352.)

#### HISTORY; ANCILLARY LAWS AND DIRECTIVES

##### Explanatory notes:

The bracketed comma is inserted in subsec. (a) to reflect the probable intent of Congress.

##### Amendments:

1980. Act Oct. 21, 1980, in subsec. (a), deleted "and" following "1978", and inserted "\$70,000,000 for the fiscal year ending September 30, 1980, \$80,000,000 for the fiscal year ending September 30, 1981, and \$80,000,000 for the fiscal year ending September 30, 1982"; in subsec. (b), inserted ", or \$5,000,000 per fiscal years, whichever is less,"; and added subsec. (d).

##### Redesignation:

This section, formerly § 2006 of Act Oct. 20, 1965, P. L. 89-272, as added Oct. 21, 1976, P. L. 94-580, § 2, 90 Stat. 2803, was redesignated § 2007 of such Act by Act Oct. 15, 1980, P. L. 96-463, § 4(a), 94 Stat. 2055.

##### Transfer of functions:

For transfer of certain enforcement functions of Administrator or other official of the Environmental Protection Agency under 42 USCS §§ 6901 et seq. to Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, see 42 USCS § 6903 note.

### HAZARDOUS WASTE MANAGEMENT

#### CROSS REFERENCES

This subchapter is referred to in 42 USCS §§ 2022, 6916, 6948, 6972.

#### § 6921. Identification and listing of hazardous waste

(a) **Criteria for identification or listing.** Not later than eighteen months after the date of the enactment of this Act [enacted Oct. 21, 1976], the Administrator shall, after notice and opportunity for public hearing, and after consultation with appropriate Federal and State agencies, develop and promulgate criteria for identifying the characteristics of hazardous waste, and for listing hazardous waste, which should be subject to the provisions of this subtitle [42 USCS §§ 6921 et seq.], taking into account toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and

other hazardous characteristics. Such criteria shall be revised from time to time as may be appropriate.

(b) Identification and listing. (1) Not later than eighteen months after the date of enactment of this section [enacted Oct. 21, 1976], and after notice and opportunity for public hearing, the Administrator shall promulgate regulations identifying the characteristics of hazardous waste, and listing particular hazardous wastes (within the meaning of section 1004(5) [42 USCS § 6903(5)]), which shall be subject to the provisions of this subtitle [42 USCS §§ 6921 et seq.]. Such regulations shall be based on the criteria promulgated under subsection (a) and shall be revised from time to time thereafter as may be appropriate.

(2)(A) Notwithstanding the provisions of paragraph (1) of this subsection, drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil or natural gas or geothermal energy shall be subject only to existing State or Federal regulatory programs in lieu of subtitle C [42 USCS §§ 6921 et seq.] until at least 24 months after the date of enactment of the Solid Waste Disposal Act Amendments of 1980 [enacted Oct. 21, 1980] and after promulgation of the regulations in accordance with subparagraphs (B) and (C) of this paragraph. It is the sense of the Congress that such State or Federal programs should include, for waste disposal sites which are to be closed, provisions requiring at least the following:

(i) The identification through surveying, platting, or other measures, together with recordation of such information on the public record, so as to assure that the location where such wastes are disposed of can be located in the future; except however, that no such surveying, platting, or other measure identifying the location of a disposal site for drilling fluids and associated wastes shall be required if the distance from the disposal site to the surveyed or platted location to the associated well is less than two hundred lineal feet; and

(ii) A chemical and physical analysis of a produced water and a composition of a drilling fluid suspected to contain a hazardous material, with such information to be acquired prior to closure and to be placed on the public record.

(B) Not later than six months after completion and submission of the study required by section 8002(m) of this Act [42 USCS § 6982(m)], the Administrator shall, after public hearings and opportunity for comment, determine either to promulgate regulations under this subtitle [42 USCS §§ 6921 et seq.] for drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil or natural gas or geothermal energy or that such regulations are unwarranted. The Administrator shall publish his decision in the Federal Register accompanied by an explanation and justification of the reasons for it. In making the decision under this

§§ 6941 et  
) or 6949].  
as added  
L. 96-463,  
94 Stat.

able

owing  
ember  
1981,  
"; in  
ver is

72, as  
dated  
Stat.

other  
USCS  
or the  
note.

en months  
1976], the  
aring, and  
velop and  
ous waste,  
provisions  
at toxicity,  
ulation in  
ness, and

paragraph, the Administrator shall utilize the information developed or accumulated pursuant to the study required under section 8002(m) [42 USCS § 6982(m)].

(C) The Administrator shall transmit his decision, along with any regulations, if necessary, to both Houses of Congress. Such regulations shall take effect only when authorized by Act of Congress.

(3)(A) Notwithstanding the provisions of paragraph (1) of this subsection, each waste listed below shall, except as provided in subparagraph (B) of this paragraph, be subject only to regulation under other applicable provisions of Federal or State law in lieu of this subtitle [42 USCS §§ 6921 et seq.] until at least six months after the date of submission of the applicable study required to be conducted under subsection (f), (n), (o), or (p) of section 8002 of this Act [42 USCS § 6982(f), (n), (o), or (p)] and after promulgation of regulations in accordance with subparagraph (C) of this paragraph:

(i) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

(ii) Solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore.

(iii) Cement kiln dust waste.

(B)(i) Owners and operators of disposal sites for wastes listed in subparagraph (A) may be required by the Administrator, through regulations prescribed under authority of section 2002 of this Act [42 USCS § 6912]—

(I) as to disposal sites for such wastes which are to be closed, to identify the locations of such sites through surveying, platting, or other measures, together with recordation of such information on the public record, to assure that the locations where such wastes are disposed of are known and can be located in the future, and

(II) to provide chemical and physical analysis and composition of such wastes, based on available information, to be placed on the public record.

(ii)(I) In conducting any study under subsection (f), (n), (o), or (p), of section 8002 of this Act [42 USCS § 6982(f), (n), (o), or (p)], any officer, employee, or authorized representative of the Environmental Protection Agency, duly designated by the Administrator, is authorized, at reasonable times and as reasonably necessary for the purposes of such study, to enter any establishment where any waste subject to such study is generated, stored, treated, disposed of, or transported from; to inspect, take samples, and conduct monitoring and testing; and to have access to and copy records relating to such waste. Each such inspection

shall be commenced and completed with reasonable promptness. If the officer, employee, or authorized representative obtains any samples prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the sample obtained and if requested a portion of each such sample equal in volume or weight to the portion retained. If any analysis is made of such samples, or monitoring and testing performed, a copy of the results shall be furnished promptly to the owner, operator, or agent in charge.

(II) Any records, reports, or information obtained from any person under subclause (I) shall be available to the public, except that upon a showing satisfactory to the Administrator by any person that records, reports, or information, or particular part thereof, to which the Administrator has access under this subparagraph if made public, would divulge information entitled to protection under section 1905 of title 18 of the United States Code [18 USCS § 1905], the Administrator shall consider such information or particular portion thereof confidential in accordance with the purposes of that section, except that such record, report, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this Act [42 USCS §§ 6901 et seq.]. Any person not subject to the provisions of section 1905 of title 18 of the United States Code [18 USCS § 1905] who knowingly and willfully divulges or discloses any information entitled to protection under this subparagraph shall, upon conviction, be subject to a fine of not more than \$5,000 or to imprisonment not to exceed one year, or both.

(iii) The Administrator may prescribe regulations, under the authority of this Act [42 USCS §§ 6901 et seq.], to prevent radiation exposure which presents an unreasonable risk to human health from the use in construction or land reclamation (with or without revegetation) of (I) solid waste from the extraction, beneficiation, and processing of phosphate rock or (II) overburden from the mining of uranium ore.

(iv) Whenever on the basis of any information the Administrator determines that any person is in violation of any requirement of this subparagraph, the Administrator shall give notice to the violator of his failure to comply with such requirement. If such violation extends beyond the thirtieth day after the Administrator's notification, the Administrator may issue an order requiring compliance within a specified time period or the Administrator may commence a civil action in the United States district court in the district in which the violation occurred for appropriate relief, including a temporary or permanent injunction.

WELFARE

developed  
18002(m)with any  
in regula-  
tions.is subsec-  
subpara-  
der other  
title [42  
date of  
ed under  
42 USCS  
lations influe gas  
emission ofemission of  
fromlisted in  
through  
this Actclosed, to  
attending, or  
formation  
where such  
is in thecomposition  
placed on), or (p),  
, or (p)],  
the Envi-  
Adminis-  
reasonably  
establish-  
d, stored,  
take sam-  
access to  
inspection

(C) Not later than six months after the date of submission of the applicable study required to be conducted under subsection (f), (n), (o), or (p), of section 8002 of this Act [42 USCS § 6982(f), (n), (o), or (p)], the Administrator shall, after public hearings and opportunity for comment, either determine to promulgate regulations under this subtitle [42 USCS §§ 6921 et seq.] for each waste listed in subparagraph (A) of this paragraph or determine that such regulations are unwarranted. The Administrator shall publish his determination, which shall be based on information developed or accumulated pursuant to such study, public hearings, and comment, in the Federal Register accompanied by an explanation and justification of the reasons for it.

(c) **Petition by State Governor.** At any time after the date eighteen months after the enactment of this title [enacted Oct. 21, 1976], the Governor of any State may petition the Administrator to identify or list a material as a hazardous waste. The Administrator shall act upon such petition within ninety days following his receipt thereof and shall notify the Governor of such action. If the Administrator denies such petition, because of financial considerations, in providing such notice to the Governor he shall include a statement concerning such considerations.

(Oct. 20, 1965, P. L. 89-272, Title II, Subtitle C, § 3001, as added Oct. 21, 1976, P. L. 94-580, § 2, 90 Stat. 2806; Oct. 21, 1980, P. L. 96-482, § 7, 94 Stat. 2336.)

#### HISTORY; ANCILLARY LAWS AND DIRECTIVES

##### Amendments:

1980. Act Oct. 21, 1980, in subsec. (b), inserted "(1)", and added paras. (2) and (3).

##### Transfer of functions:

For transfer of certain enforcement functions of Administrator or other official of the Environmental Protection Agency under 42 USCS §§ 6901 et seq. to Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, see 42 USCS § 6903 note.

#### CODE OF FEDERAL REGULATIONS

General grant regulations and procedures, 40 CFR Part 30.  
Subagreements, 40 CFR Part 33.  
Research and demonstration grants, 40 CFR Part 40.

#### CROSS REFERENCES

This section is referred to in 42 USCS § 6930.

#### RESEARCH GUIDE

##### Am Jur:

61A Am Jur 2d, Pollution Control §§ 3, 247, 248, 253.

ARY LAWS AND DIRECTIVES

DERAL REGULATIONS

ARCH GUIDE

ion Panels

ARCH GUIDE

ed objectives for the activities and programs  
USCS §§ 6901 et seq.;

le V, § 502(b), 98 Stat. 3276.)

LAWS AND DIRECTIVES

uted "detailed" for "detail".

zed to be appropriated to the Administrator for  
this Act [42 USCS §§ 6901 et seq.], \$35,000,000  
1977, \$38,000,000 for the fiscal year ending  
year ending September 30, 1979[,] \$70,000,000  
1980, \$80,000,000 for the fiscal year ending  
l year ending September 30, 1982, \$70,000,000  
985, \$80,000,000 for the fiscal year ending  
iscal year ending September 30, 1987, and

ed to be appropriated to the Administrator  
for the fiscal year 1986, \$2,529,000 for the  
ar 1988 to be used—

the Environmental Protection Agency autho-  
nal investigations (to investigate, or supervise  
criminal penalty is provided) under this Act

rs or employees.

thorized to be appropriated to the Adminis-  
rovisions of subtitle I [42 USCS §§ 6991 et  
storage tanks), \$10,000,000 for each of the

25,000,000 for each of the fiscal years 1985  
he States for purposes of assisting the States  
approved State underground storage tank  
rograms under subtitle I [42 USCS §§ 6991

i), 98 Stat. 3222, 3223.)

WS AND DIRECTIVES

ad "\$80,000,000 for the fiscal year ending

ted by P.L.'a 100-202 & 203]

September 30, 1982, \$70,000,000 for the fiscal year ending September 30, 1985, \$80,000,000  
for the fiscal year ending September 30, 1986, \$80,000,000 for the fiscal year ending  
September 30, 1987, and \$80,000,000 for the fiscal year 1988" for "and \$80,000,000 for the  
fiscal year ending September 30, 1982"; and added subsecs. (e) and (f).

§ 6917. Office of Ombudsman

(a) Establishment; Functions. The Administrator shall establish an Office of Ombudsman, to  
be directed by an Ombudsman. It shall be the function of the Office of Ombudsman to  
receive individual complaints, grievances, requests for information submitted by any person  
with respect to any program or requirement under this Act [42 USCS §§ 6901 et seq.].

(b) Authority to render assistance. The Ombudsman shall render assistance with respect to  
the complaints, grievances, and requests submitted to the Office of Ombudsman, and shall  
make appropriate recommendations to the Administrator.

(c) Effect on procedures for grievances, appeals, or administrative matters. The establishment  
of the Office of Ombudsman shall not affect any procedures for grievances, appeals, or  
administrative matters in any other provision of this Act [42 USCS §§ 6901 et seq.], any  
other provision of law, or any Federal regulation.

(d) Termination. The Office of the Ombudsman shall cease to exist 4 years after the date of  
enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984].

(Oct. 20, 1965, P. L. 89-272, Title II, Subtitle B, § 2008, as added Nov. 8, 1984, P. L. 98-616,  
Title I, § 103(a), 98 Stat. 3225.)

§ 6921. Identification and listing of hazardous waste

(a) [Unchanged]

(b) Identification and listing. (1) Not later than eighteen months after the date of enactment  
of this section [enacted Oct. 21, 1976], and after notice and opportunity for public  
hearing, the Administrator shall promulgate regulations identifying the characteristics of  
hazardous waste, and listing particular hazardous wastes (within the meaning of section  
1004(5) [42 USCS § 6903(5)]), which shall be subject to the provisions of this subtitle [42  
USCS §§ 6921 et seq.]. Such regulations shall be based on the criteria promulgated under  
subsection (a) and shall be revised from time to time thereafter as may be appropriate.  
The Administrator, in cooperation with the Agency for Toxic Substances and Disease  
Registry and the National Toxicology Program, shall also identify or list those hazardous  
wastes which shall be subject to the provisions of this subtitle [42 USCS §§ 6921 et seq.]  
solely because of the presence in such wastes of certain constituents (such as identified  
carcinogen., mutagens, or teratogens) at levels in excess of levels which endanger human  
health.

(2) [Unchanged]

(c) [Unchanged]

(d) Small quantity generator waste. (1) By March 31, 1986, the Administrator shall  
promulgate standards under sections 3002, 3003, and 3004 [42 USCS §§ 6922-6924]  
for hazardous waste generated by a generator in a total quantity of hazardous waste greater  
than one hundred kilograms but less than one thousand kilograms during a calendar  
month.

(2) The standards referred to in paragraph (1), including standards applicable to the  
legitimate use, reuse, recycling, and reclamation of such wastes, may vary from the  
standards applicable to hazardous waste generated by larger quantity generators, but such  
standards shall be sufficient to protect human health and the environment.

(3) Not later than two hundred and seventy days after the enactment of the Hazardous  
and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984] any hazardous waste which  
is part of a total quantity generated by a generator generating greater than one hundred  
kilograms but less than one thousand kilograms during one calendar month and which is  
shipped off the premises on which such waste is generated shall be accompanied by a copy  
of the Environmental Protection Agency Uniform Hazardous Waste Manifest form signed  
by the generator. This form shall contain the following information:

- (A) the name and address of the generator of the waste;
- (B) the United States Department of Transportation description of the waste, including  
the proper shipping name, hazard class, and identification number (UN/NA), if  
applicable;
- (C) the number and type of containers;
- (D) the quantity of waste being transported; and
- (E) the name and address of the facility designated to receive the waste.

If subparagraph (B) is not applicable, in lieu of the description referred to in such  
subparagraph (B), the form shall contain the Environmental Protection Agency identifica-

tion number, or a generic description of the waste, or a description of the waste by hazardous waste characteristic. Additional requirements related to the manifest form shall apply only if determined necessary by the Administrator to protect human health and the environment.

(4) The Administrator's responsibility under this subtitle [42 USCS §§ 6921 et seq.] to protect human health and the environment may require the promulgation of standards under this subtitle [42 USCS §§ 6921 et seq.] for hazardous wastes which are generated by any generator who does not generate more than one hundred kilograms of hazardous waste in a calendar month.

(5) Until the effective date of standards required to be promulgated under paragraph (1), any hazardous waste identified or listed under section 3001 [this section] generated by any generator during any calendar month in a total quantity greater than one hundred kilograms but less than one thousand kilograms, which is not treated, stored, or disposed of at a hazardous waste treatment, storage, or disposal facility with a permit under section 3005 [42 USCS § 6925], shall be disposed of only in a facility which is permitted, licensed, or registered by a State to manage municipal or industrial solid waste.

(6) Standards promulgated as provided in paragraph (1) shall, at a minimum, require that all treatment, storage, or disposal of hazardous wastes generated by generators referred to in paragraph (1) shall occur at a facility with interim status or a permit under this subtitle [42 USCS §§ 6921 et seq.], except that onsite storage of hazardous waste generated by a generator generating a total quantity of hazardous waste greater than one hundred kilograms, but less than one thousand kilograms during a calendar month, may occur without the requirement of a permit for up to one hundred and eighty days. Such onsite storage may occur without the requirement of a permit for not more than six thousand kilograms for up to two hundred and seventy days if such generator must ship or haul such waste over two hundred miles.

(7)(A) Nothing in this subsection shall be construed to affect or impair the validity of regulations promulgated by the Secretary of Transportation pursuant to the Hazardous Materials Transportation Act.

(B) Nothing in this subsection shall be construed to affect, modify, or render invalid any requirements in regulations promulgated prior to January 1, 1983 applicable to any acutely hazardous waste identified or listed under section 3001 [this section] which is generated by any generator during any calendar month in a total quantity less than one thousand kilograms.

(8) Effective March 31, 1986, unless the Administrator promulgates standards as provided in paragraph (1) of this subsection prior to such date, hazardous waste generated by any generator in a total quantity greater than one hundred kilograms but less than one thousand kilograms during a calendar month shall be subject to the following requirements until the standards referred to in paragraph (1) of this subsection have become effective:

(A) the notice requirements of paragraph (1) of this subsection shall apply and in addition, the information provided in the notice shall include the name of the waste generator, the facility designated to receive the waste, and the name and address of the facility designated to receive the waste;

(B) except in the case of the onsite storage of hazardous waste referred to in paragraph (6) of this subsection, the treatment, storage, or disposal of such waste shall occur at a facility with interim status or a permit under this subtitle [42 USCS §§ 6921 et seq.];

(C) generators of such waste shall file exception reports as required of generators producing greater amounts of hazardous waste per month except that such reports shall be filed by January 31, for any waste shipment occurring in the last half of the preceding calendar year, and by July 31, for any waste shipment occurring in the first half of the calendar year; and

(D) generators of such waste shall retain for three years a copy of the manifest signed by the designated facility that has received the waste. Nothing in this paragraph shall be construed as a determination of the standards appropriate under paragraph (1).

(9) The last sentence of section 3010(b) [42 USCS §§ 6930(b)] shall not apply to regulations promulgated under this subsection.

(e) Specified wastes. (1) Not later than 6 months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984], the Administrator shall, where appropriate, list under subsection (b)(1), additional wastes containing chlorinated dioxins or chlorinated-dibenzofurans. Not later than one year after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984], the Administrator shall, where appropriate, list under subsection (b)(1) wastes containing remaining halogenated dioxins and halogenated-dibenzofurans.

(2) Not later than fifteen months after the date of enactment of the Hazardous and Solid

of the waste, or a description of the waste by al requirements related to the manifest form shall e Administrator to protect human health and the

nder this subtitle [42 USCS §§ 6921 et seq.] to ent may require the promulgation of standards [eq.] for hazardous wastes which are generated by ore than one hundred kilograms of hazardous

quired to be promulgated under paragraph (1), nder section 3001 [this section] generated by any n a total quantity greater than one hundred grams, which is not treated, stored, or disposed or disposal facility with a permit under section of only in a facility which is permitted, licensed, al or industrial solid waste.

paragraph (1) shall, at a minimum, require that ous wastes generated by generators referred to th interim status or a permit under this subtitle site storage of hazardous waste generated by a hazardous waste greater than one hundred grams during a calendar month, may occur to one hundred and eighty days. Such onsite of a permit for not more than six thousand ty days if such generator must ship or haul

onstrued to affect or impair the validity of of Transportation pursuant to the Hazardous

onstrued to affect, modify, or render invalid ted prior to January 1, 1983 applicable to any ed under section 3001 [this section] which is endar month in a total quantity less than one

inistrator promulgates standards as provided uch date, hazardous waste generated by any one hundred kilograms but less than one h shall be subject to the following require- graph (1) of this subsection have become

(3) of this subsection shall apply and in form shall include the name of the waste he facility designated to receive the waste; rage referred to in paragraph (6) of this al of such waste shall occur at a facility ublic subtitle [42 USCS §§ 6921 et seq.]; nifest exception reports as required of azardous waste per month except that such y waste shipment occurring in the last half y 31, for any waste shipment occurring in

r three years a copy of the manifest signed he waste. Nothing in this paragraph shall rds appropriate under paragraph (1). 2 USCS §§ 6930(b)] shall not apply to

ths after the date of enactment of the 4 [enacted Nov. 8, 1984], the Administra- tion (b)(1), additional wastes containing . Not later than one year after the date of Amendments of 1984 [enacted Nov. 8, ate, list under subsection (b)(1) wastes ogenated-dibenzofurans.

of enactment of the Hazardous and Solid d by P.L.'s 100-202 & 203]

Waste Amendments of 1984 [enacted Nov. 8, 1984], the Administrator shall make a determination of whether o not to list under subsection (b)(1) the following wastes: Chlorinated Aliphatics, Dioxin, Dimethyl Hydrazine, TDI (toluene diisocyanate), Carba- mates, Bromacil, Linuron, Organo-bromines, solvents, refining wastes, chlorinated aromati- cs, dyes and pigments, inorganic chemical industry wastes, lithium batteries, coke byproducts, paint production wastes, and coal slurry pipeline effluent.

(f) **De-listing procedures.** (1) When evaluating a petition to exclude a waste generated at a particular facility from listing under this section, the Administrator shall consider factors (including additional constituents) other than those for which the waste was listed if the Administrator has a reasonable basis to believe that such additional factors could cause the waste to be a hazardous waste. The Administrator shall provide notice and opportu- nity for comment on these additional factors before granting or denying such petition.

(2)(A) To the maximum extent practicable the Administrator shall publish in the Federal Register a proposal to grant or deny a petition referred to in paragraph (1) within twelve months after receiving a complete application to exclude a waste generated at a particular facility from being regulated as a hazardous waste and shall grant or deny such a petition within twenty-four months after receiving a complete application.

(B) The temporary granting of such a petition prior to the enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984] without the opportunity for public comment and the full consideration of such comments shall not continue for more than twenty-four months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984]. If a final decision to grant or deny such a petition has not been promulgated after notice and opportunity for public comment within the time limit prescribed by the preceding sentence, any such temporary granting of such petition shall cease to be in effect.

(g) **EP Toxicity.** Not later than twenty-eight months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984] the Administrator shall examine the deficiencies of the extraction procedure toxicity characteristic as-a predictor of the leaching potential of wastes and make changes in the extraction procedure toxicity characteristic, including changes in the leaching media, as are necessary to insure that it accurately predicts the leaching potential of wastes which pose a threat to human health and the environment when mismanaged.

(h) **Additional characteristics.** Not later than two years after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 [enacted Nov. 8, 1984], the Administrator shall promulgate regulations under this section identifying additional characteristics of hazardous waste, including measures or indicators of toxicity.

(i) **Clarification of household waste exclusion.** A resource recovery facility recovering energy from the mass burning of municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this subtitle [42 USCS §§ 6921 et seq.], if—

(1) such facility—

(A) receives and burns only—

(i) household waste (from single and multiple dwellings, hotels, motels, and other residential sources), and

(ii) solid waste from commercial or industrial sources that does not contain hazardous waste identified or listed under this section, and

(B) does not accept hazardous wastes identified or listed under this section, and

(2) the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

(As amended Nov. 8, 1984, P. L. 98-616, Title II, Subtitle C, §§ 221(a), 222, 223 98 Stat. 3249, 3251, 3252.)

#### HISTORY; ANCILLARY LAWS AND DIRECTIVES

##### References in text:

"The Hazardous Materials Transportation Act", referred to in this section, is Act Jan. 3, 1975, P. L. 93-633, Title I, 88 Stat. 2156, which appears generally as 49 USCS Appx. §§ 1801 et seq. For full classification of such Act, consult USCS Tables volumes.

##### Amendments:

1984, Act Nov. 8, 1984, in subsec. (b)(1), inserted the sentence beginning "The Adminis- trator, in cooperation. . . ."; and added subsecs. (d)-(i).

##### Other provisions:

Administrator to inform and educate waste generators; study; report, Act Nov. 8, 1984, P. L. 98-616, Title II, Subtitle C, § 221(b), (d)-(f), 98 Stat. 3249, 3250, provides:

[See "Caution" on p. 3 for §§ affected by P.L.'s 100-202 & 203]

## 42 USCS § 7411, n 8

public hearing on matter and (4) industry spokesmen were specifically invited by agency to submit written comments on such issue. *National Asphalt Pavement Asso. v Train* (1976) 176 App DC 296, 539 F.2d 775, 6 ELR 20688.

### 9. Different standards for different industries

EPA Administrator is not required in setting standards of performance governing emissions of air pollutants by stationary sources to present affirmative justifications for different standards in different industries; record in proceeding to review standards promulgated by EPA Administrator for control of air pollutants from new stationary sources remanded to agency due to lack of opportunity of cement manufacturers to comment on proposed standards and failure to identify basis of standards. *Portland Cement Asso. v Ruckelshaus* (1973) 158 App DC 308, 486 F.2d 375, 3 ELR 20642, cert den 417 US 921, 41 L Ed 2d 226, 94 S Ct 2628 and later app 168 App DC 248, 513 F.2d 506, 5 ELR 20341, cert den 423 US 1025, 46 L Ed 2d 399, 96 S Ct 469, reh den 423 US 1092, 47 L Ed 2d 104, 96 S Ct 889 and (disagreed with by *Eagle-Picher Industries, Inc. v United States Environmental Protection Agency*, 245 App DC 196, 759 F.2d 922, 15 ELR 20460, later proceeding (App DC) 759 F.2d 905, 15 ELR 20467, later proceeding (App DC) 822 F.2d 132).

Absent proof of unreasonableness in fact that emission standard for one type of plant is allegedly more stringent than for others and absent showing that industry is unable to adjust in healthy economic fashion to end sought by Pollution Control Act as represented by standards promulgated pursuant to predecessor to 42 USCS § 7411, no basis exists for invalidating as discriminatory achievable emission standards for industry. *Portland Cement Asso. v Train* (1975) 168 App DC 248, 513 F.2d 506, 5 ELR 20341, cert den 423 US 1025, 46 L Ed 2d 399, 96 S Ct 469, reh den 423 US 1092, 47 L Ed 2d 104, 96 S Ct 889.

### 10. Relationship with NEPA

NEPA requirements do not apply to EPA's promulgation under predecessor to 42 USCS

## PUBLIC HEALTH AND WELFARE

§ 7411 of standards of performance for stationary sources emitting air pollutants such as the regulation establishing standards for emission of air pollutants from portland cement plants. *Portland Cement Asso. v Ruckelshaus* (1973) 158 App DC 308, 486 F.2d 375, 3 ELR 20642, cert den 417 US 921, 41 L Ed 2d 226, 94 S Ct 2628 and later app 168 App DC 248, 513 F.2d 506, 5 ELR 20341, cert den 423 US 1025, 46 L Ed 2d 399, 96 S Ct 469, reh den 423 US 1092, 47 L Ed 2d 104, 96 S Ct 889 and (disagreed with by *Eagle-Picher Industries, Inc. v United States Environmental Protection Agency*, 245 App DC 196, 759 F.2d 922, 15 ELR 20460, later proceeding (App DC) 759 F.2d 905, 15 ELR 20467, later proceeding (App DC) 822 F.2d 132).

No NEPA impact statement need be filed by EPA Administrator in making determinations for promulgation of air quality standards. *Essex Chemical Corp. v Ruckelshaus* (1973) 158 App DC 360, 486 F.2d 427, 3 ELR 20732, cert den 416 US 969, 40 L Ed 2d 558, 94 S Ct 1991.

### 11. New source waivers

Under 42 USCS § 7411(j), operator of new source may apply for innovative technology waiver of new source performance standards after putting into operation new source for which waiver is sought. *Central Illinois Public Service Co. v United States Environmental Protection Agency* (1979, CA7) 594 F.2d 636, 9 ELR 20226.

### 12. Applicability of regulations

EPA's 1974 regulation providing that, for purposes of new source performance standards, "reconstruction" of existing facility would occur irrespective of any change in emission rate upon replacement of substantial portion of existing facility's components, is not applicable to defendant's asphalt concrete facility due to defendant's replacement of filter bag house with electrostatic precipitator, where regulation did not become effective until 17 months after defendant's improvements were completed. *United States v Narragansett Improv. Co.* (1983, DC RI) 571 F Supp 688, 14 ELR 20168.

## § 7412. National emission standards for hazardous air pollutants

### (a) Definitions. For purposes of this section—

(1) The term "hazardous air pollutant" means an air pollutant to which no ambient air quality standard is applicable and which in the judgment of the Administrator causes, or contributes to, air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

(2) The term "new source" means a stationary source the construction or modification of which is commenced after the Administrator proposes regulations under this section establishing an emission standard which will be applicable to such source.

(3) The terms "stationary source", "modification", "owner or operator" and "existing source" shall have the same meaning as such terms have under section 111(a) [42 USCS § 7411(a)].

(b) **List of hazardous air pollutants; emission standards; pollution control techniques.** (1)(A) The Administrator shall, within 90 days after the date of enactment of the Clean Air Amendments of 1970 [enacted Dec. 31, 1970], publish (and shall from time to time thereafter revise) a list which includes each hazardous air pollutant for which he intends to establish an emission standard under this section.

(B) Within 180 days after the inclusion of any air pollutant in such list, the Administrator shall publish proposed regulations establishing emission standards for such pollutant together with a notice of a public hearing within thirty days. Not later than 180 days after such publication, the Administrator shall prescribe an emission standard for such pollutant, unless he finds, on the basis of information presented at such hearings, that such pollutant clearly is not a hazardous air pollutant. The Administrator shall establish any such standard at the level which in his judgment provides an ample margin of safety to protect the public health from such hazardous air pollutant.

(C) Any emission standard established pursuant to this section shall become effective upon promulgation.

(2) The Administrator shall, from time to time, issue information on pollution control techniques for air pollutants subject to the provisions of this section.

(c) **Prohibited acts; exemption.** (1) After the effective date of any emission standard under this section—

(A) no person may construct any new source or modify any existing source which, in the Administrator's judgment, will emit an air pollutant to which such standard applies unless the Administrator finds that such source if properly operated will not cause emissions in violation of such standard, and

(B) no air pollutant to which such standard applies may be emitted from any stationary source in violation of such standard, except that in the case of an existing source—

(i) such standard shall not apply until 90 days after its effective date, and

(ii) the Administrator may grant a waiver permitting such source a period of up to two years after the effective date of a standard to comply with the standard, if he finds that such period is necessary for the installation of controls and that steps will be taken during

nce for station-  
nts such as the  
for emission of  
ent plants. Port-  
aus (1973) 158  
LR 20642, cert  
6, 94 S Ct 2628  
513 F2d 506, 5  
25, 46 L Ed 2d  
5 1092, 47 L Ed  
agreed with by  
United States  
y, 245 App DC  
later proceed-  
LR 20467, later  
2).

eed be filed by  
determinations  
standards. Essex  
1973) 158 App  
20732, cert den  
5 Ct 1991.

erator of new  
ive technology  
ance standards  
ew source for  
Illinois Public  
ronmental Pro-  
14 F2d 636, 9

ding that, for  
nce standards,  
ty would occur  
ssion rate upon  
on of existing  
icable to defen-  
due to defen-  
use with elect-  
ation did not  
s after defen-  
leted. United  
o. (1983, DC  
.8.

### lutants

it to which  
e judgment  
which may  
ality or an  
less.

the period of the waiver to assure that the health of persons will be protected from imminent endangerment.

(2) The President may exempt any stationary source from compliance with paragraph (1) for a period of not more than two years if he finds that the technology to implement such standards is not available and the operation of such source is required for reasons of national security. An exemption under this paragraph may be extended for one or more additional periods, each period not to exceed two years. The President shall make a report to Congress with respect to each exemption (or extension thereof) made under this paragraph.

(d) **State implementation and enforcement.** (1) Each State may develop and submit to the Administrator a procedure for implementing and enforcing emission standards for hazardous air pollutants for stationary sources located in such State. If the Administrator finds the State procedure is adequate, he shall delegate to such State any authority he has under this Act to implement and enforce such standards.

(2) Nothing in this subsection shall prohibit the Administrator from enforcing any applicable emission standard under this section.

(e) **Design, equipment, work practice, and operational standards.** (1) For purposes of this section, if in the judgment of the Administrator, it is not feasible to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, he may instead promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in his judgment is adequate to protect the public health from such pollutant or pollutants with an ample margin of safety. In the event the Administrator promulgates a design or equipment standard under this subsection, he shall include as part of such standard such requirements as will assure the proper operation and maintenance of any such element of design or equipment.

(2) For the purpose of this subsection, the phrase "not feasible to prescribe or enforce an emission standard" means any situation in which the Administrator determines that (A) a hazardous pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations.

(3) If after notice and opportunity for public hearing, any person establishes to the satisfaction of the Administrator that an alternative means of emission limitation will achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such air pollutant achieved under the requirements of paragraph (1), the Administrator shall permit the use of such alternative by the source for purposes of compliance with this section with respect to such pollutant.

A.  
  
Ju  
L.  
§§  
P.

(4) Any standard promulgated under paragraph (1) shall be promulgated in terms of an emission standard whenever it becomes feasible to promulgate and enforce such standard in such terms.

(5) Any design, equipment, work practice, or operational standard, or any combination thereof, described in this subsection shall be treated as an emission standard for purposes of the provisions of this Act (other than the provisions of this subsection).

(July 14, 1955, ch 360, Title I, Part A, § 112, as added Dec. 31, 1970, P. L. 91-604, § 4(a), 84 Stat. 1685; Aug. 7, 1977, P. L. 95-95, Title I, §§ 109(d)(2), 110, Title IV, § 401(c), 91 Stat. 701, 703, 791; Nov. 9, 1978, P. L. 95-623, § 13(b), 92 Stat. 3458.)

**HISTORY; ANCILLARY LAWS AND DIRECTIVES**

**References in text:**

"This Act", referred to in this section, is Act July 14, 1955, ch 360, 69 Stat. 322, as generally amended by Act Dec. 17, 1963, P. L. 88-206, 77 Stat. 392, which appeared as 42 USCS §§ 1857 et seq. prior to its general amendment by Act Aug. 7, 1977, P. L. 95-95, 91 Stat. 685, and now appears as 42 USCS §§ 7401 et seq.

**Explanatory notes:**

This section formerly appeared as 42 USCS § 1857c-7.

**Amendments:**

1977. Act Aug. 7, 1977 (effective upon enactment as provided by § 406(d) of such Act, which appears as 42 USCS § 7401 note) substituted subsec. (a)(1) for one which read: The term 'hazardous air pollutant' means an air pollutant to which no ambient air quality standard is applicable and which in the judgment of the Administrator may cause, or contribute to, an increase in mortality or an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness."; in subsec. (d)(1), deleted "(except with respect to stationary sources owned or operated by the United States)" following "enforce such standards; and added subsec. (e).

1978. Act Nov. 9, 1978, in subsec. (e), added para. (5).

**Other provisions:**

**Pending actions and proceedings.** Act Aug. 7, 1977, P. L. 95-95, Title IV, § 406(a), 91 Stat. 795, which appears as 42 USCS § 7401 note, provided that suits, actions, and other proceedings lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under Act July 14, 1955, ch 360, 69 Stat. 322, which appears generally as 42 USCS §§ 7401 et seq. (for full classification of such Act, consult USCS Tables volumes), as in effect prior to the enactment of Act Aug. 7, 1977 should not abate by reason of the taking effect of Act Aug. 7, 1977.

**Modification or rescission of rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, and other actions.** Act Aug. 7, 1977, P. L. 95-95, Title IV, § 406(b), 91 Stat. 795, which

Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

(32) The term "State authority" means the agency established or designated under section 4007 [42 USCS § 6947].

(33) The term "storage", when used in connection with hazardous waste, means the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste.

(34) The term "treatment", when used in connection with hazardous waste, means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.

(35) The term "virgin material" means a raw material, including previously unused copper, aluminum, lead, zinc, iron, or other metal or metal ore, any undeveloped resource that is, or with new technology will become, a source of raw materials.

(36) The term "used oil" means any oil which has been—

(A) refined from crude oil,

(B) used, and

(C) as a result of such use, contaminated by physical or chemical impurities.

(37) The term "recycled oil" means any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes oil which is re-refined, reclaimed, burned, or reprocessed.

(38) The term "lubricating oil" means the fraction of crude oil which is sold for purposes of reducing friction in any industrial or mechanical device. Such term includes re-refined oil.

(39) The term "re-refined oil" means used oil from which the physical and chemical contaminants acquired through previous use have been removed through a refining process.

(Oct. 20, 1965, P. L. 89-272, Title II, Subtitle A, § 1004, as added Oct. 21, 1976, P. L. 94-580, § 2, 90 Stat. 2798; Nov. 8, 1978, P. L. 95-609, § 7(b), 92 Stat. 3081; Oct. 15, 1980, P.L. 96-463, § 3, 94 Stat. 2055; Oct. 21, 1980, P. L. 96-482, § 2, 94 Stat. 2334.)

#### HISTORY: ANCILLARY LAWS AND DIRECTIVES

##### Explanatory notes:

The bracketed "." was inserted in para. (8), as punctuation probably intended by Congress in amendment by Act Nov. 8, 1978.

Similar provisions  
revision of the Act  
P. L. 94-580, 90 Sta

##### Amendments:

1978, Act Nov. 8,  
1979, such term do  
subtitle D of this  
land": in para. (10  
tuted new para. (1  
management facilit  
component thereof,  
conservation, and  
including hazardous  
facilities generating

1980, Act Oct. 15,  
Act Oct. 21, 1980 s  
'open dump' means  
sanitary landfill wi  
para. (19) for one  
material which has

Transfer of function  
Enforcement functi  
ronmental Protecti  
conservation and re  
with respect to pre  
transportation syst  
transferred to the F  
Alaska Natural Ga  
of date of initial o  
System, see Reorg  
§§ 102(a), 203(a),  
which appears as 5

This section is referred

##### Am Jur:

16 Am Jur 2d, Con  
61A Am Jur 2d, E  
265, 274.

#### § 6904. Government

(a) Interstate cooperati  
seq.] to be carried out  
and provisions applica  
such agencies and reg



States under the Magnuson Fishery Conservation and Management Act [16 USCS §§ 1801 et seq.], and (B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

(9) The term "facility" means (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

(10) The term "federally permitted release" means (A) discharges in compliance with a permit under section 402 of the Federal Water Pollution Control Act [33 USCS § 1342], (B) discharges resulting from circumstances identified and reviewed and made part of the public record with respect to a permit issued or modified under section 402 of the Federal Water Pollution Control Act [33 USCS § 1342] and subject to a condition of such permit, (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the Federal Water Pollution Control Act [33 USCS § 1342], which are caused by events occurring within the scope of relevant operating or treatment systems, (D) discharges in compliance with a legally enforceable permit under section 404 of the Federal Water Pollution Control Act [42 USCS § 1344] (E) releases in compliance with a legally enforceable final permit issued pursuant to section 3005(a) through (d) of the Solid Waste Disposal Act [42 USCS § 6925(a)-(d)] from a hazardous waste treatment, storage, or disposal facility when such permit specifically identifies the hazardous substances and makes such substances subject to a standard of practice, control procedure or bioassay limitation or condition, or other control on the hazardous substances in such releases, (F) any release in compliance with a legally enforceable permit issued under section 102 of [or] section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 [33 USCS § 1412 or 1413], (G) any injection of fluids authorized under Federal underground injection control programs or State programs submitted for Federal approval (and not disapproved by the Administrator of the Environmental Protection Agency) pursuant to part C of the Safe Drinking Water Act [42 USCS §§ 300h et seq.], (H) any emission into the air subject to a permit or control regulation under section 111, section 112, title I part C, title I part D, or State implementation plans submitted in accordance with section 110 of the Clean Air Act [42 USCS §§ 7411, 7412, 7470 et seq., 7501 et seq., or 7410] (and not disapproved by the Administrator of the Environmental Protection Agency), including any schedule or waiver granted, promulgated, or approved under these sections, (I) any injection of fluids or other materials authorized under applicable State law (i) for the purpose of

stimulating or treating wells for the production of crude oil, natural gas, or water, (ii) for the purpose of secondary, tertiary, or other enhanced recovery of crude oil or natural gas, or (iii) which are brought to the surface in conjunction with the production of crude oil or natural gas and which are reinjected, (J) the introduction of any pollutant into a publicly owned treatment works when such pollutant is specified in and in compliance with applicable pretreatment standards of section 307(b) or (c) of the Clean Water Act [33 USCS § 1317(b) or (c)] and enforceable requirements in a pretreatment program submitted by a State or municipality for Federal approval under section 402 of such Act [33 USCS § 1342], and (K) any release of source, special nuclear, or byproduct material, as those terms are defined in the Atomic Energy Act of 1954 [42 USCS §§ 2011 et seq.], in compliance with a legally enforceable license, permit, regulation, or order issued pursuant to the Atomic Energy Act of 1954 [42 USCS §§ 2011 et seq.].

(11) The term "Fund" or "Trust Fund" means the Hazardous Substance Superfund established by section 9507 of the Internal Revenue Code of 1986 [26 USCS § 9507].

(12) The term "ground water" means water in a saturated zone or stratum beneath the surface of land or water.

(13) The term "guarantor" means any person, other than the owner or operator, who provides evidence of financial responsibility for an owner or operator under this Act.

(14) The term "hazardous substance" means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act [33 USCS § 1321(b)(2)(A)], (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of this Act [42 USCS § 9602], (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [42 USCS § 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [33 USCS § 1317(a)], (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 USCS § 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act [15 USCS § 2606]. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

(15) The term "navigable waters" or "navigable waters of the United States" means the waters of the United States, including the territorial seas.

(16) The term "natural resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the fishery conservation zone established by the Magnuson Fishery Conservation and Management Act [16 USCS §§ 1801 et seq.]), any State or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.

(17) The term "offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

(18) The term "onshore facility" means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land or nonnavigable waters within the United States.

(19) The term "otherwise subject to the jurisdiction of the United States" means subject to the jurisdiction of the United States by virtue of United States citizenship, United States vessel documentation or numbering, or as provided by international agreement to which the United States is a party.

→ (20)(A) The term "owner or operator" means (i) in the case of a vessel, any person owning, operating, or chartering by demise, such vessel, (ii) in the case of an ~~onshore facility~~ or ~~an offshore facility~~, any person owning or operating such facility, and (iii) in the case of any facility, title or control of which was conveyed due to bankruptcy, foreclosure, tax delinquency, abandonment, or similar means to a unit of State or local government, any person who owned, operated, or otherwise controlled activities at such facility immediately beforehand. Such term does not include a person, who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect his security interest in the vessel or facility.

⊥ (B) In the case of a hazardous substance which has been accepted for transportation by a common or contract carrier and except as provided in section 107(a)(3) or (4) of this Act [42 USCS § 9607(a)(3) or (4)], (i) the term "owner or operator" shall mean such common carrier or other bona fide for hire carrier acting as an independent contractor during such transportation, (ii) the shipper of such hazardous substance shall not be considered to have caused or contributed to any release during such transportation which resulted solely from circumstances or conditions beyond his control.

(C) In the case of a hazardous substance which has been delivered by a common or contract carrier to a disposal or treatment facility and except as provided in section 107(a)(3) or (4) [42 USCS § 9607(a)(3) or (4)] (i) the term "owner or operator" shall not include such

common or contract carrier, and (ii) such common or contract carrier shall not be considered to have caused or contributed to any release at such disposal or treatment facility resulting from circumstances or conditions beyond its control.

(D) The term "owner or operator" does not include a unit of State or local government which acquired ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function as sovereign. The exclusion provided under this paragraph shall not apply to any State or local government which has caused or contributed to the release or threatened release of a hazardous substance from the facility, and such a State or local government shall be subject to the provisions of this Act in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 107 [42 USCS § 9607].

(21) The term "person" means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, commission, political subdivision of a State, or any interstate body.

(22) The term "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes (A) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, ~~or pipeline pumping station engine,~~ (C) ~~release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 [42 USCS §§ 2011 et seq.], if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act [42 USCS §§ 2210], or, for the purposes of section 104 of this title [42 USCS § 9604] or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978 [42 USCS § 7912(a) or 7942(a)], and (D) the normal application of fertilizer.~~

(23) The terms "remove" or "removal" means the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such

JUNI-DAU LAW LIBRARY

OK delete

↓

other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under section 104(b) of this Act [42 USCS § 9604(b)], and any emergency assistance which may be provided under the Disaster Relief Act of 1974 [42 USCS §§ 5121 et seq.].

(24) The terms "remedy" or "remedial action" means [mean] those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, neutralization, cleanup of released hazardous substances and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, onsite treatment or incineration, provision of alternative water supplies, and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health or welfare; the term includes offsite transport and offsite storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials.

(25) The terms "respond" or "response" means [mean] remove, removal, remedy, and remedial action, all such terms (including the terms "removal" and "remedial action") include enforcement activities related thereto.

(26) The terms "transport" or "transportation" means the movement of a hazardous substance by any mode, including pipeline (as defined in the Pipeline Safety Act), and in the case of a hazardous substance which has been accepted for transportation by a common or contract carrier, the term "transport" or "transportation" shall include any stoppage in transit which is temporary, incidental to the transportation movement, and at the ordinary operating convenience of a common or contract carrier, and any such stoppage shall be considered as a continuity of movement and not as the storage of a hazardous substance.

(27) The terms "United States" and "State" include the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction.

(28) The term "vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

(29) The terms "disposal", "hazardous waste", and "treatment" shall have the meaning [meanings] provided in section 1004 of the Solid Waste Disposal Act [42 USCS §§ 6903].

(30) The terms "territorial sea" and "contiguous zone" shall have the meaning [meanings] provided in section 502 of the Federal Water Pollution Control Act [33 USCS § 1362].

(31) The term "national contingency plan" means the national contingency plan published under section 311(c) of the Federal Water Pollution Control Act [33 USCS § 1321(c)] or revised pursuant to section 105 of this Act [42 USCS § 9605].

(32) The terms "liable" or "liability" under this title [42 USCS §§ 9601 et seq.] shall be construed to be the standard of liability which obtains under section 311 of the Federal Water Pollution Control Act [33 USCS § 1321].

(33) The term "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring; except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of paragraph (14) and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

(34) The term "alternative water supplies" includes, but is not limited to, drinking water and household water supplies.

(35)(A) The term "contractual relationship", for the purpose of section 107(b)(3) [42 USCS § 9607(b)(3)], includes, but is not limited to, land contracts, deeds or other instruments transferring title or possession, unless the real property on which the facility concerned is located was acquired by the defendant after the disposal or placement of the hazardous substance on, in, or at the facility, and one or more of the

circumstances described in clause (i), (ii), or (iii) is also established by the defendant by a preponderance of the evidence:

(i) At the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility.

(ii) The defendant is a government entity which acquired the facility by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation.

(iii) The defendant acquired the facility by inheritance or bequest.

In addition to establishing the foregoing, the defendant must establish that he has satisfied the requirements of section 107(b)(3)(a) and (b) [42 USCS § 9607(b)(3)(a) and (b)].

(B) To establish that the defendant had no reason to know, as provided in clause (i) of subparagraph (A) of this paragraph, the defendant must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability. For purposes of the preceding sentence the court shall take into account any specialized knowledge or experience on the part of the defendant, the relationship of the purchase price to the value of the property if uncontaminated, commonly known or reasonably ascertainable information about the property, the obviousness of the presence or likely presence of contamination at the property, and the ability to detect such contamination by appropriate inspection.

(C) Nothing in this paragraph or in section 107(b)(3) [42 USCS § 9607(b)(3)] shall diminish the liability of any previous owner or operator of such facility who would otherwise be liable under this Act. Notwithstanding this paragraph, if the defendant obtained actual knowledge of the release or threatened release of a hazardous substance at such facility when the defendant owned the real property and then subsequently transferred ownership of the property to another person without disclosing such knowledge, such defendant shall be treated as liable under section 107(a)(1) [42 USCS § 107(a)(1)] and no defense under section 107(b)(3) [42 USCS § 107(b)(3)] shall be available to such defendant.

(D) Nothing in this paragraph shall affect the liability under this Act of a defendant who, by any act or omission, caused or contributed to the release or threatened release of a hazardous substance which is the subject of the action relating to the facility.

(36) The term "Indian tribe" means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and

services provided by the United States to Indians because of their status as Indians.

(37)(A) The term "service station dealer" means any person—

(i) who owns or operates a motor vehicle service station, filling station, garage, or similar retail establishment engaged in the business of selling, repairing, or servicing motor vehicles, where a significant percentage of the gross revenue of the establishment is derived from the fueling, repairing, or servicing of motor vehicles, and

(ii) who accepts for collection, accumulation, and delivery to an oil recycling facility, recycled oil that (I) has been removed from the engine of a light duty motor vehicle or household appliances by the owner of such vehicle or appliances, and (II) is presented, by such owner, to such person for collection, accumulation, and delivery to an oil recycling facility.

(B) For purposes of section 114(c) [42 USCS § 9614(c)], the term "service station dealer" shall, notwithstanding the provisions of subparagraph (A), include any government agency that establishes a facility solely for the purpose of accepting recycled oil that satisfies the criteria set forth in subclauses (I) and (II) of subparagraph (A)(ii), and, with respect to recycled oil that satisfies the criteria set forth in subclauses (I) and (II), owners or operators of refuse collection services who are compelled by State law to collect, accumulate, and deliver such oil to an oil recycling facility.

(C) The President shall promulgate regulations regarding the determination of what constitutes a significant percentage of the gross revenues of an establishment for purposes of this paragraph.

(38) The term "incineration vessel" means any vessel which carries hazardous substances for the purpose of incineration of such substances, so long as such substances or residues of such substances are on board.

(Dec. 11, 1980, P. L. 96-510, Title I, § 101, 94 Stat. 2767; Dec. 22, 1980, P. L. 96-561, Title II, § 238(b), 94 Stat. 3300; Oct. 17, 1986, P. L. 99-499, Title I, §§ 101, 114(b), 127(a), Title V, Part I, § 517(c)(2), 100 Stat. 1615, 1652, 1692, 1774.)

#### HISTORY; ANCILLARY LAWS AND DIRECTIVES

##### References in text:

"This Act", referred to in this section, is Act Dec. 11, 1980, P. L. 96-510, 94 Stat. 2767, commonly known as the "Comprehensive Environmental Response, Compensation, and Liability Act of 1980", which appears generally as 42 USCS §§ 9601 et seq. For full classification of such Act, consult USCS Tables volumes.

"The Safe Drinking Water Act", referred to in this section, is Act Dec. 16, 1974, P. L. 93-253, 88 Stat. 1660, which appears generally as 42 USCS § 300f et seq. For full classification of such Act, consult USCS Tables volumes.

JUNEAU LAW LIBRARY

## POLLUTION INSURANCE

- 9671. Definitions
- 9672. State laws; scope of title
  - (a) State laws
  - (b) Scope of title
- 9673. Risk retention groups
  - (a) Exemption
  - (b) Exceptions
  - (c) Application of exemptions
  - (d) Agents or brokers
- 9674. Purchasing groups
  - (a) Exemption
  - (b) Application of exemptions
  - (c) Agents or brokers
- 9675. Applicability of securities laws
  - (a) Ownership interests
  - (b) Investment Company Act
  - (c) Blue sky law

---

**HAZARDOUS SUBSTANCES RELEASES, LIABILITY,  
COMPENSATION**

**§ 9601. Definitions**

For purpose of this title [42 USCS §§ 9601 et seq.]—

- (1) The term “act of God” means an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.
- (2) The term “Administrator” means the Administrator of the United States Environmental Protection Agency.
- (3) The term “barrel” means forty-two United States gallons at sixty degrees Fahrenheit.
- (4) The term “claim” means a demand in writing for a sum certain.
- (5) The term “claimant” means any person who presents a claim for compensation under this Act.
- (6) The term “damages” means damages for injury or loss of natural resources as set forth in section 107(a) or 111(b) of this Act [42 USCS § 9607(a) or 9611(b)].
- (7) The term “drinking water supply” means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act, or as drinking water by one or more individuals.
- (8) The term “environment” means (A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United

y for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and (C) the inspection and supervision of the process of carrying out the project to completion.

A) The term "demonstration" means the initial exhibition of a new technology process or practice or a significantly new combination or use of technologies, processes or practices, subsequent to the development stage, for the purpose of proving technological feasibility and cost effectiveness.

B) The term "disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste on or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

C) The term "Federal agency" means any department, agency, or other instrumentality of the Federal Government, any independent agency or establishment of the Federal Government including any Government corporation, and the Government Printing Office.

D) The term "hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—

(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

E) The term "hazardous waste generation" means the act or process of producing hazardous waste.

F) The term "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes.

G) For purposes of Federal financial assistance (other than rural communities assistance), the term "implementation" does not include acquisition, leasing, construction, or modification of facilities or equipment or the acquisition, leasing, or improvement of land[.]

H) The term "intermunicipal agency" means an agency established by two or more municipalities with responsibility for planning or administration of solid waste.

I) The term "interstate agency" means an agency of two or more municipalities in different States, or an agency established by two or

primary clean-up costs in-  
 site site, under CERCLA  
 (q.), presented exceptional  
 use of extraordinary  
 since order will deprive  
 have judge decide basic  
 (1987, CA6 Ohio) 816  
 659, 17 ELR 20663.

(b) authorizes fines for  
 ul," which traditionally  
 d faith, statute allows  
 ay was in good faith.  
 ggett (1986, CA2 NY)  
 001, 87 A.L.R. Fed 205.  
 CERCLA (42 USCS  
 apply to party who can  
 t cause exists for non-  
 rative order, and such  
 er in enforcement ac-  
 recovery action under  
 is narrowly construed  
 ations in which alleged  
 faith asserts reasonable  
 y rejected by court.  
 States Environmental  
 CD Cal) 599 F Supp  
 ary judgment den, in  
 r, in part (CD Cal)  
 0377.

proper under Compre-  
 nse, Compensation,  
 S §§ 9601 et seq.) in  
 re of remedy, and  
 States v Conservation  
 Mo) 619 F Supp 162,  
 ding (CA8) 770 F2d  
 15 ELR 20774, on  
 Supp 391, 17 ELR  
 Mo) 653 F Supp  
 Mo) 661 F Supp  
 Mo) 681 F Supp  
 y multiple cases as  
 l. Co. v Chateaugay  
 and (disagreed with  
 hio) 816 F2d 1083,  
 20663) and (disap-  
 rtheastern Pharma-  
 A8 Mo) 810 F2d  
 with by Maryland  
 (CA4) 822 F2d  
 (US) 98 L Ed 2d  
 den (US) 98 L Ed

"owner" and "operator"

§ 9607. Liability

(a) Covered persons; scope; recoverable costs and damages; interest rate; "comparable maturity" date. Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in subsection (b) of this section—

- (1) the owner and operator of a vessel or a facility,
- (2) any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of,
- (3) any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances, and
- (4) any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance shall be liable for—

- (A) all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan;
- (B) any other necessary costs of response incurred by any other person consistent with the national contingency plan;
- (C) damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release; and
- (D) the costs of any health assessment or health effects study carried out under section 104(i) [42 USCS § 9604(i)].

The amounts recoverable in an action under this section shall include interest on the amounts recoverable under subparagraphs (A) through (D). Such interest shall accrue from the later of (i) the date payment of a specified amount is demanded in writing, or (ii) the date of the expenditure concerned. The rate of interest on the outstanding unpaid balance of the amounts recoverable under this section shall be the same rate as is specified for interest on investments of the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 [26 USCS §§ 9501 et seq.]. For purposes of applying such amendments to interest under this subsection, the term "comparable maturity" shall be determined with reference to the date on which interest accruing under this subsection commences.

(b) Defenses. There shall be no liability under subsection (a) of this section for a person otherwise liable who can establish by a preponderance of the

evidence that the release or threat of release of a hazardous substance and the damages resulting therefrom were caused solely by—

- (1) an act of God;
- (2) an act of war;
- (3) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a) he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or
- (4) any combination of the foregoing paragraphs.

(c) **Determination of amounts.** (1) Except as provided in paragraph (2) of this subsection, the liability under this section of an owner or operator or other responsible person for each release of a hazardous substance or incident involving release of a hazardous substance shall not exceed—

(A) for any vessel, other than an incineration vessel, which carries any hazardous substance as cargo or residue, \$300 per gross ton, or \$5,000,000, whichever is greater;

(B) for any other vessel, other than an incineration vessel, \$300 per gross ton, or \$500,000, whichever is greater;

(C) for any motor vehicle, aircraft, pipeline (as defined in the Hazardous Liquid Pipeline Safety Act of 1979 [49 USCS §§ 2001 et seq.]), or rolling stock, \$50,000,000 or such lesser amount as the President shall establish by regulation, but in no event less than \$5,000,000 (or, for releases of hazardous substances as defined in section 101(14)(A) of this title [42 USCS §§ 9601(14)(A)] into the navigable waters, \$8,000,000). Such regulations shall take into account the size, type, location, storage, and handling capacity and other matters relating to the likelihood of release in each such class and to the economic impact of such limits on each such class; or

(D) for any incineration vessel or any facility other than those specified in subparagraph (C) of this paragraph, the total of all costs of response plus \$50,000,000 for any damages under this title [42 USCS §§ 9601 et seq.].

(2) Notwithstanding the limitations in paragraph (1) of this subsection, the liability of an owner or operator or other responsible person under this section shall be the full and total costs of response and damages, if (A)(i) the release or threat of release of a hazardous substance was the result of willful misconduct or willful negligence within the privity or knowledge of such person, or (ii) the primary cause of the release was a

violati  
safety,  
person  
tance  
respon  
regula  
States  
United  
deeme  
(3) If  
hazard  
remov  
section  
may be  
least e  
incurre  
The Pr  
person  
any co  
Act [4  
pursua

(d) Rend  
paragra  
§§ 960  
omittec  
dance  
of an o  
inciden  
ment a  
thereof  
as the r  
(2) Stat  
liable u  
a resul  
release  
from a  
preclud  
intentic  
purpose  
duct sh  
(3) Sav  
person  
subsecti  
release  
(e) Indem  
gation

Cite as 572 F.Supp. 802 (1983)

States derives its authority for reimbursement from the specific Act of Congress passed in the exercise of a constitutional<sup>4</sup> function or power, its rights should also derive from federal common law. *United States v. Kimbell Foods, Inc.*, 440 U.S. 715, 726, 99 S.Ct. 1448, 1457, 59 L.Ed.2d 711 (1979); *Lake Misere*, 412 U.S. at 593, 93 S.Ct. at 2397; *Standard Oil*, 332 U.S. at 306, 67 S.Ct. at 1607; *Clearfield Trust Co. v. United States*, 318 U.S. 363, 366, 63 S.Ct. 573, 574, 87 L.Ed. 838 (1943). In conclusion, the rights, liabilities and responsibilities of the United States under 42 U.S.C. § 9607 are governed by a federal rule of decision. *Id.*

[5, 6] The question now becomes whether the scope of liability should be interpreted according to the incorporated state law of the forum state or a federally created uniform law. This determination is a matter of judicial policy dependent upon a variety of considerations relevant to the nature of the specific governmental interests and to the effects upon them of applying state law. *Kimbell*, 440 U.S. at 728, 99 S.Ct. at 1458; *Standard Oil*, 332 U.S. at 310, 67 S.Ct. at 1609. Federal programs that by their nature are and must be uniform in character throughout the nation necessitate the formulation of federal rules of decision. *Kimbell*, 440 U.S. at 728, 99 S.Ct. at 1458; *Standard Oil*, 332 U.S. at 311, 67 S.Ct. at 1609-1610. CERCLA is such a federal program. Representative Florio explained: "To insure the development of a uniform rule of law, and to discourage business dealing in hazardous substances from locating primarily in states with more lenient laws, the bill will encourage the further development of a Federal common law in this area." 126 Cong.Rec. H11787 (Dec. 3, 1980). CERCLA was designed to complement existing federal regulations by providing emergency funds for the clean-up of inactive or abandoned hazardous waste sites as well as illegal releases, such as "midnight dumping," located across the nation in vir-

tually every state. *Id.* at H11801. Exposure to these substances poses a threat to the nation's national resources and to public health. A liability standard which varies in the different forum states would undermine the policies of the statute by encouraging illegal dumping in states with lax liability laws. *Id.* at H11787; See Report to Congress, *Injuries and Damages From Hazardous Wastes—Analysis and Improvement of Legal Remedies*, 97th Cong., 2d Sess. (1982). There is no good reason why the United States' right to reimbursement should be subjected to the needless uncertainty and subsequent delay occasioned by diversified local disposition when this matter is appropriate for uniform national treatment.

[7, 8] Finding, then, that the delineation of a uniform federal rule of decision is consistent with the legislative history and policies of CERCLA and finding further that no compelling local interests mandate the incorporation of state law, a determination of the content of the federal rule is the final step in the analysis. Federal statutes dealing with similar subject matter are a prime repository of federal policy on a subject and a starting point for ascertaining federal common law. *Illinois v. City of Milwaukee*, 406 U.S. 91, 91, 92 S.Ct. 1385, 1385, 31 L.Ed.2d 712 (1972). Neither statutes nor decisions of a particular state can be conclusive when fashioning federal law.

The Federal Water Pollution Control Act (FWPCA) was codified pursuant to the Congressional policy prohibiting oil or hazardous substance discharges into navigable waters of the United States. 33 U.S.C. § 1321(b)(1). The owner or operator of a vessel which illegally discharges may be jointly and severally liable to the government for its expenses in cleaning up the substances. *Id.* at § 1321(b)(2)(B)(ii); *United States v. M/V Big Sam*, 681 F.2d 432, 439 (5th Cir.1982); *Tex-Tow*, 589 F.2d at 1314; *In Re Berkley Curtis Bay Co.*, 557 F.Supp. 335, 339 (S.D.N.Y.1983); *aff'd in part and rem in part*, 697 F.2d 288 (2d

ing the territory and other property belonging to the United States. . . ."

<sup>4</sup> See U.S. Const., Art. IV, § 3, cl. 2: "The Congress shall have power to dispose of and make all needful rules and regulations respect-

Cir.1983); *United States v. Hollywood Marine, Inc.*, 519 F.Supp. 688, 692 (S.D.Tex. 1981), *rev'd on other grounds*, 625 F.2d 524 (5th Cir.1980). In fact, the pertinent language of the two statutes addressing liability and contribution is strikingly similar. Compare 33 U.S.C. § 1321(f)(1) with 42 U.S.C. § 9607(a), (b), and 33 U.S.C. § 1321(h) with 42 U.S.C. § 9607(e)(2). While the complementary policies and comparable language of FWPCA and CERCLA are persuasive points, a blanket adoption of the joint and several liability standard of § 1321 would be inconsistent with the legislative history of CERCLA.

Typically, as in this case, there will be numerous hazardous substance generators or transporters who have disposed of wastes at a particular site. The term joint and several liability was deleted from the express language of the statute in order to avoid its universal application to inappropriate circumstances. An examination of the common law reveals that when two or more persons acting independently caused a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he has himself caused. Restatement (Second) of Torts, §§ 433A, 881 (1976); Prosser, *Law of Torts* (4th ed. 1971), pp. 313-314; *Edmonds v. Compagnie Generale Transatlantique*, 443 U.S. 256, 260, 99 S.Ct. 2753, 2756, 61 L.Ed.2d 521 (1979); See *Michie v. Great Lakes Steel Division, National Steel Corp.*, 495 F.2d 213 (6th Cir. 1974); See, e.g., *City of Valparaiso v. Moffit*, 12 Ind.App. 250, 255, 39 N.E. 909 (1895) (two independent polluters of a stream, although not joint tortfeasors, are jointly and severally liable for damages). But where two or more persons cause a single and indivisible harm, each is subject to liability for the entire harm. Restatement (Second) of Torts, § 875; Prosser at 315-316. Furthermore, where the conduct of two or more persons liable under § 9607 has combined to violate the statute, and one or more of the defendants seeks to limit his liability on the ground that the entire harm is capable of apportionment, the burden of

proof as to apportionment is upon each defendant. *Id.* at § 433B; *Id.* These rules clearly enumerate the analysis to be undertaken when applying 42 U.S.C. § 9607 and are most likely to advance the legislative policies and objectives of the Act.

### C. Summary Judgment

[9] The defendants, under section 1.80 of the Manual for Complex Litigation, have moved for an early determination that they are not jointly and severally liable for the reimbursement of clean-up costs at Chem-Dyne. The proposition of the defendants is that because joint and several liability is not expressly provided for in CERCLA, there is no basis for its imposition. We find this to be an incorrect interpretation of the Act, and will apply the law under 42 U.S.C. § 9607 as delineated in the prior discussion. The Motion of defendants is essentially a Motion for a Partial Summary Judgment on the issue of joint and several liability. Fed. R.Civ.P. 56; See, *In Re Beef Industry Antitrust Litigation*, 600 F.2d 1148, 1170 (5th Cir.1979), *cert. denied sub nom., Safeway Stores, Inc. v. Meat Price Investigators Ass'n*, 449 U.S. 905, 101 S.Ct. 280, 66 L.Ed.2d 137 (1980).

The summary judgment standard in this Circuit is a stringent one. Rule 56(c) permits the Court to grant summary judgment when there is no genuine issue of material fact and when the moving party is entitled to judgment as a matter of law. *Sartor v. Arkansas Natural Gas Corp.*, 321 U.S. 620, 64 S.Ct. 724, 88 L.Ed. 967 (1944); *Tee-Pak, Inc. v. St. Regis Paper Co.*, 491 F.2d 1193, 1195 (6th Cir.1974). In deciding a Motion for Summary Judgment, the Court must construe evidence in a light least favorable to the movant and most favorable to the opposing party. *Bohn Aluminum & Brass Corp. v. Storm King Corp.*, 303 F.2d 425, 427 (6th Cir.1962). The Court must exercise extreme caution in disposing of complex cases on a Motion for Summary Judgment. *S.J. Groves & Sons Co. v. Ohio Turnpike Commission*, 315 F.2d 235, 237 (6th Cir. 1963), *cert. denied*, 375 U.S. 824, 84 S.Ct. 65, 11 L.Ed.2d 57 (1963).

The question of whether the defendants are jointly or severally liable for the clean-up costs turns on a fairly complex factual determination. Read in the light most favorable to the plaintiff, the following facts illustrate the nature of the problem. The Chem-Dyne facility contains a variety of hazardous waste from 289 generators or transporters, consisting of about 608,000 pounds of material. Some of the wastes have commingled but the identities of the sources of these wastes remain unascertained. The fact of the mixing of the wastes raises an issue as to the divisibility of the harm. Further, a dispute exists over which of the wastes have contaminated the ground water, the degree of their migration and concomitant health hazard. Finally, the volume of waste of a particular generator is not an accurate predictor of the risk associated with the waste because the toxicity or migratory potential of a particular hazardous substance generally varies independently with the volume of the waste.

This case, as do most pollution cases, turns on the issue of whether the harm caused at Chem-Dyne is "divisible" or "indivisible." If the harm is divisible and if there is a reasonable basis for apportionment of damages, each defendant is liable only for the portion of harm he himself caused. Restatement (Second) of Torts, §§ 443A, 881. In this situation, the burden of proof as to apportionment is upon each defendant. *Id.* at § 433B. On the other hand, if the defendants caused an indivisible harm, each is subject to liability for the entire harm. *Id.* at § 875. The defendants have not carried their burden of demonstrating the divisibility of the harm and the degrees to which each defendant is responsible.

The judicial interpretation of the nature and scope of liability under 42 U.S.C. § 9607 is intended to assist the parties in expediting discovery and trial preparation. Manual of Complex Litigation, § 1.80. There is an insufficient evidentiary basis, with unresolved factual questions, which precludes the resolution of this case in the form of a summary judgment motion. Because there are genuine issues of material

fact concerning the divisibility of the harm and any potential apportionment, the defendants are not entitled to judgment as a matter of law.

#### D. Summary

In conclusion, 42 U.S.C. § 9607 provides for a uniform federal rule of decision which delineates the scope of liability pursuant to the Restatement (Second) of Torts §§ 433B, 433A, 875, 881. Additionally, because the defendants have not shown conclusively that there exists no genuine issue of material fact, they are not entitled to the partial summary judgment as a matter of law. *Sartor*, 321 U.S. at 620, 64 S.Ct. at 724.

The Court hereby DENIES defendants' Motion for Partial Summary Judgment.

IT IS SO ORDERED.



Raye S. SKINNER

v.

OLD SOUTHERN LIFE INS. CO.

Civ. A. No. 83-1522.

United States District Court,  
W.D. Louisiana,  
Alexandria Division.

Oct. 11, 1983.

On motion to remand action to state court, the District Court, Nauman S. Scott, Chief Judge, held that: (1) words "receipt by the defendant, through service or otherwise" in statute governing time for filing of removal petition means receipt by service or some action which is equivalent of service, and (2) date on which insurance company as defendant received copy of insured's petition served on Louisiana Secretary of State, rather than earlier date on which defendant

the Mortgagee. Given the existence of the Fireman's Fund policy, however, Appalachian argues that its obligation to the Mortgagee was cancelled as of the date Fireman's Fund assumed coverage, and therefore Fireman's Fund is not entitled to seek contribution from Appalachian for the loss claimed by the Mortgagee. The Court agrees.

The New York standard mortgage clause has been interpreted to operate as an independent contract of insurance between the insurer and the mortgagee. *Rubenstein v. Cosmopolitan Mut. Ins. Co.*, 403 N.Y.S.2d 96, 61 A.D.2d 1029 (1978); *Fancher v. Carson-Campbell, Inc.*, 216 Kan. 141, 530 P.2d 1225 (1975); *Hartford Fire Ins. Co. v. Associates Capital Corp.*, 313 So.2d 404 (Miss. 1975); *Waynesville Sec. Bank v. Stuyvesant Ins. Co.*, 499 S.W.2d 218 (Mo.App.1973); *Travelers Indemnity Co. v. Storecraft, Inc.*, 491 S.W.2d 745 (Tex.Civ.App.1973). In actuality, however, what has been termed an "independent contract" is more accurately characterized as a right of estoppel which the mortgagee holds against the insurer so that the mortgagee is not subject to forfeiture because of any act or omission of the insured, unknown to the mortgagee. Existing case law reveals that this estoppel right exists only for the benefit of the mortgagee. The Court has not been presented with any authority which would allow a party other than the one intended to be benefited from the mortgage clause to assert a claim against an insurer for failure to notify the Mortgagee as required by the standard mortgage clause. *Cf. Fancher v. Carson-Campbell, supra*, 530 P.2d at 1228 (allowing claim based on standard mortgage clause to be asserted by individuals who were intended beneficiaries of mortgagee's position as it related to this clause).

In the present case, Fireman's Fund is attempting to pick up the estoppel rights which the Bank would have had against Appalachian. This it cannot do. In selling its policy covering the Deer Dale Property and accepting a premium therefore, Fireman's Fund extinguished the Bank's rights against Appalachian. Appalachian was thus the unintended third party beneficiary

of the contract between Fireman's Fund and McCoy Lincoln-Mercury. The Court notes that Fireman's Fund did not rely on the existence of the Appalachian policy since its premium rate was not adjusted to reflect the presence of other similar insurance coverage on the Deer Dale Property. Having received a full premium, Fireman's Fund got everything it bargained for and the present holding does not deprive it of any real right. The inability of Fireman's Fund to capitalize on a possible windfall offers no occasion for this Court to afford it relief. Accordingly, judgment will be entered in favor of Appalachian and against Fireman's Fund.

An appropriate Order will be entered.

#### ORDER

AND NOW, TO WIT, this 7th day of October, 1983, for the reasons stated in the foregoing Memorandum, IT IS ORDERED as follows:

1. The motion of plaintiff Fireman's Fund Insurance Company for summary judgment is *denied*.
2. The motion of defendant Appalachian Insurance Company for summary judgment is *granted*.
3. Judgment is *entered* in favor of defendant Appalachian Insurance Company and against plaintiff Fireman's Fund Insurance Company.



UNITED STATES of America, Plaintiff,  
v.  
CHEM-DYNE CORP., et al., Defendants.  
No. C-1-82-840.

United States District Court,  
S.D. Ohio, W.D.

Oct. 11, 1983.

As Amended Oct. 14, 1983.

Action was brought under the Comprehensive Environmental Response, Compen-

sation, and Lial States against d allegedly generat ous substances lo for reimburseme institute remedia ant companies m tion that they we ly liable for clea District Court, C held that issues of ing divisibility of apportionment, ar nies were not ent judgment.

Motion denied

1. Statutes § 216  
Statements of properly accorded interpreting statute, single legislator ar

2. Health and Env  
Scope of liabi several liability we hensive Environme sation, and Liabili scope of liability mon-law principles, case-by-case evalu scenarios associate tor waste sites we applying joint and individual basis, an rejection of joint Comprehensive Er Compensation, and U.S.C.A. § 9607.

3. Federal Courts  
In situations w express statutory ) or federal law, th ness presented by e interstitial federal sponsibility of the

4. Federal Courts  
Rights, liabilit the United States u vironmental Respo

sation, and Liability Act by the United States against defendant companies which allegedly generated or transported hazardous substances located at treatment facility for reimbursement of money expended to institute remedial action at site. Defendant companies moved for early determination that they were not jointly and severally liable for clean up costs at site. The District Court, Carl B. Rubin, Chief Judge, held that issues of fact were raised concerning divisibility of harm and any potential apportionment, and thus defendant companies were not entitled to partial summary judgment.

Motion denied.

#### 1. Statutes ⇐216

Statements of legislation's sponsors are properly accorded substantial weight in interpreting statute, although remarks of a single legislator are not controlling.

#### 2. Health and Environment ⇐25.5(5)

Scope of liability and term joint and several liability were deleted from Comprehensive Environmental Response, Compensation, and Liability Act in order to have scope of liability determined under common-law principles, where court performing case-by-case evaluation of complex factual scenarios associated with multiple-generator waste sites would assess propriety of applying joint and several liability on an individual basis, and was not intended as a rejection of joint and several liability. Comprehensive Environmental Response, Compensation, and Liability Act, § 107, 42 U.S.C.A. § 9607.

#### 3. Federal Courts ⇐371

In situations where there is a lack of an express statutory provision selecting state or federal law, the inevitable incompleteness presented by all legislation means that interstitial federal lawmaking is a basic responsibility of the federal courts.

#### 4. Federal Courts ⇐433

Rights, liabilities and responsibilities of the United States under Comprehensive Environmental Response, Compensation, and

Liability Act are governed by a federal rule of decision, in view of fact that improper disposal or release of hazardous substances is an enormous and complex problem of national magnitude involving uniquely federal interests. Comprehensive Environmental Response, Compensation, and Liability Act, § 107, 42 U.S.C.A. § 9607.

#### 5. Federal Courts ⇐374

Federal programs that by their nature are and must be uniform in character throughout the nation necessitate formulation of federal rules of decision.

#### 6. Federal Courts ⇐433

Scope of liability under the Comprehensive Environmental Response, Compensation, and Liability Act should be interpreted according to federally created uniform law, in view of fact that federal program must be uniform in character throughout the nation. Comprehensive Environmental Response, Compensation, and Liability Act, § 107, 42 U.S.C.A. § 9607.

#### 7. Common Law ⇐13

Federal statutes dealing with similar subject matter are a prime repository of federal policy on a subject and a starting point for ascertaining federal common law.

#### 8. Federal Courts ⇐374

Neither statutes nor decisions of a particular state can be conclusive when fashioning federal law.

#### 9. Federal Civil Procedure ⇐2481

In action brought under the Comprehensive Environmental Response, Compensation, and Liability Act by the United States against companies which allegedly generated or transported hazardous substances located at treatment facility for reimbursement of money expended to institute remedial action at site, issues of material fact were raised concerning divisibility of harm and any potential apportionment, and thus defendant companies were not entitled to summary judgment that they were not jointly and severally liable. Comprehensive Environmental Response, Compensation, and Liability Act, § 107, 42 U.S.C.A. § 9607.

Christopher Barnes, U.S. Atty., Elizabeth Whitaker, Asst. U.S. Atty., Cincinnati, Ohio, Carol E. Dinkins, Asst. Atty. Gen., Barry S. Sandals, James J. Dragna, Joyce R. Branda, Richard Lazarus, Land & Natural Resource Div., Deborah Woitte, U.S. Environmental Protection Agency, Washington, D.C., Jonathan McPhee, U.S. Environmental Protection Agency, Chicago, Ill., E. Dennis Muchnicki, Steven J. Willey, Asst. Attys. Gen., Environmental Law Section, Columbus, Ohio, for plaintiff.

Steve Williams, Wood, Lamping, Slutz & Reckman, Cincinnati, Ohio, for defendants Hamilton Industrial Real Es., B & W Enterprises, Whitco Enterprises and William L. Kovas.

John A. Garretson, Hamilton, Ohio, for Zettler.

Christopher R. Schraff, Martin S. Seltzer, Columbus, Ohio, for defendants Rohm & Haas Co., Delaware, Tennessee, Connecticut, Inc., CIBA-GEIGY Corp., and Shell Oil.

Alex S. Karlin, Houston, Tex., for defendant Shell Oil Co.

Ellen S. Friedell, Philadelphia, Pa., for defendant Rohm & Haas Co.

Robert A. Naidus, Ardsley, N.Y., for defendant CIBA-GEIGY Corp.

Gerald L. Baldwin, William H. Hawkins, Cincinnati, Ohio, Fred A. Windover, North Adams, Mass., for defendants Allied Corp., Aurora Casket Co. and Sprague Elec.

Thomas T. Terp, Cincinnati, Ohio, Richard W. Kearney, Gen. Counsel, Needham Heights, Mass., for defendants Ludlow Corp., Astro Containers, Inc. and The B.F. Goodrich Co.

R. Joseph Parker, Kim Burke, Cincinnati, Ohio, Phocion S. Park, St. Louis, Mo., for defendants Monsanto Co. and C.W. Zubiel Co.

Robert C. McIntosh, Arthur Knabe, Cincinnati, Ohio, for defendant Frank Irej, Jr., Inc.

Michael Szolosi, Columbus, Ohio, for defendants World Pipe Service Co., Kipin Industries and Frank Irej, Jr., Inc.

Daniel J. Gunsett, Columbus, Ohio, Liam W. Falsgraf, Cleveland, Ohio, for defendants Phillips Petroleum Co. and Bing Ferris Industries.

David C. Greer, Dayton, Ohio, for defendant Searle Medical Products.

John R. Cromer, Indianapolis, Ind., Thomas Ravis, Pittsburgh, Pa., for defendant vil Products Inc.

Richard L. Creighton, Jr., Cincinnati, Ohio, for defendant Liberty Solvent Chemical.

Mark Wallach, Cleveland, Ohio, for defendant Chemical Solvents.

Thomas L. Conlan, Cincinnati, Ohio, J. D. Tully, Warner Norcross & Judd, Grand Rapids, Mich., for defendant Bofors-Noi Inc.

#### ORDER DENYING DEFENDANTS' MOTION FOR PARTIAL SUMMARY JUDGMENT

CARL B. RUBIN, Chief Judge.

This matter is before the Court on the Motion of the defendants for Partial Summary Judgment under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 960 ("CERCLA"). Plaintiff United States has sued 24 defendants, who allegedly generated or transported the hazardous substance located at the Chem-Dyne treatment facility, for reimbursement of the superfund money expended to institute remedial action at the site. In order to expedite discovery and trial preparation, the defendants have moved for an early determination that they are not jointly and severally liable for the clean-up costs at Chem-Dyne. Manual for Complex Litigation, § 1.80 (1977).

#### A. Statutory Construction

The defendants have moved for a determination of the scope of liability under CERCLA, 42 U.S.C. § 9607 which is a matter of first impression to this Court. At present, there is no case authority specifically addressing this point.

Cite as 572 F.Supp. 802 (1983)

The analysis begins with an examination of the germane statutory language. *Dickerson v. New Banner Institute, Inc.*, — U.S. —, 103 S.Ct. 956, 74 L.Ed.2d 845 (1983). The statutory definition of liability is the standard of liability which obtains under 33 U.S.C. § 1321. 42 U.S.C. § 9601(32). The pertinent language provides that when the owner or operator of a vessel from which oil or hazardous substances is discharged in violation of § 1321(b)(3), he shall be liable to the United States Government for the actual costs . . . 33 U.S.C. § 1321(f)(1). At the time of CERCLA's enactment, this section had been interpreted to impose a strict liability standard. *Stewart Transportation Co. v. United States*, 596 F.2d 609, 613 (4th Cir.1979); *United States v. Tex-Tow, Inc.*, 589 F.2d 1310, 1314-15 (7th Cir.1978); *Burgess v. M/V Tamano*, 564 F.2d 964, 982 (1st Cir. 1977), cert. denied, 435 U.S. 941, 98 S.Ct. 1520, 55 L.Ed.2d 537 (1978); *Tug Ocean Prince, Inc. v. United States*, 436 F.Supp. 907 (S.D.N.Y.1977), aff'd in part, rev'd in part on other grounds, 584 F.2d 1151 (2d Cir.1978). It is proper to assume Congress was aware of the judicial interpretation of section 1321 as a strict liability standard. *Cannon v. University of Chicago*, 441 U.S. 677, 696-97, 99 S.Ct. 1946, 1957-1958, 60 L.Ed.2d 560 (1979). In fact, the legislative history of the statute directly supports this finding. 126 Cong.Rec. S14964 (Nov. 24, 1980) H11787 (Dec. 3, 1980).

1. Section 9607(a) provides:

Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in subsection (b) of this section—

- (1) the owner and operator of a vessel (otherwise subject to the jurisdiction of the United States) or a facility,
- (2) any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of,
- (3) any person who by contract agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility owned or operated by another party or entity and containing such hazardous substances, and

The liability section lists the classes of persons potentially liable under the Act for the costs incurred by government removal or remedial action.<sup>1</sup> *United States v. Waste Industries, Inc.*, 556 F.Supp. 1301 (E.D.N.C.1983); *City of Philadelphia v. Stephan Chemical Co.*, 544 F.Supp. 1135 (E.D. Pa.1982). In contrast to plaintiff's assertion that joint and several liability is clear from the express statutory language, the Court finds the language ambiguous with regard to the scope of liability. Consequently, in an attempt to discern the Congressional intent, the Court will review and weigh the legislative history of the Act. *Dickerson*, — U.S. at —, 103 S.Ct. at 986.

CERCLA was enacted both to provide rapid responses to the nationwide threats posed by the 30-50,000 improperly managed hazardous waste sites in this country as well as to induce voluntary responses to those sites. 5 U.S.Code Cong. & Ad.News 6119, 6119-6120 (1980). The legislation establishes a 1.6 billion dollar trust fund ("superfund"), drawn from industry and federal appropriations, to finance the clean-up and containment efforts. *Id.* at 6119. The state or federal government may then pursue rapid recovery of the costs incurred from persons liable to reimburse the superfund money expended. This recovery task may prove difficult when several companies used a site, when dumped chemicals react with others to form new or more toxic

- (4) any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable for—

(A) all costs of removal or remedial action incurred by the United States Government or a State not inconsistent with the national contingency plan;

(B) any other necessary costs of response incurred by any other person consistent with the national contingency plan; and

(C) damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release. 42 U.S.C. § 9607(a).

substances, or when records<sup>2</sup> are unavailable. Nevertheless, those responsible for the problems caused by the hazardous wastes were intended to bear the costs and responsibilities for remedying the condition. 5 U.S.Code Cong. & Ad.News at 6119.

As background, two different superfund bills proceeded simultaneously through the House and Senate. On November 24, 1980, the Senate made its final amendment to its bill, thereby eliminating the term strict, joint and several liability from its provisions. 126 Cong.Rec. S14964 (Nov. 24, 1980). Subsequently, on December 3, 1980, the House struck the language in its bill and substituted the language of the Senate bill, which was later enacted. 126 Cong. Rec. H11787 (Dec. 3, 1980).

The defendants quote at length from Senator Helms' speech:

Retention of joint and several liability in S. 1480 received intense and well-deserved criticism from a number of sources, since it could impose financial responsibility for massive costs and damages awards on persons who contributed only minimally (if at all) to a release or injury. Joint and several liability for costs and damages was especially pernicious in S. 1480, not only because of the exceedingly broad categories of persons subject to liability and the wide array of damages available, but also because it was coupled with an industry-based fund. Those contributing to the fund will frequently be paying for conditions they had no responsibility in creating or even contributing to. To adopt a joint and several liability scheme on top of this would have been grossly unfair.

The drafters of the Stafford-Randolph substitute have recognized this unfairness, and the lack of wisdom in eliminating any meaningful link between culpable conduct and financial responsibility. Consequently, all references to joint and several liability in the bill have been deleted. . .

It is very clear from the language of the Stafford-Randolph substitute itself,

from the legislative history, and from the liability provisions of section 311 of the Federal Water Pollution Control Act that now the Stafford-Randolph bill does not in and of itself create joint and several liability.

126 Cong.Rec. S15004 (Nov. 24, 1980). The view of statutory construction is at odds with the guidelines provided by the Supreme Court. Senator Helms was an opponent of the bill. *Id.* at S14988. Accordingly, his statements are entitled to little weight in construing the statute. *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 204 n. 24 96 S.Ct. 1375, 1386 n. 24, 47 L.Ed.2d 668 (1975); *Holtzman v. Schlesinger*, 414 U.S. 1304, 1313 n. 13, 94 S.Ct. 1, 6 n. 13, 38 L.Ed.2d 18 (1973); *United States v. Calamaro*, 354 U.S. 351, 357, 77 S.Ct. 1138, 1142, 1 L.Ed.2d 1394 (1956); *Mastro Plastics Corp. v. NLRB*, 350 U.S. 270, 288, 76 S.Ct. 349, 360, 100 L.Ed. 309 (1956); *Schwegmann Bros. v. Calvert Distillers Corp.*, 341 U.S. 384, 394, 71 S.Ct. 745, 750, 95 L.Ed. 1035 (1951).

Senator Stafford, sponsor of the bill, succinctly noted that there was an elimination of the term joint and several liability as well as an elimination of the scope of liability. 126 Cong.Rec. S14969 (Nov. 24, 1980). Senator Randolph, sponsor, explained the significance of these modifications:

We have kept strict liability in the compromise, specifying the standard of liability under section 311 of the Clean Water Act, but we have deleted any reference to joint and several liability, relying on common law principles to determine when parties should be severally liable. . . The changes were made in recognition of the difficulty in prescribing in statutory terms liability standards which will be applicable in individual cases. The changes do not reflect a rejection of the standards in the earlier bill.

Unless otherwise provided in this act, the standard of liability is intended to be the same as that provided in section 311

2. See The Resource Conservation and Recovery

Act of 1976, 42 U.S.C. §§ 6923, 6924.

of the Federal Water Pollution Control Act (33 U.S.C. 1321). I understand this to be a standard of strict liability.

It is intended that issues of liability not resolved by this act, if any, shall be governed by traditional and evolving principles of common law. An example is joint and several liability. Any reference to these terms has been deleted, and the liability of joint tortfeasors will be determined under common or previous statutory law.

*Id.* at S14964.

Turning to the House proceedings, Representative Florio, sponsor, commented at length:

The liability provisions of this bill do not refer to the terms strict, joint and several liability, terms which were contained in the version of H.R. 7020 passed earlier by this body. The standard of liability in these amendments is intended to be . . . strict liability . . . I have concluded that despite the absence of these specific terms, the strict liability standard already approved by this body is preserved. Issues of joint and several liability not resolved by this shall be governed by traditional and evolving principles of common law. The terms joint and several have been deleted with the intent that the liability of joint tortfeasors be determined under common or previous statutory law . . . Rather than announce the standard, and then cut back on its applicability, this bill refers to section 311 of the Clean Water Act and to traditional and evolving principles of common law in determining the liability of such joint tortfeasors. To insure the development of a uniform rule of law, and to discourage business dealing in hazardous substances from locating primarily in States with more lenient laws, the bill will en-

courage the further development of a Federal common law in this area.

I might point out that section 311 has been interpreted by the Coast Guard, the Government body responsible for administering the section 311(k) revolving fund, as imposing joint and several liability under appropriate circumstances . . . This established policy seems particularly applicable in cases of hazardous waste sites, where several persons have often contributed to an indivisible harm.

*Id.* at H11787<sup>3</sup>. Representative Waxman observed, "[a]lthough the Senate version did not contain the House language on the question of joint and several liability, the intent of the House provisions will largely be served through the prevailing common law rules relating to apportionment among defendants who are held jointly and severally liable." *Id.* at H11799.

[1.] Statements of the legislation's sponsors are properly accorded substantial weight in interpreting the statute, although the remarks of a single legislator are not controlling. *Chrysler Corp. v. Brown*, 441 U.S. 281, 311, 99 S.Ct. 1705, 1722, 60 L.Ed.2d 208 (1979); *Federal Energy Administration v. Algonquin SNG, Inc.*, 426 U.S. 548, 564, 96 S.Ct. 2295, 2304, 49 L.Ed.2d 49 (1976); *Pan American World Airways, Inc. v. Civil Aeronautics Board*, 380 F.2d 770 (2d Cir. 1967), *aff'd*, 391 U.S. 461, 88 S.Ct. 1715, 20 L.Ed.2d 748 (1968). The fact that the term joint and several liability was deleted from a prior draft of the bill or that the term liability refers to the standard under 33 U.S.C. § 1321, in and of itself, is not dispositive of the scope of liability under CERCLA. See *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367, 382 n. 11, 89 S.Ct. 1794, 1802 n. 11, 23 L.Ed.2d 371 (1969). Perhaps in other contexts, when Congress deletes certain language it "strongly militates against a judgment that Congress intended

3. An opinion of the Assistant Attorney General referred to in Florio's statement and incorporated into the Congressional Record interprets 33 U.S.C. § 1321 as a strict liability standard, noting that the case law was based in part on the legislative history of that statute. 126 Cong.Rec. H11788 (Dec. 3, 1980). It was fur-

ther determined that the deletion of the term joint and several liability did not preclude the courts from imposing it where appropriate. *Id.* Finally, 42 U.S.C. § 9607(e)(2), which provides for contribution, was viewed as only having relevance in joint and several liability context. *Id.*

a result that it expressly declined to enact." *Gulf Oil Corp. v. Copp Paving Co.*, 419 U.S. 186, 200, 95 S.Ct. 392, 401, 42 L.Ed.2d 378 (1974). This case, however, presents an exceptional situation. A reading of the entire legislative history in context reveals that the scope of liability and term joint and several liability were deleted to avoid a mandatory legislative standard applicable in all situations which might produce inequitable results in some cases. 126 Cong. Rec. at S14964, S15004, H11787, H11799; 126 Cong.Rec. H9465 (Sept. 23, 1980) (remarks of Rep. Madigan), H9466 (remarks of Rep. Stockman). The deletion was not intended as a rejection of joint and several liability. 126 Cong.Rec. S14964, H11787, H11799 (Nov. 24, 1980). Rather, the term was omitted in order to have the scope of liability determined under common law principles, where a court performing a case by case evaluation of the complex factual scenarios associated with multiple-generator waste sites will assess the propriety of applying joint and several liability on an individual basis. *Id.*

### B. Scope of Liability

[3] Because the legislative history evinces the intent that the scope of liability under CERCLA, 42 U.S.C. § 9607, be determined from traditional and evolving principles of common law, the next issue becomes whether state or federal common law should be applied. In situations where, as here, there is a lack of an express statutory provision selecting state or federal law, the inevitable incompleteness presented by all legislation means that interstitial federal lawmaking is a basic responsibility of the federal courts. *United States v. Little Lake Misere Land Co.*, 412 U.S. 580, 593, 93 S.Ct. 2389, 2397, 37 L.Ed.2d 187 (1973). Again, the legislative history addressing the common law issue is not conclusive, referring both to "common law" and to "federal common law," 126 Cong. Rec. S14964, H11787, H11799.

State law as a rule of decision is not mandated under the *Erie* doctrine in this case because it falls within the exception

provided for federal laws. 28 U.S.C. § 1652; *Erie v. Tompkins*, 304 U.S. 64, 5 S.Ct. 817, 82 L.Ed. 1188 (1938). Although *Erie* eliminated the power of federal courts to create federal general common law, the power to fashion federal specialized common law remains untouched when it is "necessary to protect uniquely federal interests." *Texas Industries, Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 640, 101 S.Ct. 2061, 2066, 68 L.Ed.2d 500 (1981); *United States v. Standard Oil Co.*, 332 U.S. 301, 307-308, 67 S.Ct. 1604, 1607-1608, 91 L.Ed. 2067 (1947).

[4] The improper disposal or release of hazardous substances is an enormous and complex problem of national magnitude involving uniquely federal interests. Typically, an abandoned waste site will consist of waste produced by companies in several states within the area or region. W. Rodgers, *Handbook on Environmental Law*, pp. 619-697 (1977); *Congressional Quarterly*, pp. 795-804, Mar. 22, 1980. The pollution of land, groundwater, surface water and air as a consequence of this dumping presents potentially interstate problems. A driving force toward the development of CERCLA was the recognition that a response to this pervasive condition at the state level was generally inadequate. 5 U.S.Code Cong. & Ad.News at 6142. The subject matter dealt with in CERCLA is easily distinguished from areas of primarily state concern, such as domestic relations or real property rights, where state law was applied and there was no overriding interest in nationwide uniformity. *United States v. Yazell*, 382 U.S. 341, 351, 86 S.Ct. 500, 506, 16 L.Ed.2d 404 (1966); *DeSylva v. Ballentine*, 351 U.S. 570, 580, 76 S.Ct. 974, 979-980, 100 L.Ed. 1415 (1956); *United States v. Carson*, 372 F.2d 429, 434 (6th Cir.1967). Additionally, the superfund monies expended, for which the United States seeks reimbursement, are funded by general revenues and excise taxes. The degree to which the United States will be able to protect its financial interest in the trust fund is directly related to the scope of liability under CERCLA and is in no way dependent upon the laws of any state. When the United

**Sec. 46.03.826. Definitions.** In AS 46.03.822 — 46.03.828

(1) "act of God" means an act of nature which is unforeseeable in kind or degree;

(2) "economic benefit" means a benefit measurable in economic terms, including but not limited to the gathering, catching, or killing of food or other items utilized in a subsistence economy and their replacement cost;

(3) "having control over a hazardous substance" means producing, handling, storing, transporting, or refining a hazardous substance for commercial purposes immediately before entry of the hazardous substance in or upon the water, surface, or subsurface land of the state, and specifically includes bailees and carriers of a hazardous substance;

(4) "hazardous substance" means

(A) an element or compound which, when it enters in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found; or

(B) oil;

(5) "oil" means a derivative of a liquid hydrocarbon and includes crude oil, lubricating oil, sludge, oil refuse or another petroleum-related product or by-product;

(6) "subsistence economy" means an economy which utilizes on a regular basis an item which is owned in common by the people of the state, or the United States, including but not limited to fish, game, fur bearing animals, birds, timber or any part of the natural habitat for noncommercial purposes;

(7) "water, surface or subsurface land of the state" means all water, surface or subsurface land within the territorial limits of the State of Alaska. (§ 1 ch 122 SLA 1972; am § 22 ch 7 SLA 1986)

Revisor's notes. — Reorganized in 1986 to alphabetize the defined terms.

Effect of amendments. — The 1986 amendment in paragraph (3) deleted

"owning or" at the beginning of the paragraph and made minor punctuation changes.

**Sec. 46.03.828. Other rights of action not affected.** The provisions of AS 46.03.822 — 46.03.828 do not abridge or alter a right of action or remedy under another statute, in equity, or at common law. However, an award of damages to a person or the state on a cause of action for an injury under AS 46.03.822 bars recovery in an action by another person or the state on the same cause of action for the same injury. (§ 1 ch 122 SLA 1972)

NPDES permit containing such conditions.

(b) If the director, on the basis of available information including that supplied by the applicant pursuant to § 125.124 determines prior to permit issuance that the discharge will cause unreasonable degradation of the marine environment after application of all possible permit conditions specified in § 125.123(d), he may not issue an NPDES permit which authorizes the discharge of pollutants.

(c) If the director has insufficient information to determine prior to permit issuance that there will be no unreasonable degradation of the marine environment pursuant to § 125.122, there shall be no discharge of pollutants into the marine environment unless the director on the basis of available information, including that supplied by the applicant pursuant to § 125.124 determines that:

(1) Such discharge will not cause irreparable harm to the marine environment during the period in which monitoring is undertaken, and

(2) There are no reasonable alternatives to the on-site disposal of these materials, and

(3) The discharge will be in compliance with all permit conditions established pursuant to paragraph (d) of this section.

(d) All permits which authorize the discharge of pollutants pursuant to paragraph (c) of this section shall:

(1) Require that a discharge of pollutants will: (i) Following dilution as measured at the boundary of the mixing zone not exceed the limiting permissible concentration for the liquid and suspended particulate phases of the waste material as described in § 227.27(a) (2) and (3), § 227.27(b), and § 227.27(c) of the Ocean Dumping Criteria; and (ii) not exceed the limiting permissible concentration for the solid phase of the waste material or cause an accumulation of toxic materials in the human food chain as described in § 227.27 (b) and (d) of the Ocean Dumping Criteria;

(2) Specify a monitoring program, which is sufficient to assess the impact of the discharge on water, sediment, and biological quality including, where

appropriate, analysis of the bioaccumulative and/or persistent impact on aquatic life of the discharge;

(3) Contain any other conditions, such as performance of liquid or suspended particulate phase bioaccumulation tests, seasonal restrictions on discharge, process modifications, dispersion of pollutants, or schedule of compliance for existing discharges, which are determined to be necessary because of local environmental conditions, and

(4) Contain the following clause: In addition to any other grounds specified herein, this permit shall be modified or revoked at any time if, on the basis of any new data, the director determines that continued discharges may cause unreasonable degradation of the marine environment.

§ 125.124 Information required to be submitted by applicant.

The applicant is responsible for providing information which the director may request to make the determination required by this subpart. The director may require the following information as well as any other pertinent information:

(a) An analysis of the chemical constituents of any discharge;

(b) Appropriate bioassays necessary to determine the limiting permissible concentrations for the discharge;

(c) An analysis of initial dilution;

(d) Available process modifications which will reduce the quantities of pollutants which will be discharged;

(e) Analysis of the location where pollutants are sought to be discharged, including the biological community and the physical description of the discharge facility;

(f) Evaluation of available alternatives to the discharge of the pollutants including an evaluation of the possibility of land-based disposal or disposal in an approved ocean dumping site.

PART 129—TOXIC POLLUTANT EFFLUENT STANDARDS

Subpart A—Toxic Pollutant Effluent Standards and Prohibitions

Sec.

- 129.1 Scope and purpose.
129.2 Definitions.
129.3 Abbreviations.
129.4 Toxic pollutants.
129.5 Compliance.
129.6 Adjustment of effluent standard for presence of toxic pollutant in the intake water.
129.7 Requirement and procedure for establishing a more stringent effluent limitation.
129.8 Compliance date.
129.9-129.99 (Reserved)
129.100 Aldrin/dieldrin.
129.101 DDT, DDD and DDE.
129.102 Endrin.
129.103 Toxaphene.
129.104 Benzidine.
129.105 Polychlorinated biphenyls (PCBs).

AUTHORITY: Secs. 307, 308, 501, Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500, 86 Stat. 816, (33 U.S.C. 1251 et seq.)).

SOURCE: 42 FR 2613, Jan. 12, 1977, unless otherwise noted.

Subpart A—Toxic Pollutant Effluent Standards and Prohibitions

§ 129.1 Scope and purpose.

(a) The provisions of this subpart apply to owners or operators of specified facilities discharging into navigable waters.

(b) The effluent standards or prohibitions for toxic pollutants established in this subpart shall be applicable to the sources and pollutants hereinafter set forth, and may be incorporated in any NPDES permit, modification or renewal thereof, in accordance with the provisions of this subpart.

(c) The provisions of 40 CFR Parts 124 and 125 shall apply to any NPDES permit proceedings for any point source discharge containing any toxic pollutant for which a standard or prohibition is established under this part.

§ 129.2 Definitions.

All terms not defined herein shall have the meaning given them in the

Act or in 40 CFR Part 124 or 125. As used in this part, the term:

(a) "Act" means the Federal Water Pollution Control Act, as amended (Pub. L. 92-500, 88 Stat. 816 *et seq.*, 33 U.S.C.1251 *et seq.*). Specific references to sections within the Act will be according to Pub. L. 92-500 notation.

(b) "Administrator" means the Administrator of the Environmental Protection Agency or any employee of the Agency to whom the Administrator may by order delegate the authority to carry out his functions under section 307(a) of the Act, or any person who shall by operation of law be authorized to carry out such functions.

(c) "Effluent standard" means, for purposes of section 307, the equivalent of "effluent limitation" as that term is defined in section 502(11) of the Act with the exception that it does not include a schedule of compliance.

(d) "Prohibited" means that the constituent shall be absent in any discharge subject to these standards, as determined by any analytical method.

(e) "Permit" means a permit for the discharge of pollutants into navigable waters under the National Pollutant Discharge Elimination System established by section 402 of the Act and implemented in regulations in 40 CFR Parts 124 and 125.

(f) "Working day" means the hours during a calendar day in which a facility discharges effluents subject to this part.

(g) "Ambient water criterion" means that concentration of a toxic pollutant in a navigable water that, based upon available data, will not result in adverse impact on important aquatic life, or on consumers of such aquatic life, after exposure of that aquatic life for periods of time exceeding 96 hours and continuing at least through one reproductive cycle; and will not result in a significant risk of adverse health effects in a large human population based on available information such as mammalian laboratory toxicity data, epidemiological studies of human occupational exposures, or human exposure data, or any other relevant data.

(h) "New source" means any source discharging a toxic pollutant, the constructor, of which is commenced after proposal of an effluent standard or

prohibition applicable to such source. If such effluent standard or prohibition is thereafter promulgated in accordance with section 307.

(i) "Existing source" means any source which is not a new source as defined above.

(j) "Source" means any building, structure, facility, or installation from which there is or may be the discharge of toxic pollutants designated as such by the Administration under section 307(a)(1) of the Act.

(k) "Owner or operator" means any person who owns, leases, operates, controls, or supervises a source as defined above.

(l) "Construction" means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

(m) "Manufacturer" means any establishment engaged in the mechanical or chemical transformation of materials or substances into new products, including but not limited to the blending of materials such as pesticides, products, resins, or liquors.

(n) "Process wastes" means any designated toxic pollutant, whether wastewater or otherwise present, which is inherent to or unavoidably resulting from any manufacturing process, including that which comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product or waste product and is discharged into the navigable waters.

(o) "Air emissions" means the release or discharge of a toxic pollutant by an owner or operator into the ambient air either (1) by means of a stack or (2) as a fugitive dust, mist or vapor as a result inherent to the manufacturing or formulating process.

(p) "Fugitive dust, mist or vapor" means dust, mist or vapor containing a toxic pollutant regulated under this part which is emitted from any source other than through a stack.

(q) "Stack" means any chimney, flue, conduit, or duct arranged to conduct emissions to the ambient air.

**Environmental**

(r) "Ten year" means the interval with a term of once the National Physical Paper N cy Atlas of 1981, and subsequent equivalent re probability therefrom.

(s) "State I administrative w interstate w agency opera permit progra bility for wat enforcement more State o term "State administrative ( form the p which referer

§ 129.3 Abbrev  
The abbrev represent the  
lb = pound (or p  
g = gram.  
µg/l = microgra gram/liter)  
kg = kilogram(s  
kkg = 1000 kilog

§ 129.4 Toxic  
The follow subject to re sions of this:  
(a) Aldrin/ the compour the chemica achloro-1,4,4 endo-5,8-exo "Dieldrin" n drin as ide name 1,2,3,4 epoxy - 1,4, endo-5,8-exo-  
(b) DDT— pounds DDT tified by the 1,1,1-trichlor phenyl) etha (DDD) or (T bis(p-chloro; o,p'-isomers; bis(p-chloro; (c) Endri compound e

prohibition applicable to such source if such effluent standard or prohibition is thereafter promulgated in accordance with section 307.

(i) "Existing source" means any source which is not a new source as defined above.

(j) "Source" means any building, structure, facility, or installation from which there is or may be the discharge of toxic pollutants designated as such by the Administration under section 307(a)(1) of the Act.

(k) "Owner or operator" means any person who owns, leases, operates, controls, or supervises a source as defined above.

(l) "Construction" means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

(m) "Manufacturer" means any establishment engaged in the mechanical or chemical transformation of materials or substances into new products including but not limited to the blending of materials such as pesticidal products, resins, or liquors.

(n) "Process wastes" means any designated toxic pollutant, whether in wastewater or otherwise present which is inherent to or unavoidably resulting from any manufacturing process, including that which comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product or waste product and is discharged into the navigable waters.

(o) "Air emissions" means the release or discharge of a toxic pollutant by an owner or operator into the ambient air either (1) by means of a stack or (2) as a fugitive dust, mist or vapor as a result inherent to the manufacturing or formulating process.

(p) "Fugitive dust mist or vapor" means dust, mist or vapor containing a toxic pollutant regulated under this part which is emitted from any source other than through a stack.

(q) "Stack" means any chimney, flue, conduit, or duct arranged to conduct emissions to the ambient air.

(r) "Ten year 24-hour rainfall event" means the maximum precipitation event with a probable recurrence interval of once in 10 years as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments or equivalent regional or State rainfall probability information developed herefrom.

(s) "State Director" means the chief administrative officer of a State or interstate water pollution control agency operating an approved HPDES permit program. In the event responsibility for water pollution control and enforcement is divided among two or more State or interstate agencies, the term "State Director" means the administrative officer authorized to perform the particular procedure to which reference is made.

§ 129.5 Abbreviations.

The abbreviations used in this part represent the following terms:

- lb - pound (or pounds).
- g - gram.
- µg - micrograms per liter (1 one-millionth gram/liter).
- kg - kilogram(s).
- kg - 1000 kilogram(s).

§ 129.5 Toxic pollutants.

The following are the pollutants subject to regulation under the provisions of this subpart:

(a) Aldrin/Dieldrin—"Aldrin" means the compound aldrin as identified by the chemical name, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4-endo-5,8-exo-dimethanonaphthalene;

"Dieldrin" means the compound dieldrin as identified by the chemical name 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-5,8-exo-dimethanonaphthalene.

(b) DDT—"DDT" means the compounds DDT, DDD, and DDE as identified by the chemical names: (DDT)-1,1,1-trichloro-2,2-bis(p-chlorophenyl) ethane and some o,p'-isomers; (DDD) or (TDE) - 1,1-dichloro-2,2-bis(p-chlorophenyl) ethane and some o,p'-isomers; (DDE) - 1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene.

(c) Endrin—"Endrin" means the compound endrin as identified by the

chemical name 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-5,8-endodimethanonaphthalene.

(d) Toxaphene—"Toxaphene" means a material consisting of technical grade chlorinated camphene having the approximate formula of C<sub>10</sub>H<sub>6</sub>Cl<sub>10</sub> and normally containing 67-69 percent chlorine by weight.

(e) Benzidine—"Benzidine" means the compound benzidine and its salts as identified by the chemical name 4,4'-diaminobiphenyl.

(f) Polychlorinated Biphenyls (PCBs) "polychlorinated biphenyls" (PCBs) means a mixture of compounds composed of the biphenyl molecule which has been chlorinated to varying degrees.

[42 FR 2613, Jan. 12, 1977, as amended at 42 FR 2620, Jan. 12, 1977; 42 FR 6555, Feb. 2, 1977]

§ 129.5 Compliance.

(a)(1) Within 60 days from the date of promulgation of any toxic pollutant effluent standard or prohibition each owner or operator with a discharge subject to that standard or prohibition must notify the Regional Administrator (or State Director, if appropriate) of such discharge. Such notification shall include such information and follow such procedures as the Regional Administrator (or State Director, if appropriate) may require.

(2) Any owner or operator who does not have a discharge subject to any toxic pollutant effluent standard at the time of such promulgation but who thereafter commences or intends to commence any activity which would result in such a discharge shall first notify the Regional Administrator (or State Director, if appropriate) in the manner herein provided at least 60 days prior to any such discharge.

(b) Upon receipt of any application for issuance or reissuance of a permit or for a modification of an existing permit for a discharge subject to a toxic pollutant effluent standard or prohibition the permitting authority shall proceed thereon in accordance with 40 CFR Part 124 or 125, whichever is applicable.

ATTORNEY GENERAL

cation. The submission of an application or the scheduling of a hearing does not stay the operation of the department's order issued under (a) of this section

(d) After a hearing the department may affirm, modify or set aside the order. An order affirmed, modified or set aside after hearing is subject to judicial review as provided in AS 44.62.560. The order is not stayed pending judicial review unless the commissioner so directs. If an order is not immediately complied with, the attorney general, upon request of the commissioner, shall seek enforcement of the order.

(e) The department may adopt additional regulations prescribing the procedure to be followed in the issuance of emergency orders. (§ 3 ch 120 SLA 1971)

**Sec. 46.03.822. Strict liability for the discharge of hazardous substances.** To the extent not otherwise preempted by federal law, a person owning or having control over a hazardous substance which enters in or upon the waters, surface or subsurface lands of the state is strictly liable, without regard to fault, for the damages to persons or property, public or private, caused by the entry. In an action to recover damages, the person is relieved from strict liability, without regard to fault, if the person can prove

(1) that the hazardous substance to which the damages relate entered in or upon the water, surface or subsurface land of the state solely as a result of

(A) an act of war,

(B) an intentional act or a negligent act of a third party, other than a party or its employees in privity of contract with, or employed by, the person,

(C) negligence on the part of the United States government or the State of Alaska, or

(D) an act of God; and

(2) in relation to (1)(B), (C) or (D) of this section, that the person discovered the entry of the hazardous substance in or upon the waters, surface or subsurface land of the state and began operations to contain and clean up the hazardous substance within a reasonable period of time. (§ 1 ch 122 SLA 1972; am § 13 ch 220 SLA 1976)

**Cross references.** — For provision or other persons providing evidence of financial responsibility. see AS 46.04.040(e).  
that actions brought under this section may be brought directly against insurers

**Sec. 46.03.824. Damages.** Damages include but are not limited to injury to or loss of persons or property, real or personal, loss of income, loss of the means of producing income, or the loss of an economic benefit. (§ 1 ch 122 SLA 1972)

- 61.242-8 Standards: Pressure relief devices in liquid service and flanges and other connectors.
- 61.242-9 Standards: Product accumulator vessels.
- 61.242-10 Standards: Delay of repair.
- 61.242-11 Standards: Closed-vent systems and control devices.
- 61.243-1 Alternative standards for valves in UHAP Service—allowable percentage of valves leaking.
- 61.243-2 Alternative standards for valves in VHAP service—skip period leak detection and repair.
- 61.244 Alternative means of emission limitation.
- 61.245 Test methods and procedures.
- 61.246 Recordkeeping requirements.
- 61.247 Reporting requirements.

**Subpart W—National Emission Standard for Radon-222 Emissions from Licensed Uranium Mill Tailings**

- 61.250 Applicability.
- 61.251 Definitions.
- 61.252 Standard.

**APPENDIX A—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS. COMPLIANCE STATUS INFORMATION**

**APPENDIX B—TEST METHODS**

**APPENDIX C—QUALITY ASSURANCE PROCEDURES**

**AUTHORITY:** Secs. 101, 112, 114, 116, 301, Clean Air Act as amended (42 U.S.C. 7401, 7412, 7414, 7416, 7601).

**SOURCE:** 38 FR 8826, Apr. 6, 1973, unless otherwise noted.

**Subpart A—General Provisions**

**§ 61.01 Lists of pollutants and applicability of Part 61.**

(a) The following list presents the substances that, pursuant to section 112 of the Act, have been designated as hazardous air pollutants. The FEDERAL REGISTER citations and dates refer to the publication in which the listing decision was originally published.

- Asbestos (38 FR 5931; Mar. 31, 1971)
- Benzene (42 FR 29332; June 8, 1977)
- Beryllium (38 FR 5931; Mar. 31, 1971)
- Coke Oven Emissions (49 FR 38560; Sept. 18, 1984)
- Inorganic Arsenic (45 FR 37886; June 5, 1980)
- Mercury (38 FR 5931; Mar. 31, 1971)
- Radionuclides (44 FR 76738; Dec. 27, 1979)
- Vinyl Chloride (40 FR 59532; Dec. 24, 1975)

(b) The following list presents other substances for which a FEDERAL REGISTER notice has been published that included consideration of the serious health effects, including cancer, from ambient air exposure to the substance.

- Acrylonitrile (50 FR 24319; June 10, 1985)
- 1,3-Butadiene (50 FR 41468; Oct. 10, 1985)
- Cadmium (50 FR 42000; Oct. 16, 1985)
- Carbon Tetrachloride (50 FR 32821; Aug. 13, 1985)
- Chlorinated Benzenes (50 FR 32628; Aug. 13, 1985)
- Chlorofluorocarbon—113 (50 FR 24313; June 10, 1985)
- Chloroform (50 FR 39626; Sept. 27, 1985)
- Chloroprene (50 FR 39632; Sept. 27, 1985)
- Chromium (50 FR 24317; June 10, 1985)
- Copper (52 FR 5496; Feb. 23, 1987)
- Epichlorohydrin (50 FR 24575; June 11, 1985)
- Ethylene Dichloride (50 FR 41994; Oct. 16, 1985)
- Ethylene Oxide (50 FR 40286; Oct. 2, 1985)
- Hexachlorocyclopentadiene (50 FR 40154; Oct. 1, 1985)
- Manganese (50 FR 32827; Aug. 13, 1985)
- Methyl Chloroform (50 FR 24314; June 10, 1985)
- Methylene Chloride (50 FR 42037; Oct. 17, 1985)
- Nickel (51 FR 34135; Sept. 25, 1986)
- Perchloroethylene (50 FR 52800; Dec. 28, 1985)
- Phenol (51 FR 22854; June 23, 1986)
- Polycyclic Organic Matter (49 FR 31680; Aug. 8, 1984)
- Toluene (49 FR 22195; May 25, 1984)
- Trichloroethylene (50 FR 52422; Dec. 23, 1985)
- Vinylidene Chloride (50 FR 32632; Aug. 13, 1985)
- Zinc and Zinc Oxide (52 FR 32597; Aug. 28, 1987)

(c) This part applies to the owner or operator of any stationary source for which a standard is prescribed under this part.

(50 FR 46290, Nov. 7, 1985, as amended at 51 FR 7715 and 7719, Mar. 5, 1986; 51 FR 11022, Apr. 1, 1986; 52 FR 37617, Oct. 8, 1987)

**§ 61.02 Definitions.**

The terms used in this part are defined in the Act or in this section as follows:

"Act" means the Clean Air Act (42 U.S.C. 7401 et seq.).

"Administrator" means the Administrator of the Environmental Protec-

Environm  
tion Age  
sentative  
"Alterr  
method  
an air p  
ence met  
onstrate  
faction t  
the Adm  
compliar  
"Capit  
penditur  
change  
exceeds  
"annual  
ance p  
latest  
Service  
stationa  
section  
Code. H  
for a ph  
a static  
duced t  
defined  
structe  
IRS Pu  
for tax  
asset g  
be usec  
tax pur  
"Corr  
to the  
section  
owner  
continu  
modifi  
ator h  
ligatio  
within  
progra  
tion.  
"Cor  
date o  
egory  
with  
ance  
compl  
"Cor  
erecti  
facilit  
"Eff  
mulga  
an ap  
lator  
"E  
ary s

**Comprehensive Environmental Response, Compensation,  
and Liability Act**

**42 U.S.C. §§9601-9675**

**As amended by  
the Superfund Amendments and Reauthorization Act of 1986**

*A Comparison Text of the Statute Before and After Amendment*

## How To Use This Text

This reprint of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) includes both the original statute enacted in 1980 and the changes made by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

1. New language added by SARA is printed in *italics*.
2. Original language left unchanged by SARA is printed in Roman type.
3. Original language deleted from the law by SARA is printed in Roman type within boldface brackets [  ].

Thus, CERCLA as it now exists is printed in italics and unbracketed Roman type. CERCLA as it existed prior to the SARA amendments is in Roman type, without regard to boldface brackets. Changes made by SARA can be seen by comparing the italicized revisions with language inside boldface brackets.

This text may be used in conjunction with the annotated legislative history to SARA: Atkeson, et al., *An Annotated Legislative History of the Superfund Amendments and Reauthorization Act of 1986 (SARA)*, 16 ELR 10363 (Dec. 1986). Changes to the statute with legislative history in SARA are enclosed in arrows ► ◄ with a reference to the portion of the annotated legislative history describing the provision.

### Example:

► I.A. Scope of Superfund  
SARA §101(f)

*(34) The term "alternative water supplies" includes, but is not limited to, drinking water and household water supplies. ◄*

In this example, the discussion of the legislative history of this provision is in section I.A. of the annotated legislative history, entitled "Scope of Superfund," and dealing with SARA §101(f). A table of contents of the annotated legislative history appears at 16 ELR 10360.

# Comprehensive Environmental Response, Compensation, and Liability Act of 1980

42 U.S.C. §§9601-9675<sup>1</sup>

## Subchapter I—Hazardous Substances Releases, Liability, Compensation

ELR 44005

### § 9601. [CERCLA §101]

Definitions

### § 9602. [CERCLA §102]

Designation of additional hazardous substances and establishment of reportable released quantities; regulations

### § 9603. [CERCLA §103]

Notification requirements respecting released substances

- (a) Notice to National Response Center upon release from vessel or offshore or onshore facility by person in charge; conveyance of notice by Center
- (b) Penalties for failure to notify; use of notice or information pursuant to notice in criminal case
- (c) Notice to Administrator of EPA of existence of storage, etc., facility by owner or operator; exceptions: time, manner, and form of notice; penalties for failure to notify; use of notice or information pursuant to notice in criminal case
- (d) Recordkeeping requirements; promulgation of rules and regulations by Administrator of EPA; penalties for violations; waiver of retention requirements
- (e) Applicability to registered pesticide product
- (f) Exemptions from notice and penalty provisions for substances reported under other Federal law or is in continuous release, etc.

### § 9604. [CERCLA §104]

Response authorities

- (a) Removal and other remedial action by President; applicability of national contingency plan; definition
- [(b) Investigations, monitoring, etc., by President]
- (b) *Information; studies and investigations; coordination of investigations*
- (c) Criteria for continuance of obligations from Fund over specified amount for response actions: consultation by President with affected States; contracts or cooperative agreements by States with President prior to remedial actions; cost-sharing agreements; selection by President of appropriate remedial actions
- (d) Contracts or cooperative agreements by President with States or political subdivisions; cost-sharing provisions; enforcement requirements and procedures
- [(e) Access to, and copying of, records relating to covered substances; availability to public of records, reports, and information; procedures applicable]
- (e) *Information on gathering and access*
- (f) *Contracts for the use of services in compliance with Federal health and safety standards*

(g) Rates for wages and labor standards applicable to covered work

(h) Emergency procurement powers; exercise by President

(i) Agency for Toxic Substances and Disease Registry; establishment, functions, etc.

(j) *Acquisition of property*

### § 9605. [CERCLA §105]

National contingency plan: preparation; contents; etc.

(a) *Revision and republication*

(b) *Revision of plan*

(c) *Hazard ranking system*

(d) *Petition for assessment of release*

(e) *Releases from earlier sites*

(f) *Minority contractors*

(g) *Special study wastes*

### § 9606. [CERCLA §106]

Abatement actions

(a) Maintenance, jurisdiction, etc.,

(b) Fines

(c) Guidelines for using imminent hazard, enforcement, and emergency response authorities; promulgation by Administrator of EPA, scope, etc.

### § 9607. [CERCLA §107]

Liability

(a) Covered persons; scope

(b) Defenses

(c) Determination of amounts

[(d) Activities pursuant to national contingency plan]

(d) *Rendering care or advice*

(e) Indemnification, hold harmless, etc., agreements or conveyances; subrogation rights

(f) Actions involving natural resources; maintenance, scope, etc.

[(g) Applicability to Federal government branches]

(g) *Federal agencies*

(h) Owner or operator of vessel

(i) Application of a registered pesticide product

(j) Obligations or liability pursuant to federally permitted release

(k) Transfer to, and assumption by, Post-closure Liability Fund of liability of owner or operator of hazardous waste disposal facility in receipt of permit under applicable solid waste disposal law; time, criteria applicable, procedures, etc.; monitoring costs; reports

(l) *Federal lien*

(m) *Maritime lien*

### § 9608. [CERCLA §108]

Financial responsibility

- (a) Establishment and maintenance by owner or operator of vessel; amount; failure to obtain certification of compliance

- (b) Establishment and maintenance by owner or operator of production, etc., facilities; amount; adjustment; consolidated form of responsibility; coverage of motor carriers
- [(c) Claims against guarantor; maintenance, etc.]
- (c) *Direct action*
- [(d) Liability of guarantor]
- (d) *Limitation of guarantor liability*

§ 9609. [CERCLA §109]

[Civil penalties]

*Civil penalties and awards*

- (a) *Class I administrative penalty*
- (b) *Class II administrative penalty*
- (c) *Judicial assessment*
- (d) *Awards*
- (e) *Procurement procedures*
- (f) *Savings clause*

§ 9610. [CERCLA §110]

Employee protection

- (a) Activities of employee subject to protection
- (b) Administrative grievance procedures in cases of alleged violations
- (c) Assessment of costs and expenses against violator subsequent to issuance of order of abatement
- (d) Defenses
- (e) Presidential evaluations of potential loss of shifts of employment resulting from administration or enforcement of provisions; investigations; procedures applicable, etc.

*Note: Worker protection standards*

§ 9611. [CERCLA §111]

Uses of Fund

- (a) Authorized purposes
- (b) Additional authorized purposes
- (c) Peripheral matters and limitations
- (d) Additional limitations
- (e) Funding requirements respecting moneys in Fund
- (f) Obligation of moneys by Federal officials; obligation of moneys or settlement of claims by State officials
- (g) Notice to potential injured parties by owner and operator of vessel or facility causing release of substance; rules and regulations
- [(h) Assessment of damages for injury, etc., to natural resources from release of substances; determination, etc.] *Repealed.*
- (i) Restoration, etc., of natural resources
- (j) Use of Post-closure Liability Fund
- [(k) Audit review, etc., by Inspector General of Federal department or agency delegated with responsibility to obligate moneys]
- (k) *Inspector General*
- (l) *Foreign claimants*
- (m) *Agency for Toxic Substances and Disease Registry*
- (n) *Limitations on research, development, and demonstration program*
- (o) *Notification procedures for limitations on certain payments*

§ 9612. [CERCLA §112]

Claims procedure

- (a) Presentation of assertable claims against owner, operator, guarantor, or other person; election of available remedies upon failure to satisfy presentment
- [(b) Forms and procedures applicable]
- (b) *Prescribing forms and procedures; payment or request for hearing; burden of proof; decisions; finality and appeal; payment*
- (c) Subrogation rights; actions maintainable
- [(d) Time for presentation of claims or maintenance of actions]
- (d) *Statute of limitations*
- (e) *Other statutory or common law claims not waived, etc.*
- (f) *Double recovery prohibited*

§9613. [CERCLA §113]

Civil proceedings

- (a) Review of regulations in Circuit Court of Appeals of the United States for the District of Columbia
- (b) Jurisdiction; venue
- (c) Controversies or other matters resulting from tax collection or tax regulation review
- (d) Litigation commenced prior to December 11, 1980
- (e) *Nationwide service of process*
- (f) *Contribution*
- (g) *Period in which action may be brought*
- (h) *Timing of review*
- (i) *Intervention*
- (j) *Judicial review*
- (k) *Administrative record and participation procedures*
- (l) *Notice of actions*

§9614. [CERCLA §114]

Relationship to other law

- (a) Additional State liability or requirements with respect to release of substances within State
- (b) Recovery under other State or Federal law of compensation for removal costs or damages, or payment of claims
- [(c) Contributions to other funds: limitations, etc.]
- (c) *Recycled oil*
- (d) Financial responsibility of owner or operator or vessel of facility under State or local law, rule, or regulation

§9615. [CERCLA §115]

*Presidential delegation and assignment of duties or powers and promulgation of regulations*

§9616. [CERCLA §116]

*Schedules*

- (a) *Assessment and listing of facilities*
- (b) *Evaluation*
- (c) *Explanations*
- (d) *Commencement of RI/FS*
- (e) *Commencement of remedial action*

§9617. [CERCLA §117]

*Public participation*

- (a) *Proposed plan*
- (b) *Final plan*

- (c) Explanation of differences  
 (d) Publication  
 (e) Grants for technical assistance
- § 9618. [CERCLA §118]  
 High priority for drinking water supplies  
 Note: Removal and temporary storage of containers of radon contaminated soil; unconsolidated quaternary aquifer; study of shortages of skilled personnel; State requirements not applicable to certain transfers; study of lead poisoning in children; Federally licensed dam; community relocation at Times Beach site; limited waivers in State of Illinois; study of joint use of trucks; radon assessment and mitigation; Gulf Coast Hazardous Substance Research, Development and Demonstration Center; radon protection at current national priorities list sites; spill control technology; Pacific Northwest Hazardous Substance Research, Development and Demonstration Center; Silver Creek tailings
- § 9619. [CERCLA §119]  
 Response action contractors  
 (a) Liability of response action contractors  
 (b) Savings provisions  
 (c) Indemnification  
 (d) Exception  
 (e) Definitions  
 (f) Competition
- § 9620. [CERCLA §120]  
 Federal facilities  
 (c) Application of Act to Federal Government  
 (b) Notice  
 (c) Federal agency hazardous waste compliance docket  
 (d) Assessment and evaluation  
 (e) Required action by department  
 (f) State and local participation  
 (g) Transfer of authorities  
 (h) Property transferred by Federal agencies  
 (i) Obligations under Solid Waste Disposal Act  
 (j) National security
- § 9621. [CERCLA §121]  
 Cleanup standards  
 (a) Selection of remedial action  
 (b) General rules  
 (c) Review  
 (d) Degree of cleanup  
 (e) Permits and enforcement  
 (f) State involvement
- § 9622. [CERCLA §122]  
 Settlements  
 (a) Authority to enter into agreements  
 (b) Agreements with potentially responsible parties  
 (c) Effect of agreement  
 (d) Enforcement  
 (e) Special notice procedures  
 (f) Covenant not to sue  
 (g) De minimis settlements  
 (h) Cost recovery settlement authority  
 (i) Settlement procedures  
 (j) Natural resources  
 (k) Section not applicable to vessels  
 (l) Civil penalties  
 (m) Applicability of general principles of law
- § 9623. [CERCLA §123]  
 Reimbursement to local governments  
 (a) Application  
 (b) Reimbursement  
 (c) Amount  
 (d) Procedure
- § 9624. [CERCLA §124]  
 Methane recovery  
 (a) In general  
 (b) Exceptions
- § 9625. [CERCLA §125]  
 Section 3001(b)(3)(A)(i) waste  
 (c) Revision of hazard ranking system  
 (b) Inclusion prohibited
- § 9626. [CERCLA §126]  
 Indian tribes  
 (a) Treatment generally  
 (b) Community relocation  
 (c) Study  
 (d) Limitation
- Subchapter II—Hazardous Substance Response Revenue**  
**Part A—Hazardous Substance Response Trust Fund**  
 ELR 44065
- § 9631. [CERCLA §221]  
 Establishment of Hazardous Substance Response Trust Fund  
 (a) Creation of Trust Fund  
 (b) Transfers to Response Trust Fund  
 [(c) Expenditures from Response Trust Fund]  
 (c) Expenditures from Trust Fund
- § 9632. [CERCLA §222]  
 Liability of United States limited to amounts in Trust Fund  
 (a) General rule  
 (b) Order in which unpaid claims are to be paid
- § 9633. [CERCLA §223]  
 Administrative provisions  
 (a) Method of transfer  
 (b) Management of Trust Fund  
 (c) Authority to borrow
- Part B—Post-Closure Liability Trust Fund**  
 ELR 44066
- § 9641. [CERCLA §232]  
 Post-closure Liability Trust Fund  
 (a) Creation of Trust Fund  
 (b) Expenditures from Post-closure Liability Trust Fund  
 (c) Administrative provisions
- Subchapter III—Miscellaneous Provisions**  
 ELR 44067
- § 9651. [CERCLA §301]  
 Reports and studies  
 (a) Implementation experiences: identification and disposal of waste  
 (b) Private insurance protection  
 (c) Regulations respecting assessment of damage to natural resources

- (d) Issues, alternatives, and policy considerations involving selection of locations for waste treatment, storage, and disposal facilities
- (e) Adequacy of existing common law and statutory remedies
- (f) Modification of national contingency plan
- (g) *Insurability study*
- (h) *Report and oversight requirements*
- § 9652. [CERCLA §302]  
Effective dates; savings provisions
- § 9653. [CERCLA §303]  
Termination of authority to collect taxes
- § 9654. [CERCLA § 304(b), (c)]  
Applicability of Federal water pollution control funding, etc., provisions
- § 9655. [CERCLA §305]  
Legislative veto of rule or regulation:
  - (a) Transmission to Congress upon promulgation or repromulgation of rule or regulation; disapproval procedures
  - (b) Approval; effective dates
  - (c) Sessions of Congress as applicable
  - (d) Congressional inaction on, or rejection of, resolution of disapproval
- § 9656. [CERCLA §306]  
Transportation of hazardous substances; listing as hazardous material; liability for release
- § 9657. [CERCLA §308]  
Separability of provisions
- § 9658. [CERCLA §309]  
*Actions under state law for damages from exposure to hazardous substances*
  - (a) *State statutes of limitations for hazardous substance cases*
  - (b) *Definitions*
- § 9659. [CERCLA §310]  
*Citizens suits*
  - (a) *Authority to bring civil actions*
  - (b) *Venue*
  - (c) *Relief*
  - (d) *Rules applicable to subsection (a)(1) actions*
  - (e) *Rules applicable to subsection (a)(2) actions*
  - (f) *Costs*
  - (g) *Intervention*
  - (h) *Other rights*
  - (i) *Definitions*

- § 9660. [CERCLA §311]  
*Research, development, and demonstration*
  - (a) *Hazardous substance research and training*
  - (b) *Alternative or innovative treatment technology research and demonstration program*
  - (c) *Hazardous substance research*
  - (d) *University hazardous substance research centers*
  - (e) *Report to Congress*
  - (f) *Saving provision*
  - (g) *Small business participation*
- § 9661. [CERCLA §312]  
*Love Canal property acquisition*
  - (a) *Acquisition of property in emergency declaration area*
  - (b) *Procedures for acquisition*
  - (c) *State ownership*
  - (d) *Maintenance of property*
  - (e) *Habitability and land use study*
  - (f) *Funding*
  - (g) *Response*
  - (h) *Definitions*

**Subchapter IV—Pollution Insurance<sup>1</sup>**  
ELR 44079

- § 9671. [CERCLA §401]  
*Definitions*
- § 9672. [CERCLA §402]  
*State laws; scope of title*
  - (a) *State laws*
  - (b) *Scope of title*
- § 9673. [CERCLA §403]  
*Risk retention groups*
  - (a) *Exemption*
  - (b) *Exceptions*
  - (c) *Application of exemptions*
  - (d) *Agents or brokers*
- § 9674. [CERCLA §404]  
*Purchasing groups*
  - (a) *Exemption*
  - (b) *Application of exemptions*
  - (c) *Agents or brokers*
- § 9675. [CERCLA §405]  
*Applicability of securities laws*
  - (a) *Ownership interests*
  - (b) *Investment Company Act*
  - (c) *Blue Sky Law*

<sup>1</sup> At press time, §§401 through 405 had not yet been codified in the United States Code. The editors of ELR have assigned these sections to 42 U.S.C. §§9671-9675, based on their position within CERCLA.

## SUBCHAPTER I—HAZARDOUS SUBSTANCES RELEASES, LIABILITY, COMPENSATION

### § 9601. [CERCLA § 101]

#### Definitions

For the purpose of this subchapter, the term—

(1) *The term* "act of God" means an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight[;].

(2) *The term* "Administrator" means the Administrator of the United States Environmental Protection Agency[;].

(3) *The term* "barrel" means forty-two United States gallons at sixty degrees Fahrenheit[;].

(4) *The term* "claim" means a demand in writing for a sum certain[;].

(5) *The term* "claimant" means any person who presents a claim for compensation under this chapter[;].

(6) *The term* "damages" means damages for injury or loss of natural resources as set forth in section 9607(a) or 9611(b) of this title[;].

(7) *The term* "drinking water supply" means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act [42 U.S.C.A. § 300f et seq.]) or as drinking water by one or more individuals[;].

(8) *The term* "environment" means (A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson Fishery Conservation and Management Act [16 U.S.C.A. § 1801 et seq.], and (B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States[;].

(9) *The term* "facility" means (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel[;].

(10) *The term* "federally permitted release" means (A) discharges in compliance with a permit under section 1342 of Title 33, (B) discharges resulting from circumstances identified and reviewed and made part of the public record with respect to a permit issued or modified under section 1342 of Title 33 and subject to a condition of such permit, (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 1342 of Title 33, which are caused by events occurring within the scope of relevant operating or treatment systems, (D) discharges in compliance with a legally enforceable permit under section 1344 of Title 33, (E) releases in compliance with a legally enforceable final permit issued pursuant to section 3005(a) through (d) of the Solid Waste Disposal Act [42 U.S.C.A. § 6925(a) to (d)] from a hazardous waste treatment, storage, or disposal

facility when such permit specifically identifies the hazardous substances and makes such substances subject to a standard of practice, control procedure or bioassay limitation or condition, or other control on the hazardous substances in such releases, (F) any release in compliance with a legally enforceable permit issued under section 1412 of Title 33 or section 1413 of Title 33, (G) any injection of fluids authorized under Federal underground injection control programs or State programs submitted for Federal approval (and not disapproved by the Administrator of the Environmental Protection Agency) pursuant to part C of the Safe Drinking Water Act [42 U.S.C.A. § 300h et seq.], (H) any emission into the air subject to a permit or control regulation under section 111 [42 U.S.C.A. § 7411], section 112 [42 U.S.C.A. § 7412], Title I part C [42 U.S.C.A. § 7470 et seq.], Title I part D [42 U.S.C.A. § 7501 et seq.], or State implementation plans submitted in accordance with section 110 of the Clean Air Act [42 U.S.C.A. § 7410] (and not disapproved by the Administrator of the Environmental Protection Agency), including any schedule or waiver granted, promulgated, or approved under these sections, (I) any injection of fluids or other materials authorized under applicable State law (i) for the purpose of stimulating or treating wells for the production of crude oil, natural gas, or water, (ii) for the purpose of secondary, tertiary, or other enhanced recovery of crude oil or natural gas, or (iii) which are brought to the surface in conjunction with the production of crude oil or natural gas and which are reinjected, (J) the introduction of any pollutant into a publicly owned treatment works when such pollutant is specified in and in compliance with applicable pretreatment standards of section 1317(b) or (c) of Title 33 and enforceable requirements in a pretreatment program submitted by a State or municipality for Federal approval under section 1342 of Title 33, and (K) any release of source, special nuclear, or by-product material, as those terms are defined in the Atomic Energy Act of 1954 [42 U.S.C.A. § 2011 et seq.], in compliance with a legally enforceable license, permit, regulation, or order issued pursuant to the Atomic Energy Act of 1954[;].

(11) *The term* "Fund" or "Trust Fund" means the Hazardous Substance Response Fund established by section 9631 of this title or, in the case of a hazardous waste disposal facility for which liability has been transferred under section 9607(k) of this title, the Post-closure Liability Fund established by section 9641 of this title[;].

(12) *The term* "ground water" means water in a saturated zone or stratum beneath the surface of land or water[;].

(13) *The term* "guarantor" means any person, other than the owner or operator, who provides evidence of financial responsibility for an owner or operator under this chapter[;].

(14) *The term* "hazardous substance" means (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the

Solid Waste Disposal Act [42 U.S.C.A. § 6921] (but not including any waste the regulation of which under the Solid Waste Disposal Act [42 U.S.C.A. § 6901 et seq.] has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317 (a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act [42 U.S.C.A. § 7412], and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas);].

(15) *The term "navigable waters" or "navigable waters of the United States" means the waters of the United States, including the territorial seas[;].*

►I.H. Indian Tribes  
SARA § 101(a)

(16) *The term "natural resources" means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the fishery conservation zone established by the Magnuson Fishery Conservation and Management Act [16 U.S.C.A. § 1801 et seq.]) any State or local government, [or] any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe[;].* ◀

(17) *The term "offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel[;].*

(18) *The term "onshore facility" means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land or nonnavigable waters within the United States[;].*

(19) *The term "otherwise subject to the jurisdiction of the United States" means subject to the jurisdiction of the United States by virtue of United States citizenship, United States vessel documentation or numbering, or as provided by international agreement to which the United States is a party[;].*

►II.B. Liability Limits  
SARA § 101(b)

(20)(A) *The term "owner or operator" means (i) in the case of a vessel, any person owning, operating, or chartering by demise, such vessel, (ii) in the case of an onshore facility or an offshore facility, any person owning or operating such facility, and [(iii) in the case of any abandoned facility, any person who owned, operated, or otherwise controlled activities at such facility immediately prior to such abandonment.] (iii) in the case of any facility, title or control of which was conveyed due to bankruptcy, foreclosure, tax delinquency, abandonment, or similar means to a unit of State or local government, any person who owned, operated, or otherwise controlled activities at*

*such facility immediately beforehand. Such term does not include a person, who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect his security interest in the vessel or facility[;].*

(B) [i]/n the case of a hazardous substance which has been accepted for transportation by a common or contract carrier and except as provided in section 9607(a)(3) or (4) of this title, (i) the term "owner or operator" shall mean such common carrier or other bona fide for hire carrier acting as an independent contractor during such transportation, (ii) the shipper of such hazardous substance shall not be considered to have caused or contributed to any release during such transportation which resulted solely from circumstances or conditions beyond his control[;].

(C) [i]/n the case of a hazardous substance which has been delivered by a common or contract carrier to a disposal or treatment facility and except as provided in section 9607(a)(3) or (4) of this title (i) the term "owner or operator" shall not include such common or contract carrier, and (ii) such common or contract carrier shall not be considered to have caused or contributed to any release at such disposal or treatment facility resulting from circumstances or conditions beyond its control[;].

(D) *The term "owner or operator" does not include a unit of State or local government which acquired ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function as sovereign. The exclusion provided under this paragraph shall not apply to any State or local government which has caused or contributed to the release or threatened release of a hazardous substance from the facility, and such a State or local government shall be subject to the provisions of this chapter in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 9607.* ◀

(21) *The term "person" means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, commission, political subdivision of a State, or any interstate body[;].*

►I.A. Scope of Superfund  
SARA § 101(c)

(22) *The term "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes (A) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (C) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954 [42 U.S.C.A. § 2011 et seq.], if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section*

170 of such Act [42 U.S.C.A. § 2210], or, for the purposes of section 9604 of this title or any other response action, any release of source byproduct, or special nuclear material from any processing site designated under section 7912(a)(1) or 7942(a) of this title, and (D) the normal application of fertilizer[;]. ◀

(23) *The terms "remove" or "removal" means:* the cleanup or removal of released hazardous substances from the environment, such actions as may be necessary taken in the event of the threat of release of hazardous substances into the environment, such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removed material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under section 9604(b) of this title, and any emergency assistance which may be provided under the Disaster Relief Act of 1974 [42 U.S.C.A. § 5121 et seq.][;].

►I.F. Cleanup Standards  
SARA § 101(d)

(24) *The terms "remedy" or "remedial action" means:* those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, neutralization, cleanup of released hazardous substances or contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, onsite treatment or incineration, provision of alternative water supplies, and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health or [welfare]. The term does not include off-site transport of hazardous substances, or the storage, treatment, destruction, or secure disposition off-site of such hazardous substances or contaminated materials unless the President determines that such actions (A) are more cost-effective than other remedial actions, (B) will create new capacity to manage, in compliance with subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.], hazardous substances in addition to those located at the affected facility, or (C) are necessary to protect public

health or welfare or the environment from a present or potential risk which may be created by further exposure to the continued presence of such substances or materials[;] *welfare; the term includes offsite transport and offsite storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials.* ◀

►I.C. Federal/State Cost Sharing  
SARA § 101(e)

(25) *The terms "respond" or "response" means:* remove, removal, remedy, and remedial action[;], *all such terms (including the terms "removal" and "remedial action") include enforcement activities related thereto.* ◀

(26) *The terms "transport" or "transportation" means:* the movement of a hazardous substance by any mode, including pipeline (as defined in the Pipeline Safety Act), and in the case of a hazardous substance which has been accepted for transportation by a common or contract carrier, the term "transport" or "transportation" shall include any stoppage in transit which is temporary, incidental to the transportation movement, and at the ordinary operating convenience of a common or contract carrier, and any such stoppage shall be considered as a continuity of movement and not as the storage of a hazardous substance[;].

(27) *The terms "United States" and "State" include the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction[;].*

(28) *The term "vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water[;].*

(29) *The terms "disposal", "hazardous waste", and "treatment" shall have the meaning provided in section 1004 of the Solid Waste Disposal Act [42 U.S.C.A. § 6903][;].*

(30) *The terms "territorial sea" and "contiguous zone" shall have the meaning provided in section 1362 of Title 33.*

(31) *The term "national contingency plan" means the national contingency plan published under section 1321(c) of Title 33 or revised pursuant to section 9605 of this title[; and].*

(32) *The terms "liable" or "liability" under this subchapter shall be construed to be the standard of liability which obtains under section 1321 of Title 33.*

(33) *The term "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring; except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous*

substance under subparagraphs (A) through (F) of paragraph (14) and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

►I.A. Scope of Superfund  
SARA § 101(f)

(34) The term "alternative water supplies" includes, but is not limited to, drinking water and household water supplies. ◀

►II.B. Liability Limits  
SARA § 101(f)

(35)(A) The term "contractual relationship", for the purpose of section 9607(b)(3), includes, but is not limited to, land contracts, deeds or other instruments transferring title or possession, unless the real property on which the facility concerned is located was acquired by the defendant after the disposal or placement of the hazardous substance on, in, or at the facility, and one or more of the circumstances described in clause (i), (ii), or (iii) is also established by the defendant by a preponderance of the evidence:

(i) At the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility.

(ii) The defendant is a government entity which acquired the facility by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation.

(iii) The defendant acquired the facility by inheritance or bequest.

In addition to establishing the foregoing, the defendant must establish that he has satisfied the requirements of section 9607(b)(3)(a) and (b).

(B) To establish that the defendant had no reason to know, as provided in clause (i) of subparagraph (A) of this paragraph, the defendant must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability. For purposes of the preceding sentence the court shall take into account any specialized knowledge or experience on the part of the defendant, the relationship of the purchase price to the value of the property if uncontaminated, commonly known or reasonably ascertainable information about the property, the obviousness of the presence or likely presence of contamination at the property, and the ability to detect such contamination by appropriate inspection.

(C) Nothing in this paragraph or in section 9607(b)(3) shall diminish the liability of any previous owner or operator of such facility who would otherwise be liable under this chapter. Notwithstanding this paragraph, if the defendant obtained actual knowledge of the release or threatened release of a hazardous substance at such facility when the defendant owned the real property and then subsequently transferred ownership of the property to another person without disclosing such knowledge, such defendant shall be treated as liable under section 9607(a)(1) and no defense under section 9607(b)(3) shall be available to such defendant.

(D) Nothing in this paragraph shall affect the liability under this chapter of a defendant who, by any act or omission, caused or contributed to the release or threatened release of a hazardous substance which is the subject of the action relating to the facility. ◀

►I.H. Indian Tribes  
SARA § 101(f)

(36) The term "Indian tribe" means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians. ◀

►IV.G. Recycled Oil  
SARA § 114(b)

(37)(A) The term "service station dealer" means any person—

(i) who owns or operates a motor vehicle service station, filling station, garage, or similar retail establishment engaged in the business of selling, repairing, or servicing motor vehicles, where a significant percentage of the gross revenue of the establishment is derived from the fueling, repairing, or servicing of motor vehicles, and

(ii) who accepts for collection, accumulation, and delivery to an oil recycling facility, recycled oil that (I) has been removed from the engine of a light duty motor vehicle or household appliances by the owner of such vehicle or appliances, and (II) is presented, by such owner, to such person for collection, accumulation, and delivery to an oil recycling facility.

(B) For purposes of section 9614(c), the term "service station dealer" shall, notwithstanding the provisions of subparagraph (A), include any government agency that establishes a facility solely for the purpose of accepting recycled oil that satisfies the criteria set forth in subclauses (I) and (II) of subparagraph (A)(ii), and with respect to recycled oil that satisfies the criteria set forth in subclauses (I) and (II), owners or operators of refuse collection services who are compelled by State law to collect, accumulate, and deliver such oil to an oil recycling facility.

(C) The President shall promulgate regulations regarding the determination of what constitutes a significant percentage of the gross revenues of an establishment for purposes of this paragraph. ◀

►IV.K. Ocean Incineration  
SARA § 127(a)

(38) The term "incineration vessel" means any vessel which carries hazardous substances for the purposes of incineration of such substances, so long as such substances or residues of such substances are on board. ◀

Pub.L. 96-510, Title I, § 101, Dec. 11, 1980, 94 Stat. 2767; Pub.L. 96-561, Title II, § 238(b), Dec. 22, 1980, 94 Stat. 3309, as added and amended Pub.L. 99-499, Title I, §§ 101, 114(b), 127(a), Oct. 17, 1986.

So in original. Probably should be "or".

So in original. Probably should be "mean".

So in original. Probably should be "necessarily".

**SHORT TITLE OF 1986 AMENDMENTS.** Section 1 of Pub.L. 99-499 provided that: "This Act [which amended this chapter generally] may be cited as the 'Superfund Amendments and Reauthorization Act of 1986.'"

**CERCLA AND ADMINISTRATOR.** Section 2 of Pub.L. 99-499 provided that: "As used in this Act [which amended this chapter generally]—

(1) **CERCLA.**—The term 'CERCLA' means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.).

(2) **ADMINISTRATOR.**—The term 'Administrator' means the Administrator of the Environmental Protection Agency."

**LIMITATION ON CONTRACT AND BORROWING AUTHORITY.** Section 3 of Pub.L. 99-499 provided that: "Any authority provided by this Act [which amended this chapter generally] including any amendment made by this Act, to enter into contracts to obligate the United States or to incur indebtedness for the repayment of which the United States is liable shall be effective only to such extent or in such amounts as are provided in appropriation Acts."

**EFFECTIVE DATE OF 1986 AMENDMENTS.** Section 4 of Pub.L. 99-499 provided that: "Except as otherwise specified in section 121(b) of this Act [which amended this chapter generally] or in any other provision of titles I, II, III, and IV of this Act, the amendments made by titles I through IV of this Act shall take effect on the enactment of this Act."

## § 9602. [CERCLA § 102]

Designation of additional hazardous substances and establishment of reportable released quantities; regulations

### ►IV.A. Reportable Quantities SARA § 102

(a) The Administrator shall promulgate and revise as may be appropriate, regulations designating as hazardous substances, in addition to those referred to in section 9601(14) of this title, such elements, compounds, mixtures, solutions, and substances which, when released into the environment may present substantial danger to the public health or welfare or the environment, and shall promulgate regulations establishing that quantity of any hazardous substance the release of which shall be reported pursuant to section 9603 of this title. The Administrator may determine that one single quantity shall be the reportable quantity for any hazardous substance, regardless of the medium into which the hazardous substance is released. *For all hazardous substances for which proposed regulations establishing reportable quantities were published in the Federal Register under this subsection on or before March 1, 1986, the Administrator shall promulgate under this subsection final regulations establishing reportable quantities not later than December 31, 1986. For all hazardous substances for which proposed regulations establishing reportable quantities were not published in the Federal Register under this subsection on or before March 1, 1986, the Administrator shall publish under this subsection proposed regulations establishing reportable quantities not later than December 31, 1986, and promulgate final regulations under this subsection establishing reportable quantities not later than April 30, 1988.* ◀

(b) Unless and until superseded by regulations establishing a reportable quantity under subsection (a) of this section for any hazardous substance as defined in section 9601(14) of this title, (1) a quantity of one pound, or (2) for those hazardous substances for which reportable quantities have been established pursuant to section 1321(b)(4) of Title 33, such reportable quantity, shall be deemed that quantity, the release of which requires notification pursuant to section 9603(a) or (b) of this title.

Pub.L. 96-510, Title I, § 102, Dec. 11, 1980, 94 Stat. 2772, as added Pub.L. 99-499, Title I, § 102, Oct. 17, 1986.

## § 9603. [CERCLA § 103]

Notification requirements respecting released substances

(a) **Notice to National Response Center upon release from vessel or offshore or onshore facility by person in charge; conveyance of notice by Center**

Any person in charge of a vessel or an offshore or an onshore facility shall, as soon as he has knowledge of any release (other than a federally permitted release) of a hazardous substance from such vessel or facility in quantities equal to or greater than those determined pursuant to section 9602 of this title, immediately notify the National Response Center established under the Clean Water Act [33 U.S.C.A. § 1251 et seq.] of such release. The National Response Center shall convey the notification expeditiously to all appropriate Government agencies, including the Governor of any affected State.

(b) **Penalties for failure to notify; use of notice or information pursuant to notice in criminal case**

Any person—

(1) in charge of a vessel from which a hazardous substance is released, other than a federally permitted release, into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, or

(2) in charge of a vessel from which a hazardous substance is released, other than a federally permitted release, which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Magnuson Fishery Conservation and Management Act [16 U.S.C.A. § 1801 et seq.]), and who is otherwise subject to the jurisdiction of the United States at the time of the release, or

### ►II.D. Civil and Criminal Penalties SARA § 109(a)

(3) in charge of a facility from which a hazardous substance is released, other than a federally permitted release, in a quantity equal to or greater than that determined pursuant to section 9602 of this title who fails to notify immediately the appropriate agency of the United States Government as soon as he has knowledge of such release or who submits in such a notification any information which he knows to be false or misleading shall, upon conviction, be fined [not more than \$10,000 or imprisoned for not more than one year, or both] in accordance with the applicable provisions of title 18 of the United States Code or imprisoned for not more than 3

years (or not more than 5 years in the case of a second or subsequent conviction), or both ◀.

▶II.D. Civil and Criminal Penalties  
SARA § 103

Notification received pursuant to this [paragraph] subsection or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement. ◀

(c) **Notice to Administrator of EPA of existence of storage, etc., facility by owner or operator; exceptions; time, manner, and form of notice; penalties for failure to notify; use of notice or information pursuant to notice in criminal case**

Within one hundred and eighty days after December 11, 1980, any person who owns or operates or who at the time of disposal owned or operated, or who accepted hazardous substances for transport and selected, a facility at which hazardous substances (as defined in section 9601(14)(C) of this title) are or have been stored, treated, or disposed of shall, unless such facility has a permit issued under, or has been accorded interim status under, subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.], notify the Administrator of the Environmental Protection Agency of the existence of such facility, specifying the amount and type of any hazardous substance to be found there, and any known, suspected, or likely releases of such substances from such facility. The Administrator may prescribe in greater detail the manner and form of the notice and the information included. The Administrator shall notify the affected State agency, or any department designated by the Governor to receive such notice, of the existence of such facility. Any person who knowingly fails to notify the Administrator of the existence of any such facility shall, upon conviction, be fined not more than \$10,000, or imprisoned for not more than one year, or both. In addition, any such person who knowingly fails to provide the notice required by this subsection shall not be entitled to any limitation of liability or to any defenses to liability set out in section 9607 of this title: *Provided, however,* That notification under this subsection is not required for any facility which would be reportable hereunder solely as a result of any stoppage in transit which is temporary, incidental to the transportation movement, or at the ordinary operating convenience of a common or contract carrier, and such stoppage shall be considered as a continuity of movement and not as the storage of a hazardous substance. Notification received pursuant to this subsection or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement.

(d) **Recordkeeping requirements; promulgation of rules and regulations by Administrator of EPA; penalties for violations; waiver of retention requirements**

(1) The Administrator of the Environmental Protection Agency is authorized to promulgate rules and regulations specifying, with respect to—

- (A) the location, title, or condition of a facility, and
- (B) the identity, characteristics, quantity, origin,

or condition (including containerization and previous treatment) of any hazardous substances contained or deposited in a facility; the records which shall be retained by any person required to provide the notification of a facility set out in subsection (c) of this section. Such specification shall be in accordance with the provisions of this subsection.

▶II.D. Civil and Criminal Penalties  
SARA § 109(a)

(2) Beginning with December 11, 1980, for fifty years thereafter or for fifty years after the date of establishment of a record (whichever is later), or at any such earlier time as a waiver if obtained under paragraph (3) of this subsection, it shall be unlawful for any such person knowingly to destroy, mutilate, erase, dispose of, conceal, or otherwise render unavailable or unreadable or falsify any records identified in paragraph (1) of this subsection. Any person who violates this paragraph shall, upon conviction, be fined [not more than \$20,000, or imprisoned for not more than one year or both.] *in accordance with the applicable provisions of title 18 of the United States Code or imprisoned for not more than 3 years (or not more than 5 years in the case of a second or subsequent conviction), or both* ◀.

(3) At any time prior to the date which occurs fifty years after December 11, 1980, any person identified under paragraph (1) of this subsection may apply to the Administrator of the Environmental Protection Agency for a waiver of the provisions of the first sentence of paragraph (2) of this subsection. The Administrator is authorized to grant such waiver if, in his discretion, such waiver would not unreasonably interfere with the attainment of the purposes and provisions of this chapter. The Administrator shall promulgate rules and regulations regarding such a waiver so as to inform parties of the proper application procedure and conditions for approval of such a waiver.

(4) Notwithstanding the provisions of this subsection, the Administrator of the Environmental Protection Agency may in his discretion require any such person to retain any record identified pursuant to paragraph (1) of this subsection for such a time period in excess of the period specified in paragraph (2) of this subsection as the Administrator determines to be necessary to protect the public health or welfare.

(e) **Applicability to registered pesticide product**

This section shall not apply to the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act [7 U.S.C.A. § 136 et seq.] or to the handling and storage of such a pesticide product by an agricultural producer.

(f) **Exemptions from notice and penalty provisions for substances reported under other Federal law or is in continuous release, etc.**

No notification shall be required under subsection (a) or (b) of this section for any release of a hazardous substance—

- (1) which is required to be reported (or specifically exempted from a requirement for reporting under subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.] or regulations thereunder

thereunder and which has been reported to the National Response Center, or

(2) which is a continuous release, stable in quantity and rate, and is—

(A) from a facility for which notification has been given under subsection (c) of this section, or

(B) a release of which notification has been given under subsections (a) and (b) of this section for a period sufficient to establish the continuity, quantity, and regularity of such release:

*Provided*, That notification in accordance with subsections (a) and (b) of this paragraph shall be given for releases subject to this paragraph annually, or at such time as there is any statistically significant increase in the quantity of any hazardous substance or constituent thereof released, above that previously reported or occurring.

Pub.L. 96-510, Title I, § 103, Dec. 11, 1980, 94 Stat. 2772; Pub.L. 96-561, Title II, § 238(b), Dec. 22, 1980, 94 Stat. 3300, as added and amended Pub.L. 99-499, Title I, §§ 103, 109(a), Oct. 17, 1986.

<sup>1</sup> So in original. Probably should be "expeditiously".

## § 9604. [CERCLA § 104]

### Response authorities

#### (a) Removal and other remedial action by President; applicability of national contingency plan; definition

##### ►I.B. Response Authorities SARA § 104(a)

(1) Whenever (A) any hazardous substance is released or there is a substantial threat of such a release into the environment, or (B) there is a release or substantial threat of release into the environment of any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare, the President is authorized to act, consistent with the national contingency plan, to remove or arrange for the removal of, and provide for remedial action relating to such hazardous substance, pollutant, or contaminant at any time (including its removal from any contaminated natural resource), or take any other response measure consistent with the national contingency plan which the President deems necessary to protect the public health or welfare or the environment, unless the President determines that such removal and remedial action will be done properly by the owner or operator of the vessel or facility from which the release or threat of release emanates, or by any other responsible party. *When the President determines that such action will be done properly and promptly by the owner or operator of the facility or vessel or by any other responsible party, the President may allow such person to carry out the action, conduct the remedial investigation, or conduct the feasibility study in accordance with section 9622. No remedial investigation or feasibility study (RIFS) shall be authorized except on a determination by the President that the party is qualified to conduct the RIFS and only if the President contracts with or arranges for a qualified person to assist the President in overseeing and reviewing the conduct of such RIFS and if the responsi-*

*ble party agrees to reimburse the Fund for any cost incurred by the President under, or in connection with, the oversight contract or arrangement. In no event shall a potentially responsible party be subject to a lesser standard of liability, receive preferential treatment, or in any other way, whether direct or indirect, benefit from any such arrangements as a response action contractor, or as a person hired or retained by such a response action contractor, with respect to the release or facility in question. ◀*

##### ►I.A. Scope of Superfund SARA § 104(a)

*The President shall give primary attention to those releases which the President deems may present a public health threat. ◀*

##### ►I.K. Removal Actions SARA § 104(b)

[(2) For the purposes of this section, "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil and any fraction thereof which is not otherwise specifically listed or designated as hazardous substances under section 9601(14)(A) through (F) of this title, nor does it include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).]

(2) **REMOVAL ACTION.**—*Any removal action undertaken by the President under this subsection (or by any other person referred to in section 9622) should, to the extent the President deems practicable, contribute to the efficient performance of any long term remedial action with respect to the release or threatened release concerned. ◀*

##### ►I.A. Scope of Superfund SARA § 104(c)

(3) **LIMITATIONS ON RESPONSE.**—*The President shall not provide for a removal or remedial action under this section in response to a release or threat of release—*

(A) *of a naturally occurring substance in its altered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found;*

(B) *from products which are part of the structure of, and result in exposure within, residential buildings or business or community structures; or*

(C) *into public or private drinking water supplies due to deterioration of the system through ordinary use.*

(4) **EXCEPTION TO LIMITATIONS.**—*Notwithstanding paragraph (3) of this subsection, to the extent authorized by this section, the President may respond to any release or threat of release if, in the President's discretion, it constitutes a public health or environmental emergency and no other person with the authority and capability to respond to the emergency will do so in a timely manner. ◀*

[Investigations, monitoring, etc., by President]

**(b) (1) INFORMATION; STUDIES AND INVESTIGATIONS.—**

Whenever the President is authorized to act pursuant to subsection (a) of this section, or whenever the President has reason to believe that a release has occurred or is about to occur, or that illness, disease, or complaints thereof may be attributable to exposure to a hazardous substance, pollutant, or contaminant and that a release may have occurred or be occurring, he may undertake such investigations, monitoring, surveys, testing, and other information gathering as he may deem necessary or appropriate to identify the existence and extent of the release or threat thereof, the source and nature of the hazardous substances, pollutants or contaminants involved, and the extent of danger to the public health or welfare or to the environment. In addition, the President may undertake such planning, legal, fiscal, economic, engineering, architectural, and other studies or investigations as he may deem necessary or appropriate to plan and direct response actions, to recover the costs thereof, and to enforce the provisions of this chapter.

►I.N. Natural Resource Damages  
SARA § 104(d)

**(2) COORDINATION OF INVESTIGATIONS.—***The President shall promptly notify the appropriate Federal and State natural resource trustees of potential damages to natural resources resulting from releases under investigation pursuant to this section and shall seek to coordinate the assessments, investigations, and planning under this section with such Federal and State trustees.* ◀

**(c) Criteria for continuance of obligations from Fund over specified amount for response actions; consultation by President with affected States; contracts or cooperative agreements by States with President prior to remedial actions; cost-sharing agreements; selection by President of appropriate remedial actions**

►I.K. Removal Actions  
SARA § 104(e)

(1) Unless (A) the President finds that (i) continued response actions are immediately required to prevent, limit, or mitigate an emergency, (ii) there is an immediate risk to public health or welfare or the environment, and (iii) such assistance will not otherwise be provided on a timely basis, or (B) the President has determined the appropriate remedial actions pursuant to paragraph (2) of this subsection and the State or States in which the source of the release is located have complied with the requirements of paragraph (3) of this subsection, or (C) continued response action is otherwise appropriate and consistent with the remedial action to be taken obligations from the Fund, other than those authorized by subsection (b) of this section, shall not continue after [§1,000,000] \$2,000,000 has been obligated for response actions or [six months] 12 months has elapsed from the date of initial response to a release or threatened release of hazardous substances. ◀

(2) The President shall consult with the affected State or States before determining any appropriate remedial action to be taken pursuant to the authority granted under subsection (c) of this section.

►I.C. Federal/State Cost Sharing  
SARA § 104(f)

(3) The President shall not provide any remedial actions pursuant to this section unless the State in which the release occurs first enters into a contract or cooperative agreement with the President providing assurances deemed adequate by the President that (A) the State will assure all future maintenance of the removal and remedial actions provided for the expected life of such actions as determined by the President; (B) the State will assure the availability of a hazardous waste disposal facility acceptable to the President and in compliance with the requirements of subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.] for any necessary offsite storage, destruction, treatment, or secure disposition of the hazardous substances; and (C) the State will pay or assure payment of (i) 10 per centum of the costs of the remedial action, including all future maintenance, or [(ii) at least 50 per centum or such greater amount as the President may determine appropriate, taking into account the degree of responsibility of the State or political subdivision, of any sums expended in response to a release at a facility that was owned at the time of any disposal of hazardous substances therein by the State or a political subdivision thereof.] (ii) 50 per cent (or such greater amount as the President may determine appropriate, taking into account the degree of responsibility of the State or political subdivision for the release) of any sums expended in response to a release at a facility, that was operated by the State or a political subdivision thereof, either directly or through a contractual relationship or otherwise, at the time of any disposal of hazardous substances therein. For the purpose of clause (ii) of this subparagraph, the term "facility" does not include navigable waters or the beds underlying those waters. The President shall grant the State a credit against the share of the costs for which it is responsible under this paragraph for any documented direct out-of-pocket non-Federal funds expended or obligated by the State or a political subdivision thereof after January 1, 1978, and before December 11, 1980, for cost-eligible response actions and claims for damages compensable under section 9611 of this title relating to the specific release in question: *Provided, however,* That in no event shall the amount of the credit granted exceed the total response costs relating to the release. ◀

►I.H. Indian Tribes  
SARA § 207(b)

*In the case of remedial action to be taken on land or water held by an Indian tribe, held by the United States in trust for Indians, held by a member of an Indian tribe (if such land or water is subject to a trust restriction on alienation), or otherwise within the borders of an Indian reservation, the requirements of this paragraph for assurances regarding future maintenance and cost-sharing shall not apply, and the President shall provide the assurance required by this paragraph regarding the availability of a hazardous waste disposal facility.* ◀

►I.F. Cleanup Standards  
SARA § 104(g)

(4) The President shall select appropriate remedial action determined to be necessary to carry out this section which are to the extent practicable in accordance with the

national contingency plan and which provide for that cost-effective response which provides a balance between the need for protection of public health and welfare and the environment at the facility under consideration, and the availability of amounts from the Fund established under subchapter II of this chapter to respond to other sites which present or may present a threat to public health or welfare or the environment, taking into consideration the need for immediate action.]

**(4) SELECTION OF REMEDIAL ACTION.**—The President shall select remedial actions to carry out this section in accordance with section 9621 of this title (relating to cleanup standards). ◀

▶I.C. Federal/State Cost Sharing  
SARA § 104(h),(i)

**(5) STATE CREDITS.**—

**(A) GRANTING OF CREDIT.**—The President shall grant a State a credit against the share of the costs, for which it is responsible under paragraph (3) with respect to a facility listed on the National Priorities List under the National Contingency Plan, for amounts expended by a State for remedial action at such facility pursuant to a contract or cooperative agreement with the President. The credit under this paragraph shall be limited to those State expenses which the President determines to be reasonable, documented, direct out-of-pocket expenditures of non-Federal funds.

**(B) EXPENSES BEFORE LISTING OR AGREEMENT.**—The credit under this paragraph shall include expenses for remedial action at a facility incurred before the listing of the facility on the National Priorities List or before a contract or cooperative agreement is entered into under subsection (d) for the facility if—

(i) after such expenses are incurred the facility is listed on such list and a contract or cooperative agreement is entered into for the facility, and

(ii) the President determines that such expenses would have been credited to the State under subparagraph (A) had the expenditures been made after listing of the facility on such list and after the date on which such contract or cooperative agreement is entered into.

**(C) RESPONSE ACTIONS BETWEEN 1978 and 1980.**—The credit under this paragraph shall include funds expended or obligated by the State or a political subdivision thereof after January 1, 1978, and before December 11, 1980, for cost-eligible response actions and claims for damages compensable under section 111.

**(D) STATE EXPENSES AFTER DECEMBER 11, 1980, IN EXCESS OF 10 PERCENT OF COSTS.**—The credit under this paragraph shall include 50 percent of State expenses incurred at a facility owned, but not operated, by such State or by a political subdivision thereof. Such credit applies only to expenses incurred pursuant to a contract or cooperative agreement under subsection (d) and only to expenses incurred after December 11, 1980, but before the date of the enactment of this paragraph.

**(E) ITEM-BY-ITEM APPROVAL.**—In the case of expenditures made after the date of the enactment of this paragraph, the President may require prior approval of each item of expenditure as a condition of granting a credit under this paragraph.

**(F) USE OF CREDITS.**—Credits granted under this paragraph for funds expended with respect to a facility may be used by the State to reduce all or part of the share of costs otherwise required to be paid by the State under paragraph (3) in connection with remedial actions at such facility. If the amount of funds for which credit is allowed under this paragraph exceeds such share of costs for such facility, the State may use the amount of such excess to reduce all or part of the share of such costs at other facilities in that State. A credit shall not entitle the State to any direct payment.

**(6) OPERATION AND MAINTENANCE.**—For the purposes of paragraph (3) of this subsection, in the case of ground or surface water contamination, completed remedial action includes the completion of treatment or other measures, whether taken onsite or offsite, necessary to restore ground and surface water quality to a level that assures protection of human health and the environment. With respect to such measures, the operation of such measures for a period of up to 10 years after the construction or installation and commencement of operation shall be considered remedial action. Activities required to maintain the effectiveness of such measures following such period or the completion of remedial action whichever is earlier, shall be considered operation or maintenance.

**(7) LIMITATION ON SOURCE OF FUNDS FOR O&M.**—During any period after the availability of funds received by the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 from tax revenues or appropriations from general revenues, the Federal share of the payment of the cost of operation or maintenance pursuant to paragraph (3)(C)(i) or paragraph (6) of this subsection (relating to operation and maintenance) shall be from funds received by the Hazardous Substance Superfund from amounts recovered on behalf of such fund under this chapter. ◀

▶IV.J. Recontracting  
SARA § 104(j)

**(8) RECONTRACTING.**—The President is authorized to undertake or continue whatever interim remedial actions the President determines to be appropriate to reduce risks to public health or the environment where the performance of a complete remedial action requires recontracting because of the discovery of sources, types, or quantities of hazardous substances not known at the time of entry into the original contract. The total cost of interim actions undertaken at a facility pursuant to this paragraph shall not exceed \$2,000,000. ◀

▶I.E. State Assurances of Capacity  
SARA § 104(k)

**(9) SITING.**—Effective 3 years after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the President shall not provide any remedial actions pursuant to this section unless the State in which the release occurs first enters into a contract or cooperative agreement.

with the President providing assurances deemed adequate by the President that the State will assure the availability of hazardous waste treatment or disposal facilities which—

(A) have adequate capacity for the destruction, treatment, or secure disposition of all hazardous wastes that are reasonably expected to be generated within the State during the 20-year period following the date of such contract or cooperative agreement and to be disposed of, treated, or destroyed,

(B) are within the State or outside the State in accordance with an interstate agreement or regional agreement or authority,

(C) are acceptable to the President, and

(D) are in compliance with the requirements of subtitle C of the Solid Waste Disposal Act. ◀

(d) Contracts or cooperative agreements by President with States or political subdivisions; cost-sharing provisions; enforcement requirements and procedures

▶I.C. Federal/State Cost Sharing  
SARA § 104(l)

[(1) Where the President determines that a State or political subdivision thereof has the capability to carry out any or all of the actions authorized in this section, the President may, in his discretion, enter into a contract or cooperative agreement with such State or political subdivision to take such actions in accordance with criteria and priorities established pursuant to section 9605(8) of this title and to be reimbursed for the reasonable response costs thereof from the Funds. Any contract made hereunder shall be subject to the cost-sharing provisions of subsection (c) of this section.]

**(1) COOPERATIVE AGREEMENTS.—**

(A) **STATE APPLICATIONS.**—A State or political subdivision thereof or Indian tribe may apply to the President to carry out actions authorized in this section. If the President determines that the State or political subdivision or Indian tribe has the capability to carry out any or all of such actions in accordance with the criteria and priorities established pursuant to section 9605(a)(8) and to carry out related enforcement actions, the President may enter into a contract or cooperative agreement with the State or political subdivision or Indian tribe to carry out such actions. The President shall make a determination regarding such an application within 90 days after the President receives the application.

(B) **TERMS AND CONDITIONS.**—A contract or cooperative agreement under this paragraph shall be subject to such terms and conditions as the President may prescribe. The contract or cooperative agreement may cover a specific facility or specific facilities.

(C) **REIMBURSEMENTS.**—Any State which expended funds during the period beginning September 30, 1985, and ending on the date of the enactment of this subparagraph for response actions at any site included on the National Priorities List and subject to a cooperative agreement under this chapter shall be reimbursed for the share of costs of such actions for which the Federal Government is responsible under this chapter. ◀

(2) If the President enters into a cost-sharing agreement pursuant to subsection (c) of this section or a contract or

cooperative agreement pursuant to this subsection, and the State or political subdivision thereof fails to comply with any requirements of the contract, the President may, after providing sixty days notice, seek in the appropriate Federal district court to enforce the contract or to recover any funds advanced or any costs incurred because of the breach of the contract by the State or political subdivision.

(3) Where a State or a political subdivision thereof is acting in behalf of the President, the President is authorized to provide technical and legal assistance in the administration and enforcement of any contract or subcontract in connection with response actions assisted under this subchapter, and to intervene in any civil action involving the enforcement of such contract or subcontract.

(4) Where two or more noncontiguous facilities are reasonably related on the basis of geography, or on the basis of the threat, or potential threat to the public health or welfare or the environment, the President may, in his discretion, treat these related facilities as one for purposes of this section.

▶II.E. EPA Access and Information Gathering  
SARA § 104(m)

**[(e) Access to, and copying of, records relating to covered substances; availability to public of records, reports, and information; procedures applicable**

(1) For purposes of assisting in determining the need for response to a release under this subchapter or enforcing the provisions of this subchapter, any person who stores, treats, or disposes of, or, where necessary to ascertain facts not available at the facility where such hazardous substances are located, who generates, transports, or otherwise handles or has handled, hazardous substances shall, upon request of any officer, employee, or representative of the President, duly designated by the President, or upon request of any duly designated officer, employee, or representative of a State, where appropriate, furnish information relating to such substances and permit such person at all reasonable times to have access to, and to copy all records relating to such substances. For the purposes specified in the preceding sentence, such officers, employees, or representatives are authorized—

(A) to enter at reasonable times any establishment or other place where such hazardous substances are or have been generated, stored, treated, or disposed of, or transported from;

(B) to inspect and obtain samples from any person of any such substance and samples of any containers or labeling for such substances. Each such inspection shall be commenced and completed with reasonable promptness. If the officer, employee, or representative obtains any samples, prior to leaving the premises, he shall give to the owner, operator, or person in charge a receipt describing the sample obtained and if requested a portion of each sample equal in volume or weight to the portion retained. If any analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or person in charge.]

**(e) INFORMATION GATHERING AND ACCESS.—**

**(1) ACTION AUTHORIZED.**—Any officer, employee, or representative of the President duly designated by the President, is authorized to take ac-

tion under paragraph (2), (3), or (4) (or any combination thereof) at a vessel, facility, establishment, place, property, or location or, in the case of paragraph (3) or (4), at any vessel, facility, establishment, place, property, or location which is adjacent to the vessel, facility, establishment, place, property, or location referred to in such paragraph (3) or (4). Any duly designated officer, employee, or representative of a State or political subdivision under a contract or cooperative agreement under subsection (d) (1) is also authorized to take such action. The authority of paragraphs (3) and (4) may be exercised only if there is a reasonable basis to believe there may be a release or threat of release of a hazardous substance or pollutant or contaminant. The authority of this subsection may be exercised only for the purposes of determining the need for response, or choosing or taking any response action under this subchapter, or otherwise enforcing the provisions of this subchapter.

(2) **ACCESS TO INFORMATION.**—Any officer, employee, or representative described in paragraph (1) may require any person who has or may have information relevant to any of the following to furnish, upon reasonable notice, information or documents relating to such matter:

(A) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility.

(B) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility.

(C) Information relating to the ability of a person to pay for or to perform a cleanup. In addition, upon reasonable notice, such person either (i) shall grant any such officer, employee, or representative access at all reasonable times to any vessel, facility, establishment, place, property, or location to inspect and copy all documents or records relating to such matters or (ii) shall copy and furnish to the officer, employee, or representative all such documents or records, at the option and expense of such person.

(3) **ENTRY.**—Any officer, employee, or representative described in paragraph (1) is authorized to enter at reasonable times any of the following:

(A) Any vessel, facility, establishment, or other place or property where any hazardous substance or pollutant or contaminant may be or has been generated, stored, treated, disposed of, or transported from.

(B) Any vessel, facility, establishment, or other place or property from which or to which a hazardous substance or pollutant or contaminant has been or may have been released.

(C) Any vessel, facility, establishment, or other place or property where such release is or may be threatened.

(D) Any vessel, facility, establishment, or other place or property where entry is needed to determine the need for response or the ap-

propriate response or to effectuate a response action under this subchapter.

(4) **INSPECTION AND SAMPLES.**—

(A) **AUTHORITY.**—Any officer, employee or representative described in paragraph (1) is authorized to inspect and obtain samples from any vessel, facility, establishment, or other place or property referred to in paragraph (3) or from any location of any suspected hazardous substance or pollutant or contaminant. Any such officer, employee, or representative is authorized to inspect and obtain samples of any containers or labeling for suspected hazardous substances or pollutants or contaminants. Each such inspection shall be completed with reasonable promptness.

(B) **SAMPLES.**—If the officer, employee, or representative obtains any samples, before leaving the premises he shall give to the owner, operator, tenant, or other person in charge of the place from which the samples were obtained a receipt describing the sample obtained and, if requested, a portion of each such sample. A copy of the results of any analysis made of such samples shall be furnished promptly to the owner, operator, tenant, or other person in charge, if such person can be located. ◀

▶II.D. Civil and Criminal Penalties  
SARA § 104(m)

(5) **COMPLIANCE ORDERS.**—

(A) **ISSUANCE.**—If consent is not granted regarding any request made by an officer, employee, or representative under paragraph (2), (3), or (4), the President may issue an order directing compliance with the request. The order may be issued after such notice and opportunity for consultation as is reasonably appropriate under the circumstances.

(B) **COMPLIANCE.**—The President may ask the Attorney General to commence a civil action to compel compliance with a request or order referred to in subparagraph (A). Where there is a reasonable basis to believe there may be a release or threat of a release of a hazardous substance or pollutant or contaminant, the court shall take the following actions:

(i) In the case of interference with entry or inspection, the court shall enjoin such interference or direct compliance with orders to prohibit interference with entry or inspection unless under the circumstances of the case the demand for entry or inspection is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law.

(ii) In the case of information or document requests or orders, the court shall enjoin interference with such information or document requests or orders or direct compliance with the requests or orders to provide such information or documents unless under the circumstances of the case the de-

*mand for information or documents is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law.*

*The court may assess a civil penalty not to exceed \$25,000 for each day of noncompliance against any person who unreasonably fails to comply with the provisions of paragraph (2), (3), or (4) or an order issued pursuant to subparagraph (A) of this paragraph. ◀*

*(6) OTHER AUTHORITY.—Nothing in this subsection shall preclude the President from securing access or obtaining information in any other lawful manner.*

**(2) (7) CONFIDENTIALITY OF INFORMATION.—**

(A) Any records, reports, or information obtained from any person under this section (including records, reports, or information obtained by representatives of the President) shall be available to the public, except that upon a showing satisfactory to the President (or the State, as the case may be) by any person that records, reports, or information, or particular part thereof (other than health or safety effects data), to which the President (or the State, as the case may be) or any officer, employee, or representative has access under this section if made public would divulge information entitled to protection under section 1905 of Title 18, such information or particular portion thereof shall be considered confidential in accordance with the purposes of that section, except that such record, report, document or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, or when relevant in any proceeding under this chapter.

(B) Any person not subject to the provisions of section 1905 of Title 18 who knowingly and willfully divulges or discloses any information entitled to protection under this subsection shall, upon conviction, be subject to a fine of not more than \$5,000 or to imprisonment not to exceed one year, or both.

(C) In submitting data under this chapter, a person required to provide such data may (i) designate the data which such person believes is entitled to protection under this subsection and (ii) submit such designated data separately from other data submitted under this chapter. A designation under this paragraph shall be made in writing and in such manner as the President may prescribe by regulation.

(D) Notwithstanding any limitation contained in this section or any other provision of law, all information reported to or otherwise obtained by the President (or any representative of the President) under this chapter shall be made available, upon written request of any duly authorized committee of the Congress, to such committee.

**▶ II.E. EPA Access and Information Gathering SARA § 104(n)**

*(E) No person required to provide information under this chapter may claim that the information is entitled to protection under this paragraph unless such person shows each of the following:*

*(i) Such person has not disclosed the information to any other person, other than a member of a local emergency planning committee established under title III of the Amendments and Reauthorization Act of 1986, an officer or employee of the United States or a State or local government, an employee of such person, or a person who is bound by a confidentiality agreement, and such person has taken reasonable measures to protect the confidentiality of such information and intends to continue to take such measures.*

*(ii) The information is not required to be disclosed, or otherwise made available, to the public under any other Federal or State law.*

*(iii) Disclosure of the information is likely to cause substantial harm to the competitive position of such person.*

*(iv) The specific chemical identity, if sought to be protected, is not readily discoverable through reverse engineering.*

*(F) The following information with respect to any hazardous substance at the facility or vessel shall not be entitled to protection under this paragraph:*

*(i) The trade name, common name, or generic class or category of the hazardous substance.*

*(ii) The physical properties of the substance, including its boiling point, melting point, flash point, specific gravity, vapor density, solubility in water, and vapor pressure at 20 degrees celsius.*

*(iii) The hazards to health and the environment posed by the substance, including physical hazards (such as explosion) and potential acute and chronic health hazards.*

*(iv) The potential routes of human exposure to the substance at the facility, establishment, place, or property being investigated, entered, or inspected under this subsection.*

*(v) The location of disposal of any waste stream.*

*(vi) Any monitoring data or analysis of monitoring data pertaining to disposal activities.*

*(vii) Any hydrogeologic or geologic data.*

*(viii) Any groundwater monitoring data. ◀*

**(1) Contracts for response actions; compliance with Federal health and safety standards**

In awarding contracts to any person engaged in response

actions, the President or the State, in any case where it is awarding contracts pursuant to a contract entered into under subsection (d) of this section, shall require compliance with Federal health and safety standards established under section 9651(f) of this title by contractors and subcontractors as a condition of such contracts.

**(g) Rates for wages and labor standards applicable to covered work**

(1) All laborers and mechanics employed by contractors or subcontractors in the performance of construction, repair, or alteration work funded in whole or in part under this section shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act [40 U.S.C.A. § 276a et seq.]. The President shall not approve any such funding without first obtaining adequate assurance that required labor standards will be maintained upon the construction work.

(2) The Secretary of Labor shall have, with respect to the labor standards specified in paragraph (1), the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 64 Stat. 1267) and section 276c of Title 40.

**(h) Emergency procurement powers; exercise by President**

Notwithstanding any other provision of law, subject to the provisions of section 9611 of this title, the President may authorize the use of such emergency procurement powers as he deems necessary to effect the purpose of this chapter. Upon determination that such procedures are necessary, the President shall promulgate regulations prescribing the circumstances under which such authority shall be used and the procedures governing the use of such authority.

**(i) Agency for Toxic Substances and Disease Registry; establishment, functions, etc.**

►I.L. Health Related Authorities  
SARA § 110

(1) There is hereby established within the Public Health Service an agency, to be known as the Agency for Toxic Substances and Disease Registry, which shall report directly to the Surgeon General of the United States. The Administrator of said Agency shall, with the cooperation of the Administrator of the Environmental Protection Agency, the Commissioner of the Food and Drug Administration, the Directors of the National Institute of Medicine, National Institute of Environmental Health Sciences, National Institute of Occupational Safety and Health, Centers for Disease Control, the Administrator of the Occupational Safety and Health Administration, [and] the Administrator of the Social Security Administration, *the Secretary of Transportation, and appropriate State and local health officials*, effectuate and implement the health related authorities of this chapter. In addition, said Administrator shall—

[(3)](A) in cooperation with the States, establish and maintain a national registry of serious diseases and illnesses and a national registry of persons exposed to toxic substances;

[(2)](B) establish and maintain inventory of literature, research, and studies on the health effects of toxic substances;

[(3)](C) in cooperation with the States, and other agencies of the Federal Government, establish and maintain a complete listing of areas closed to the public or otherwise restricted in use because of toxic substance contamination;

[(4)](D) in cases of public health emergencies caused or believed to be caused by exposure to toxic substances, provide medical care and testing to exposed individuals, including but not limited to tissue sampling, chromosomal testing *where appropriate*, epidemiological studies, or any other assistance appropriate under the circumstances; and

[(5)](E) either independently or as part of other health status survey, conduct periodic survey and screening programs to determine relationships between exposure to toxic substances and illness. In cases of public health emergencies, exposed persons shall be eligible for admission to hospitals and other facilities and services operated or provided by the Public Health Service.

*(2)(A) Within 6 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the Administrator of the Agency for Toxic Substances and Disease Registry (ATSDR) and the Administrator of the Environmental Protection Agency ("EPA") shall prepare a list, in order of priority, of at least 100 hazardous substances which are most commonly found at facilities on the National Priorities List and which, in their sole discretion, they determine are posing the most significant potential threat to human health due to their known or suspected toxicity to humans and the potential for human exposure to such substances at facilities on the National Priorities List or at facilities to which a response to a release or a threatened release under this section is under consideration.*

*(B) Within 24 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the Administrator of ATSDR and the Administrator of EPA shall revise the list prepared under subparagraph (A). Such revision shall include, in order of priority, the addition of 100 or more such hazardous substances. In each of the 3 consecutive 12-month periods that follow, the Administrator of ATSDR and the Administrator of EPA shall revise, in the same manner as provided in the 2 preceding sentences, such list to include not fewer than 25 additional hazardous substances per revision. The Administrator of ATSDR and the Administrator of EPA shall not less often than once every year thereafter revise such list to include additional hazardous substances in accordance with the criteria in subparagraph (A).*

*(3) Based on all available information, including information maintained under paragraph (1)(B) and data developed and collected on the health effects of hazardous substances under this paragraph, the Administrator of ATSDR shall prepare toxicological profiles of each of the substances listed pursuant to paragraph (2). The toxicological profiles shall be prepared in accordance with guidelines developed by the Administrator of ATSDR and the Administrator of EPA. Such profiles shall include, but not be limited to each of the following:*

*(A) An examination, summary, and interpretation of available toxicological information and*

*epidemiologic evaluations on a hazardous substance in order to ascertain the levels of significant human exposure for the substance and the associated acute, subacute, and chronic health effects.*

*(B) A determination of whether adequate information on the health effects of each substance is available or in the process of development to determine levels of exposure which present a significant risk to human health of acute, subacute, and chronic health effects.*

*(C) Where appropriate, an identification of toxicological testing needed to identify the types or levels of exposure that may present significant risk of adverse health effects in humans.*

*Any toxicological profile or revision thereof shall reflect the Administrator of ATSDR's assessment of all relevant toxicological testing which has been peer reviewed. The profiles required to be prepared under this paragraph for those hazardous substances listed under subparagraph (A) of paragraph (2) shall be completed, at a rate of no fewer than 25 per year, within 4 years after the enactment of the Superfund Amendments and Reauthorization Act of 1986. A profile required on a substance listed pursuant to subparagraph (B) of paragraph (2) shall be completed within 3 years after addition to the list. The profiles prepared under this paragraph shall be of those substances highest on the list of priorities under paragraph (2) for which profiles have not previously been prepared. Profiles required under this paragraph shall be revised and republished as necessary, but no less often than once every 3 years. Such profiles shall be provided to the States and made available to other interested parties.*

*(4) The Administrator of the ATSDR shall provide consultations upon request on health issues relating to exposure to hazardous or toxic substances, on the basis of available information, to the Administrator of EPA, State officials, and local officials. Such consultations to individuals may be provided by States under cooperative agreements established under this chapter.*

*(5)(A) For each hazardous substance listed pursuant to paragraph (2), the Administrator of ATSDR (in consultation with the Administrator of EPA and other agencies and programs of the Public Health Service) shall assess whether adequate information on the health effects of such substance is available. For any such substance for which adequate information is not available (or under development), the Administrator of ATSDR, in cooperation with the Director of the National Toxicology Program, shall assure the initiation of a program of research designed to determine the health effects (and techniques for development of methods to determine such health effects) of such substance. Where feasible, such program shall seek to develop methods to determine the health effects of such substance in combination with other substances with which it is commonly found. Before assuring the initiation of such program, the Administrator of ATSDR shall consider recommendations of the Interagency Testing Committee established under section 4(e) of the Toxic Substances Control Act on the types of research that should be done. Such program shall include, to the extent necessary to supplement existing information, but shall not be limited to—*

*(i) laboratory and other studies to determine short, intermediate, and long-term health effects;*

*(ii) laboratory and other studies to determine organ-specific, site-specific, and system-specific acute and chronic toxicity;*

*(iii) laboratory and other studies to determine the manner in which such substances are metabolized or to otherwise develop an understanding of the biokinetics of such substances; and*

*(iv) where there is a possibility of obtaining human data, the collection of such information.*

*(B) In assessing the need to perform laboratory and other studies, as required by subparagraph (A), the Administrator of ATSDR shall consider—*

*(i) the availability and quality of existing test data concerning the substance on the suspected health effect in question;*

*(ii) the extent to which testing already in progress will, in a timely fashion, provide data that will be adequate to support the preparation of toxicological profiles as required by paragraph (3); and*

*(iii) such other scientific and technical factors as the Administrator of ATSDR may determine are necessary for the effective implementation of this subsection.*

*(C) In the development and implementation of any research program under this paragraph, the Administrator of ATSDR and the Administrator of EPA shall coordinate such research program implemented under this paragraph with the National Toxicology Program and with programs of toxicological testing established under the Toxic Substances Control Act and the Federal Insecticide, Fungicide and Rodenticide Act. The purpose of such coordination shall be to avoid duplication of effort and to assure that the hazardous substances listed pursuant to this subsection are tested thoroughly at the earliest practicable date. Where appropriate, consistent with such purpose, a research program under this paragraph may be carried out using such programs of toxicological testing.*

*(D) It is the sense of the Congress that the costs of research programs under this paragraph be borne by the manufacturers and processors of the hazardous substance in question, as required in programs of toxicological testing under the Toxic Substances Control Act. Within 1 year after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the Administrator of EPA shall promulgate regulations which provide, where appropriate, for payment of such costs by manufacturers and processors under the Toxic Substances Control Act, and registrants under the Federal Insecticide, Fungicide, and Rodenticide Act, and recovery of such costs from responsible parties under this chapter.*

*(6)(A) The Administrator of ATSDR shall perform a health assessment for each facility on the National Priorities List established under section 9605. Such health assessment shall be completed not later than December 10, 1988, for each facility proposed for inclusion on such list prior to the date of the enactment of the Superfund Amendments and Reauthorization Act of 1986 or not later than one year after the date of proposal for inclusion on such list for each facility proposed for inclusion on such list after such date of enactment.*

*(B) The Administrator of ATSDR may perform health assessments for releases or facilities where individual persons or licensed physicians provide information that in-*

Individuals have been exposed to a hazardous substance, for which the probable source of such exposure is a release. In addition to other methods (formal or informal) of providing such information, such individual persons or licensed physicians may submit a petition to the Administrator of ATSDR providing such information and requesting a health assessment. If such a petition is submitted and the Administrator of ATSDR does not initiate a health assessment, the Administrator of ATSDR shall provide a written explanation of why a health assessment is not appropriate.

(C) In determining the priority in which to conduct health assessments under this subsection, the Administrator of ATSDR, in consultation with the Administrator of EPA, shall give priority to those facilities at which there is documented evidence of the release of hazardous substances, at which the potential risk to human health appears highest, and for which in the judgment of the Administrator of ATSDR existing health assessment data are inadequate to assess the potential risk to human health as provided in subparagraph (F). In determining the priorities for conducting health assessments under this subsection, the Administrator of ATSDR shall consider the National Priorities List schedules and the needs of the Environmental Protection Agency and other Federal agencies pursuant to schedules for remedial investigation and feasibility studies.

(D) Where a health assessment is done at a site on the National Priorities List, the Administrator of ATSDR shall complete such assessment promptly and, to the maximum extent practicable, before the completion of the remedial investigation and feasibility study at the facility concerned.

(E) Any State or political subdivision carrying out a health assessment for a facility shall report the results of the assessment to the Administrator of ATSDR and the Administrator of EPA and shall include recommendations with respect to further activities which need to be carried out under this section. The Administrator of ATSDR shall state such recommendation in any report on the results of any assessment carried out directly by the Administrator of ATSDR for such facility and shall issue periodic reports which include the results of all the assessments carried out under this subsection.

(F) For the purposes of this subsection and section 9611(c)(4), the term "health assessments" shall include preliminary assessments of the potential risk to human health posed by individual sites and facilities, based on such factors as the nature and extent of contamination, the existence of potential pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size and potential susceptibility of the community within the likely pathways of exposure, the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified hazardous substances and any available recommended exposure or tolerance limits for such hazardous substances, and the comparison of existing morbidity and mortality data on diseases that may be associated with the observed levels of exposure. The Administrator of ATSDR shall use appropriate data, risk assessments, risk evaluations and studies available from the Administrator of EPA.

(G) The purpose of health assessments under this subsection

shall be to assist in determining whether actions under paragraph (11) of this subsection should be taken to reduce human exposure to hazardous substances from a facility and whether additional information on human exposure and associated health risks is needed and should be acquired by conducting epidemiological studies under paragraph (7), establishing a registry under paragraph (8), establishing a health surveillance program under paragraph (9), or through other means. In using the results of health assessments for determining additional actions to be taken under this section, the Administrator of ATSDR may consider additional information on the risks to the potentially affected population from all sources of such hazardous substances including known point or nonpoint sources other than those from the facility in question.

(H) At the completion of each health assessment, the Administrator of ATSDR shall provide the Administrator of EPA and each affected State with the results of such assessment, together with any recommendations for further actions under this subsection or otherwise under this chapter. In addition, if the health assessment indicates that the release or threatened release concerned may pose a serious threat to human health or the environment, the Administrator of ATSDR shall so notify the Administrator of EPA who shall promptly evaluate such release or threatened release in accordance with the hazard ranking system referred to in section 9605(a)(8)(A) to determine whether the site shall be placed on the National Priorities List or, if the site is already on the list, the Administrator of ATSDR may recommend to the Administrator of EPA that the site be accorded a higher priority.

(7)(A) Whenever in the judgment of the Administrator of ATSDR it is appropriate on the basis of the results of a health assessment, the Administrator of ATSDR shall conduct a pilot study of health effects for selected groups of exposed individuals in order to determine the desirability of conducting full scale epidemiological or other health studies of the entire exposed population.

(B) Whenever in the judgment of the Administrator of ATSDR it is appropriate on the basis of the results of such pilot study or other study or health assessment, the Administrator of ATSDR shall conduct such full scale epidemiological or other health studies as may be necessary to determine the health effects on the population exposed to hazardous substances from a release or threatened release. If a significant excess of disease in a population is identified, the letter of transmittal of such study shall include an assessment of other risk factors, other than a release, that may, in the judgment of the peer review group, be associated with such disease, if such risk factors were not taken into account in the design or conduct of the study.

(8) In any case in which the results of a health assessment indicate a potential significant risk to human health, the Administrator of ATSDR shall consider whether the establishment of a registry of exposed persons would contribute to accomplishing the purposes of this subsection, taking into account circumstances bearing on the usefulness of such a registry, including the seriousness or unique character of identified diseases or the likelihood of population migration from the affected area.

(9) Where the Administrator of ATSDR has determined that there is a significant increased risk of adverse health

effects in humans from exposure to hazardous substances based on the results of a health assessment conducted under paragraph (6), an epidemiologic study conducted under paragraph (7), or an exposure registry that has been established under paragraph (8), and the Administrator of ATSDR has determined that such exposure is the result of a release from a facility, the Administrator of ATSDR shall initiate a health surveillance program for such population. This program shall include but not be limited to—

(A) periodic medical testing where appropriate of population subgroups to screen for diseases for which the population or subgroup is at significant increased risk; and

(B) a mechanism to refer for treatment those individuals within such population who are screened positive for such diseases.

(10) Two years after the date of the enactment of the Superfund Amendments and Reauthorization Act of 1986, and every 2 years thereafter, the Administrator of ATSDR shall prepare and submit to the Administrator of EPA and to the Congress a report on the results of the activities of ATSDR regarding—

(A) health assessments and pilot health effects studies conducted;

(B) epidemiologic studies conducted;

(C) hazardous substances which have been listed under paragraph (2), toxicological profiles which have been developed, and toxicologic testing which has been conducted or which is being conducted under this subsection;

(D) registries established under paragraph (8); and

(E) an overall assessment, based on the results of activities conducted by the Administrator of ATSDR, of the linkage between human exposure to individual or combinations of hazardous substances due to releases from facilities covered by this chapter or the Solid Waste Disposal Act and any increased incidence or prevalence of adverse health effects in humans.

(11) If a health assessment or other study carried out under this subsection contains a finding that the exposure concerned presents a significant risk to human health, the President shall take such steps as may be necessary to reduce such exposure and eliminate or substantially mitigate the significant risk to human health. Such steps may include the use of any authority under this chapter, including, but not limited to—

(A) provision of alternative water supplies, and

(B) permanent or temporary relocation of individuals.

In any case in which information is insufficient, in the judgment of the Administrator of ATSDR or the President to determine a significant human exposure level with respect to a hazardous substance, the President may take such steps as may be necessary to reduce the exposure of any person to such hazardous substance to such level as the President deems necessary to protect human health.

(12) In any case which is the subject of a petition, a health assessment or study, or a research program under this subsection, nothing in this subsection shall be construed to delay or otherwise affect or impair the authority of the President, the Administrator of ATSDR, or the Administrator of EPA to exercise any authority vested in the

President, the Administrator of ATSDR or the Administrator of EPA under any other provision of law (including, but not limited to, the imminent hazard authority of section 7003 of the Solid Waste Disposal Act) or the response and abatement authorities of this chapter.

(13) All studies and results of research conducted under this subsection (other than health assessments) shall be reported or adopted only after appropriate peer review. Such peer review shall be completed, to the maximum extent practicable, within a period of 60 days. In the case of research conducted under the National Toxicology Program, such peer review may be conducted by the Board of Scientific Counselors. In the case of other research, such peer review shall be conducted by panels consisting of no less than three nor more than seven members, who shall be disinterested scientific experts selected for such purpose by the Administrator of ATSDR or the Administrator of EPA, as appropriate, on the basis of their reputation for scientific objectivity and the lack of institutional ties with any person involved in the conduct of the study or research under review. Support services for such panels shall be provided by the Agency for Toxic Substances and Disease Registry, or by the Environmental Protection Agency, as appropriate.

(14) In the implementation of this subsection and other health-related authorities of this chapter, the Administrator of ATSDR shall assemble, develop as necessary, and distribute to the States, and upon request to medical colleges, physicians, and other health professionals, appropriate educational materials (including short courses) on the medical surveillance, screening, and methods of diagnosis and treatment of injury or disease related to exposure to hazardous substances (giving priority to those listed in paragraph (2)), through such means as the Administrator of ATSDR deems appropriate.

(15) The activities of the Administrator of ATSDR described in this subsection and section 9611(c)(4) shall be carried out by the Administrator of ATSDR, either directly or through cooperative agreements with States (or political subdivisions thereof) which the Administrator of ATSDR determines are capable of carrying out such activities. Such activities shall include provision of consultations on health information, the conduct of health assessments, including those required under section 3019(b) of the Solid Waste Disposal Act, health studies, registries, and health surveillance.

(16) The President shall provide adequate personnel for ATSDR, which shall not be fewer than 100 employees. For purposes of determining the number of employees under this subsection, an employee employed by ATSDR on a part-time career employment basis shall be counted as a fraction which is determined by dividing 40 hours into the average number of hours of such employee's regularly scheduled workweek.

(17) In accordance with section 9620 (relating to Federal facilities), the Administrator of ATSDR shall have the same authorities under this section with respect to facilities owned or operated by a department, agency, or instrumentality of the United States as the Administrator of ATSDR has with respect to any nongovernmental entity.

(18) If the Administrator of ATSDR determines that it is appropriate for purposes of this section to treat a polluta-

*tant or contaminant as a hazardous substance, such pollutant or contaminant shall be treated as a hazardous substance for such purpose.*

►1.1. Property Acquisition  
SARA § 104(o)

(j) ACQUISITION OF PROPERTY.—

(1) AUTHORITY.—*The President is authorized to acquire, by purchase, lease, condemnation, donation, or otherwise, any real property or any interest in real property that the President in his discretion determines is needed to conduct a remedial action under this chapter. There shall be no cause of action to compel the President to acquire any interest in real property under this chapter.*

(2) STATE ASSURANCE.—*The President may use the authority of paragraph (1) for a remedial action only if, before an interest in real estate is acquired under this subsection, the State in which the interest to be acquired is located assures the President, through a contract or cooperative agreement or otherwise, that the State will accept transfer of the interest following completion of the remedial action.*

(3) EXEMPTION.—*No Federal, State, or local government agency shall be liable under this chapter solely as a result of acquiring an interest in real estate under this subsection.* ◀

Pub.L. 96-510, Title I, § 104, Dec. 11, 1980, 94 Stat. 2774, as added and amended Pub.L. 99-499, Title I, §§ 104, 110, Title II, § 207(b), Oct. 17, 1986.

## § 9605. [CERCLA § 105]

National contingency plan; preparation, contents. etc.

►I.D. NCI/HRS/NPL  
SARA § 105(a)

(a) REVISIONS AND REPUBLICATION.—Within one hundred and eighty days after December 11, 1980, the President shall, after notice and opportunity for public comments, revise and republish the national contingency plan for the removal of oil and hazardous substances, originally prepared and published pursuant to section 1321 of Title 33, to reflect and effectuate the responsibilities and powers created by this chapter, in addition to those matters specified in section 1321(c)(2) of Title 33. Such revision shall include a section of the plan to be known as the national hazardous substance response plan which shall establish procedures and standards for responding to releases of hazardous substances, pollutants, and contaminants, which shall include at a minimum:

(1) methods for discovering and investigating facilities at which hazardous substances have been disposed or otherwise come to be located;

(2) methods for evaluating, including analyses of relative cost, and remedying any releases or threats of releases from facilities which pose substantial danger to the public health or the environment;

(3) methods and criteria for determining the appropriate extent of removal, remedy, and other measures authorized by this chapter;

(4) appropriate roles and responsibilities for the Federal, State, and local governments and for in-

terstate and nongovernmental entities in effectuating the plan;

(5) provision for identification, procurement, maintenance, and storage of response equipment and supplies;

(6) a method for and assignment of responsibility for reporting the existence of such facilities which may be located on federally owned or controlled properties and any releases of hazardous substances from such facilities;

(7) means of assuring that remedial action measures are cost-effective over the period of potential exposure to the hazardous substances or contaminated materials;

(8)(A) 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. Criteria and priorities under this paragraph shall be based upon relative risk or danger to public health or welfare or the environment, in the judgment of the President, taking into account to the extent possible the population at risk, the hazard potential of the hazardous substances at such facilities, the potential for contamination of drinking water supplies, the potential for direct human contact, the potential for destruction of sensitive ecosystems, *the damage to natural resources which may affect the human food chain and which is associated with any release or threatened release, the contamination or potential contamination of the ambient air which is associated with the release or threatened release*, State preparedness to assume State costs and responsibilities, and other appropriate factors;

(B) based upon the criteria set forth in subparagraph (A) of this paragraph, the President shall list as part of the plan national priorities among the known releases or threatened releases throughout the United States and shall revise the list no less often than annually. Within one year after December 11, 1980, and annually thereafter, each State shall establish and submit for consideration by the President priorities for remedial action among known releases and potential releases in that State based upon the criteria set forth in subparagraph (A) of this paragraph. In assembling or revising the national list, the President shall consider any priorities established by the States. To the extent practicable, [at least four hundred of] the highest priority facilities shall be designated individually and shall be referred to as the "top priority among known response targets", and, to the extent practicable, shall include among the one hundred highest priority [facilities at least] facilities one such facility from each State which shall be the facility designated by the State as presenting the greatest danger to public health or welfare or the environment among the known facilities in such State. *A State shall be allowed to designate its highest priority facility only once.* Other priority facilities or incidents may be listed singly or grouped for response priority purposes: [and]

(9) specified roles for private organizations and entities in preparation for response and in responding to releases of hazardous substances, including identification of appropriate qualifications and capacity therefor [.] and including consideration of minority firms in accordance with subsection (f); and ◀

▶I.M. Research and Development  
SARA § 105(a)

(10) standards and testing procedures by which alternative or innovative treatment technologies can be determined to be appropriate for utilization in response actions authorized by this chapter. ◀

The plan shall specify procedures, techniques, materials, equipment, and methods to be employed in identifying, removing, or remedying releases of hazardous substances comparable to those required under section 1321(c)(2)(F) and (G) and (j)(1) of Title 33. Following publication of the revised national contingency plan, the response to and actions to minimize damage from hazardous substances releases shall, to the greatest extent possible, be in accordance with the provisions of the plan. The President may, from time to time, revise and republish the national contingency plan.

▶I.D. NCP/HRS/NPL  
SARA § 105(b)

(b) **REVISION OF PLAN.**—Not later than 18 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the President shall revise the National Contingency Plan to reflect the requirements of such amendments. The portion of such Plan known as "the National Hazardous Substance Response Plan" shall be revised to provide procedures and standards for remedial actions undertaken pursuant to this chapter which are consistent with amendments made by the Superfund Amendments and Reauthorization Act of 1986 relating to the selection of remedial action.

(c) **HAZARD RANKING SYSTEM.**—

(1) **REVISION.**—Not later than 18 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986 and after publication of notice and opportunity for submission of comments in accordance with section 553 of title 5, United States Code, the President shall by rule promulgate amendments to the hazard ranking system in effect on September 1, 1984. Such amendments shall assure, to the maximum extent feasible, that the hazard ranking system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review. The President shall establish an effective date for the amended hazard ranking system which is not later than 24 months after enactment of the Superfund Amendments and Reauthorization Act of 1986. Such amended hazard ranking system shall be applied to any site or facility to be newly listed on the National Priorities List after the effective date established by the President. Until such effective date of the regulations, the hazard ranking system in effect on September 1, 1984, shall continue in full force and effect.

(2) **HEALTH ASSESSMENT OF WATER CONTAMINATION RISK.**—In carrying out this subsection, the President shall ensure that the human health

risks associated with the contamination or potential contamination (either directly or as a result of the runoff of any hazardous substance or pollutant or contaminant from sites or facilities) of surface water are appropriately assessed where such surface water is, or can be, used for recreation or potable water consumption. In making the assessment required pursuant to the preceding sentence, the President shall take into account the potential migration of any hazardous substance or pollutant or contaminant through such surface water to downstream sources of drinking water.

(3) **RE-EVALUATION NOT REQUIRED.**—The President shall not be required to reevaluate, after the date of enactment of the Superfund Amendments and Reauthorization Act of 1986, the hazard ranking of any facility which was evaluated in accordance with the criteria under this section before the effective date of the amendments to the hazard ranking system under this subsection and which was assigned a national priority under the National Contingency Plan.

(4) **NEW INFORMATION.**—Nothing in paragraph (3) shall preclude the President from taking new information into account in undertaking response actions under this chapter.

(d) **PETITION FOR ASSESSMENT OF RELEASE.**—Any person who is, or may be, affected by a release or threatened release of a hazardous substance or pollutant or contaminant, may petition the President to conduct a preliminary assessment of the hazards to public health and the environment which are associated with such release or threatened release. If the President has not previously conducted a preliminary assessment of such release, the President shall, within 12 months after the receipt of any such petition, complete such assessment or provide an explanation of why the assessment is not appropriate. If the preliminary assessment indicates that the release or threatened release concerned may pose a threat to human health or the environment, the President shall promptly evaluate such release or threatened release in accordance with the hazard ranking system referred to in paragraph (8)(A) of subsection (a) to determine the national priority of such release or threatened release.

(e) **RELEASES FROM EARLIER SITES.**—Whenever there has been, after January 1, 1985, a significant release of hazardous substances or pollutants or contaminants from a site which is listed by the President as a "Site Cleaned Up To Date" on the National Priorities List (revised edition, December 1984) the site shall be restored to the National Priorities List, without application of the hazard ranking system.

(f) **MINORITY CONTRACTORS.**—In awarding contracts under this chapter, the President shall consider the availability of qualified minority firms. The President shall describe, as part of any annual report submitted to the Congress under this chapter, the participation of minority firms in contracts carried out under this chapter. Such report shall contain a brief description of the contracts which have been awarded to minority firms under this chapter and of the efforts made by the President to encourage the participation of such firms in programs carried out under this chapter.

**(g) SPECIAL STUDY WASTES.—**

**(1) APPLICATION—***This subsection applies to facilities—*

*(A) which as of the date of enactment of the Superfund Amendments and Reauthorization Act of 1986 were not included on, or proposed for inclusion on, the National Priorities List; and*

*(B) at which special study wastes described in paragraph (2), (3)(A)(ii) or (3)(A)(iii) of section 3001(b) of the Solid Waste Disposal Act are present in significant quantities, including any such facility from which there has been a release of a special study waste.*

**(2) CONSIDERATIONS IN ADDING FACILITIES TO NPL.—***Pending revision of the hazard ranking system under subsection (c), the President shall consider each of the following factors in adding facilities covered by this section to the National Priorities List:*

*(A) The extent to which hazard ranking system score for the facility is affected by the presence of any special study waste at, or any release from, such facility.*

*(B) Available information as to the quantity, toxicity, and concentration of hazardous substances that are constituents of any special study waste at, or released from such facility, the extent of or potential for release of such hazardous constituents, the exposure or potential exposure to human population and the environment, and the degree of hazard to human health or the environment posed by the release of such hazardous constituents at such facility. This subparagraph refers only to available information on actual concentrations of hazardous substances and not on the total quantity of special study waste at such facility.*

**(3) SAVINGS PROVISIONS.—***Nothing in this subsection shall be construed to limit the authority of the President to remove any facility which as of the date of enactment of the Superfund Amendments and Reauthorization Act of 1986 is included on the National Priorities List from such List, or not to list any facility which as of such date is proposed for inclusion on such list.*

**(4) INFORMATION GATHERING AND ANALYSIS.—***Nothing in this chapter shall be construed to preclude the expenditure of monies from the Fund for gathering and analysis of information which will enable the President to consider the specific factors required by paragraph (2).*

Pub.L. 96-510, Title I, § 105, Dec. 11, 1980, 94 Stat. 2779, as added and amended Pub.L. 99-499, Title I, § 105, Oct. 17, 1986

**§ 9606. [CERCLA § 106]****Abatement actions**

(a) Maintenance, jurisdiction, etc.

In addition to any other action taken by a State or local

government, when the President determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility, he may require the Attorney General of the United States to secure such relief as may be necessary to abate such danger or threat, and the district court of the United States in the district in which the threat occurs shall have jurisdiction to grant such relief as the public interest and the equities of the case may require. The President may also, after notice to the affected State, take other action under this section including, but not limited to, issuing such orders as may be necessary to protect public health and welfare and the environment.

**(b) Fines**

►II.D. Civil and Criminal Penalties  
SARA §§ 106, 109(b)

*(1) Any person [who willfully] who, without sufficient cause, willfully violates, or fails or refuses to comply with, any order of the President under subsection (a) of this section may, in an action brought in the appropriate United States district court to enforce such order, be fined not more than [\$5,000] \$25,000 for each day in which such violation occurs or such failure to comply continues. ◀*

►II.A. Judicial Review  
SARA § 106

*(2)(A) Any person who receives and complies with the terms of any order issued under subsection (a) may, within 60 days after completion of the required action, petition the President for reimbursement from the Fund for the reasonable costs of such action, plus interest. Any interest payable under this paragraph shall accrue on the amounts expended from the date of expenditure at the same rate as specified for interest on investments of the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954.*

*(B) If the President refuses to grant all or part of a petition made under this paragraph, the petitioner may within 30 days of receipt of such refusal file an action against the President in the appropriate United States district court seeking reimbursement from the Fund.*

*(C) Except as provided in subparagraph (D), to obtain reimbursement, the petitioner shall establish by a preponderance of the evidence that it is not liable for response costs under section 9607(a) and that costs for which it seeks reimbursement are reasonable in light of the action required by the relevant order.*

*(D) A petitioner who is liable for response costs under section 9607(a) may also recover its reasonable costs of response to the extent that it can demonstrate, on the administrative record, that the President's decision in selecting the response action ordered was arbitrary and capricious or was otherwise not in accordance with law. Reimbursement awarded under this subparagraph shall include all reasonable response costs incurred by the petitioner pursuant to the portions of the order found to be arbitrary and capricious or otherwise not in accordance with law.*

*(E) Reimbursement awarded by a court under subparagraph (C) or (D) may include appropriate costs, fees, and other expenses in accordance with subsections (a) and (b) of section 2412 of title 28 of the United States Code. ◀*

**(c) Guidelines for using imminent hazard, enforcement, and emergency response authorities; promulgation by Administrator of EPA, scope, etc.**

Within one hundred and eighty days after December 11, 1980, the Administrator of the Environmental Protection Agency shall, after consultation with the Attorney General, establish and publish guidelines for using the imminent hazard, enforcement, and emergency response authorities of this section and other existing statutes administered by the Administrator of the Environmental Protection Agency to effectuate the responsibilities and powers created by this chapter. Such guidelines shall to the extent practicable be consistent with the national hazardous substance response plan, and shall include, at a minimum, the assignment of responsibility for coordinating response actions with the issuance of administrative orders, enforcement of standards and permits, the gathering of information, and other imminent hazard and emergency powers authorized by (1) sections 1321(c)(2), 1318, 1319, and 1364(a) of Title 33, (2) sections 6927, 6928, 6934, and 6973 of this title, (3) sections 300j-4 and 300i of this title, (4) sections 7413, 7414, and 7603 of this title, and (5) section 2606 of Title 15. Pub.L. 96-510, Title I, § 106, Dec. 11, 1980, 94 Stat. 2780, as added and amended Pub.L. 99-499, Title I, §§ 106, 109(b), Oct. 17, 1986.

## § 9607. [CERCLA § 107]

### Liability

**(a) Covered persons; scope**

►II.L. Foreign Vessels  
SARA § 107(a)

Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in subsection (b) of this section—

(1) the owner and operator of a vessel [(otherwise subject to the jurisdiction of the United States)] or a facility, ◀

(2) any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of,

►IV.K. Ocean Incineration  
SARA § 127(b)

(3) any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances, and

(4) any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable for— ◀

►I.H. Indian Tribes  
SARA § 207(c)

(A) all costs of removal or remedial action

incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan; ◀

(B) any other necessary costs of response incurred by any other person consistent with the national contingency plan; [and]

(C) damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release[.]; and

►I.L. Health Related Authorities  
SARA § 107(b)

(D) the costs of any health assessment or health effects study carried out under section 104(i).

*The amounts recoverable in an action under this section shall include interest on the amounts recoverable under subparagraphs (A) through (D). Such interest shall accrue from the later of (i) the date payment of a specified amount is demanded in writing, or (ii) the date of the expenditure concerned. The rate of interest on the outstanding unpaid balance of the amounts recoverable under this section shall be the same rate as is specified for interest on investments of the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954. For purposes of applying such amendments to interest under this subsection, the term "comparable maturity" shall be determined with reference to the date on which interest accruing under this subsection commences. ◀*

**(b) Defenses**

There shall be no liability under subsection (a) of this section for a person otherwise liable who can establish by a preponderance of the evidence that the release or threat of release of a hazardous substance and the damages resulting therefrom were caused solely by—

(1) an act of God;

(2) an act of war;

(3) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a) he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or

(4) any combination of the foregoing paragraphs.

**(c) Determination of amounts**

(1) Except as provided in paragraph (2) of this subsection, the liability under this section of an owner or operator or other responsible person for each release of a hazardous substance or incident involving release of a hazardous substance shall not exceed—

*Sec 101 (3)*

►IV.X. Ocean Incineration  
SARA § 127(b)

(A) for any vessel, *other than an incineration vessel* which carries any hazardous substance as cargo or residue, \$300 per gross ton, or \$5,000,000, whichever is greater;

(B) for any other vessel, *other than an incineration vessel*, \$300 per gross ton, or \$500,000, whichever is greater;

(C) for any motor vehicle, aircraft, pipeline (as defined in the Hazardous Liquid Pipeline Safety Act of 1979 [49 U.S.C.A. § 2001 et seq.]), or rolling stock, \$50,000,000 or such lesser amount as the President shall establish by regulation, but in no event less than \$5,000,000 (or, for releases of hazardous substances as defined in section 9601(14)(A) of this title into the navigable waters, \$8,000,000). Such regulations shall take into account the size, type, location, storage, and handling capacity and other matters relating to the likelihood of release in each such class and to the economic impact of such limits on each such class; or

(D) for any incineration vessel or any facility other than those specified in subparagraph (C) of this paragraph, the total of all costs of response plus \$50,000,000 for any damages under this subchapter. ◀

(2) Notwithstanding the limitations in paragraph (1) of this subsection, the liability of an owner or operator or other responsible person under this section shall be the full and total costs of response and damages, if (A)(i) the release or threat of release of a hazardous substance was the result of willful misconduct or willful negligence within the privity or knowledge of such person, or (ii) the primary cause of the release was a violation (within the privity or knowledge of such person) of applicable safety, construction, or operating standards or regulations; or (B) such person fails or refuses to provide all reasonable cooperation and assistance requested by a responsible public official in connection with response activities under the national contingency plan with respect to regulated carriers subject to the provisions of Title 49 or vessels subject to the provisions of Title 33 or 46, subparagraph (A)(ii) of this paragraph shall be deemed to refer to Federal standards or regulations.

(3) If any person who is liable for a release or threat of release of a hazardous substance fails without sufficient cause to properly provide removal or remedial action upon order of the President pursuant to section 9604 or 9606 of this title, such person may be liable to the United States for punitive damages in an amount at least equal to, and not more than three times, the amount of any costs incurred by the Fund as a result of such failure to take proper action. The President is authorized to commence a civil action against any such person to recover the punitive damages, which shall be in addition to any costs recovered from such person pursuant to section 9612(c) of this title. Any moneys received by the United States pursuant to this subsection shall be deposited in the Fund.

►II.B. Liability Limits  
SARA § 107(c)

(d) Activities pursuant to national contingency plan  
No person shall be liable under this subchapter for

damages as a result of actions taken or omitted in the course of rendering care, assistance, or advice in accordance with the national contingency plan or at the direction of an onscene coordinator appointed under such plan, with respect to an incident creating a danger to public health or welfare or the environment as a result of any release of a hazardous substance or the threat thereof. This subsection shall not preclude liability for damages as the result of gross negligence or intentional misconduct on the part of such person. For the purposes of the preceding sentence, reckless, willful, or wanton misconduct shall constitute gross negligence.]

(d) RENDERING CARE OR ADVICE.—

(1) IN GENERAL.—*Except as provided in paragraph (2), no person shall be liable under this subchapter for costs or damages as a result of actions taken or omitted in the course of rendering care, assistance, or advice in accordance with the National Contingency Plan ("NCP") or at the direction of an onscene coordinator appointed under such plan, with respect to an incident creating a danger to public health or welfare or the environment as a result of any releases of a hazardous substance or the threat thereof. This paragraph shall not preclude liability for costs or damages as the result of negligence on the part of such person.*

(2) STATE AND LOCAL GOVERNMENTS.—*No State or local government shall be liable under this subchapter for costs or damages as a result of actions taken in response to an emergency created by the release or threatened release of a hazardous substance generated by or from a facility owned by another person. This paragraph shall not preclude liability for costs or damages as a result of gross negligence or intentional misconduct by the State or local government. For the purpose of the preceding sentence, reckless, willful, or wanton misconduct shall constitute gross negligence.*

(3) SAVINGS PROVISION.—*This subsection shall not alter the liability of any person covered by the provisions of paragraph (1), (2), (3), or (4) of subsection (a) of this section with respect to the release or threatened release concerned.* ◀

(e) Indemnification, hold harmless, etc., agreements or conveyances; subrogation rights

(1) No indemnification, hold harmless, or similar agreement or conveyance shall be effective to transfer from the owner or operator of any vessel or facility or from any person who may be liable for a release or threat of release under this section, to any other person the liability imposed under this section. Nothing in this subsection shall bar any agreement to insure, hold harmless, or indemnify a party to such agreement for any liability under this section.

(2) Nothing in this subchapter, including the provisions of paragraph (1) of this subsection, shall bar a cause of action that an owner or operator or any other person subject to liability under this section, or a guarantor, has or would have, by reason of subrogation or otherwise against any person.

(f) Actions involving natural resources: maintenance, scope, etc.

**(D) NATURAL RESOURCES LIABILITY.—**

►I.H. Indian Tribes  
SARA § 207(c)

In the case of an injury to, destruction of, or loss of natural resources under subparagraph (C) of subsection (a) of this section liability shall be to the United States Government and to any State for natural resources within the State or belonging to, managed by, controlled by, or appertaining to such State *and to any Indian tribe for natural resources belonging to, managed by, controlled by, or appertaining to such tribe, or held in trust for the benefit of such tribe, or belonging to a member of such tribe if such resources are subject to a trust restriction on alienation: Provided, however, That no liability to the United States or State or Indian tribe shall be imposed under subparagraph (C) of subsection (a) of this section, where the party sought to be charged has demonstrated that the damages to natural resources complained of were specifically identified as an irreversible and irretrievable commitment of natural resources in an environmental impact statement, or other comparable environment analysis, and the decision to grant a permit or license authorizes such commitment of natural resources, and the facility or project was otherwise operating within the terms of its permit or license, so long as, in the case of damages to an Indian tribe occurring pursuant to a Federal permit or license, the issuance of that permit or license was not inconsistent with the fiduciary duty of the United States with respect to such Indian tribe.* ◀

►I.N. Natural Resource Damages  
SARA § 107(d)

The President, or the authorized representative of any State, shall act on behalf of the public as trustee of such natural resources to recover for such damages. [Sums recovered shall be available for use to restore, rehabilitate, or acquire the equivalent of such natural resources by the appropriate agencies of the Federal Government or the State government, but the measure of such damages shall not be limited by the sums which can be used to restore or replace such resources.] *Sums recovered by the United States Government as trustee under this subsection shall be retained by the trustee, without further appropriation, for use only to restore, replace, or acquire the equivalent of such natural resources. Sums recovered by a State as trustee under this subsection shall be available for use only to restore, replace, or acquire the equivalent of such natural resources by the State. The measure of damages in any action under subparagraph (C) of subsection (a) shall not be limited by the sums which can be used to restore or replace such resources. There shall be no double recovery under this chapter for natural resource damages, including the costs of damage assessment or restoration, rehabilitation, or acquisition for the same release and natural resource. There shall be no recovery under the authority of subparagraph (C) of subsection (a) of this section where such damages and the release of a hazardous substance from which such damages resulted have occurred wholly before December 11, 1980.*

**(2) DESIGNATION OF FEDERAL AND STATE OFFICIALS.—**

**(A) FEDERAL.—** *The President shall designate in the National Contingency Plan published under section 9605 of this title the Federal officials who shall act on behalf of the public as trustees for natural resources under this chapter and section 311 of the Federal Water Pollution Control Act. Such officials shall assess damages for injury to, destruction of, or loss of natural resources for purposes of this chapter and such section 311 for those resources under their trusteeship and may, upon request of and reimbursement from a State and at the Federal officials' discretion, assess damages for those natural resources under the State's trusteeship.*

**(B) STATE.—** *The Governor of each State shall designate State officials who may act on behalf of the public as trustee for natural resources under this chapter and section 311 of the Federal Water Pollution Control Act and shall notify the President of such designations. Such State officials shall assess damages to natural resources for the purposes of this chapter and such section 311 for those natural resources under their trusteeship.*

**(C) REBUTTABLE PRESUMPTION.—** *Any determination or assessment of damages to natural resources for the purposes of this chapter and section 311 of the Federal Water Pollution Control Act made by a Federal or State trustee in accordance with the regulations promulgated under section 9651(c) of this title shall have the force and effect of a rebuttable presumption on behalf of the trustee in any administrative or judicial proceeding under this chapter or section 311 of the Federal Water Pollution Control Act.* ◀

►I.O. Federal Facilities  
SARA § 107(e)

**(g) Applicability to Federal Government branches**

Each department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government shall be subject to, and comply with, this chapter in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under this section.]

**(g) FEDERAL AGENCIES.—** *For provisions relating to Federal agencies, see section 9620 of this title.* ◀

**(h) Owner or operator of vessel**

►IV.K. Ocean Incineration  
SARA § 127(e)

The owner or operator of a vessel shall be liable in accordance with this section, *under maritime tort law*, and as provided under section 9614 of this title notwithstanding any provision of the Act of March 3, 1851 (46 U.S.C. 183ff) *or the absence of any physical damage to the proprietary interest of the claimant.* ◀

**(i) Application of registered pesticide product**

►I.H. Indian Tribes  
SARA § 207(c)

No person (including the United States or any State or Indian tribe) may recover under the authority of this section for any response costs or damages resulting from the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act [7

U.S.C.A. § 136 et seq.]. Nothing in this paragraph shall affect or modify in any way the obligations or liability of any person under any other provision of State or Federal law, including common law, for damages, injury, or loss resulting from a release of any hazardous substance or for removal or remedial action or the costs of removal or remedial action of such hazardous substance.

**(j) Obligations or liability pursuant to federally permitted release**

Recovery by any person (including the United States or any State or Indian tribe) for response costs or damages resulting from a federally permitted release shall be pursuant to existing law in lieu of this section. Nothing in this paragraph shall affect or modify in any way the obligations or liability of any person under any other provision of State or Federal law, including common law, for damages, injury, or loss resulting from a release of any hazardous substance or for removal or remedial action or the costs of removal or remedial action of such hazardous substance. In addition, costs of response incurred by the Federal Government in connection with a discharge specified in section 9601(10)(B) or (C) of this title shall be recoverable in an action brought under section 1319(b) of Title 33. ◀

**(k) Transfer to, and assumption by, Post-closure Liability Fund of liability of owner or operator of hazardous waste disposal facility in receipt of permit under applicable solid waste disposal law; time, criteria applicable, procedures, etc; monitoring costs; reports**

(1) The liability established by this section or any other law for the owner or operator of a hazardous waste disposal facility which has received a permit under subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.], shall be transferred to and assumed by the Post-closure Liability Fund established by section 9641 of this title when—

(A) Such facility and the owner and operator thereof has complied with the requirements of subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.] and regulations issued thereunder, which may affect the performance of such facility after closure; and

(B) such facility has been closed in accordance with such regulations and the conditions of such permit, and such facility and the surrounding area have been monitored as required by such regulations and permit conditions for a period not to exceed five years after closure to demonstrate that there is no substantial likelihood that any migration offsite or release from confinement of any hazardous substance or other risk to public health or welfare will occur.

(2) Such transfer of liability shall be effective ninety days after the owner or operator of such facility notifies the Administrator of the Environmental Protection Agency (and the State where it has an authorized program under section 3006(b) of the Solid Waste Disposal Act [42 U.S.C.A. § 6926(b)]) that the conditions imposed by this subsection have been satisfied. If within such ninety-day period the Administrator of the Environmental Protection Agency or such State determines that any such facility has not complied with all the conditions imposed by this subsection or

that insufficient information has been provided to demonstrate such compliance, the Administrator or such State shall so notify the owner and operator of such facility and the administrator of the Fund established by section 9641 of this title, and the owner and operator of such facility shall continue to be liable with respect to such facility under this section and other law until such time as the Administrator and such State determines that such facility has complied with all conditions imposed by this subsection. A determination by the Administrator or such State that a facility has not complied with all conditions imposed by this subsection or that insufficient information has been supplied to demonstrate compliance, shall be a final administrative action for purposes of judicial review. A request for additional information shall state in specific terms the data required.

(3) In addition to the assumption of liability of owners and operators under paragraph (1) of this subsection, the Post-closure Liability Fund established by section 9641 of this title may be used to pay costs of monitoring and care and maintenance of a site incurred by other persons after the period of monitoring required by regulations under subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.] for hazardous waste disposal facilities meeting the conditions of paragraph (1) of this subsection.

(4)(A) Not later than one year after December 11, 1980, the Secretary of the Treasury shall conduct a study and shall submit a report thereon to the Congress on the feasibility of establishing or qualifying an optional system of private insurance for postclosure financial responsibility for hazardous waste disposal facilities to which this subsection applies. Such study shall include a specification of adequate and realistic minimum standards to assure that any such privately placed insurance will carry out the purposes of this subsection in a reliable, enforceable, and practical manner. Such a study shall include an examination of the public and private incentives, programs, and actions necessary to make privately placed insurance a practical and effective option to the financing system for the Post-closure Liability Fund provided in subchapter II of this chapter.

(B) Not later than eighteen months after December 11, 1980, and after a public hearing, the President shall by rule determine whether or not it is feasible to establish or qualify an optional system of private insurance for postclosure financial responsibility for hazardous waste disposal facilities to which this subsection applies. If the President determines the establishment or qualification of such a system would be infeasible, he shall promptly publish an explanation of the reasons for such a determination. If the President determines the establishment or qualification of such a system would be feasible, he shall promptly publish notice of such determination. Not later than six months after an affirmative determination under the preceding sentence and after a public hearing, the President shall by rule promulgate adequate and realistic minimum standards which must be met by any such privately placed insurance, taking into account the purposes of this chapter and this subsection. Such rules shall also specify reasonable expeditious procedures by which privately placed insurance plans can qualify as meeting such minimum standards.

(C) In the event any privately placed insurance plan qualifies under subparagraph (B), any person enrolled in, and complying with the terms of, such plan shall be excluded from the provisions of paragraphs (1), (2), and (3) of this subsection and exempt from the requirements to pay any tax or fee to the Post-closure Liability Fund under subchapter II of this chapter.

(D) The President may issue such rules and take such other actions as are necessary to effectuate the purposes of this paragraph.

►III.B. Post-Closure  
SARA § 201

**(5) SUSPENSION OF LIABILITY TRANSFER.**—Notwithstanding paragraphs (1), (2), (3), and (4) of this subsection and subsection (j) of section 9611 of this title, no liability shall be transferred to or assumed by the Post-Closure Liability Trust Fund established by section 9641 of this title prior to completion of the study required under paragraph (6) of this subsection, transmission of a report of such study to both Houses of Congress, and authorization of such a transfer or assumption by Act of Congress following receipt of such study and report.

**(6) STUDY OF OPTIONS FOR POST-CLOSURE PROGRAM.**—

**(A) STUDY.**—The Comptroller General shall conduct a study of options for a program for the management of the liabilities associated with hazardous waste treatment, storage, and disposal sites after their closure which complements the policies set forth in the Hazardous and Solid Waste Amendments of 1984 and assures the protection of human health and the environment.

**(B) PROGRAM ELEMENTS.**—The program referred to in subparagraph (A) shall be designed to assure each of the following:

(i) Incentives are created and maintained for the safe management and disposal of hazardous wastes so as to assure protection of human health and the environment.

(ii) Members of the public will have reasonable confidence that hazardous wastes will be managed and disposed of safely and that resources will be available to address any problems that may arise and to cover costs of long-term monitoring, care, and maintenance of such sites.

(iii) Persons who are or seek to become owners and operators of hazardous waste disposal facilities will be able to manage their potential future liabilities and to attract the investment capital necessary to build, operate, and close such facilities in a manner which assures protection of human health and the environment.

**(C) ASSESSMENTS.**—The study under this paragraph shall include assessments of treatment, storage, and disposal facilities which have been or are likely to be issued a permit under section 3005 of the Solid Waste Disposal Act and the likelihood of future insolvency on the part of owners and operators of such facilities. Separate assessments shall be made for different classes of facilities and

for different classes of land disposal facilities and shall include but not be limited to—

(i) the current and future financial capabilities of facility owners and operators;

(ii) the current and future costs associated with facilities, including the costs of routine monitoring and maintenance, compliance monitoring, corrective action, natural resource damages, and liability for damages to third parties; and

(iii) the availability of mechanisms by which owners and operators of such facilities can assure that current and future costs, including post-closure costs, will be financed.

**(D) PROCEDURES.**—In carrying out the responsibilities of this paragraph, the Comptroller General shall consult with the Administrator, the Secretary of Commerce, the Secretary of the Treasury, and the heads of other appropriate Federal agencies.

**(E) CONSIDERATION OF OPTIONS.**—In conducting the study under this paragraph, the Comptroller General shall consider various mechanisms and combinations of mechanisms to complement the policies set forth in the Hazardous and Solid Waste Amendments of 1984 to serve the purposes set forth in subparagraph (B) and to assure that the current and future costs associated with hazardous waste facilities, including post-closure costs, will be adequately financed and, to the greatest extent possible, borne by the owners and operators of such facilities. Mechanisms to be considered include, but are not limited to—

(i) revisions to closure, post-closure, and financial responsibility requirements under subtitles C and I of the Solid Waste Disposal Act;

(ii) voluntary risk pooling by owners and operators;

(iii) legislation to require risk pooling by owners and operators;

(iv) modification of the Post-Closure Liability Trust Fund previously established by section 9641 of this title, and the conditions for transfer of liability under this subsection, including limiting the transfer of some or all liability under this subsection only in the case of insolvency of owners and operators;

(v) private insurance;

(vi) insurance provided by the Federal Government;

(vii) coinsurance, reinsurance, or pooled-risk insurance, whether provided by the private sector or provided or assisted by the Federal Government; and

(viii) creation of a new program to be administered by a new or existing Federal agency or by a federally chartered corporation.

**(F) RECOMMENDATIONS.**—The Comptroller General shall consider options for funding any program under this section and shall, to the extent necessary, make recommendations to the appropriate committees of Congress for additional authority to implement such program. ◀

► II.J. Federal Lien  
SARA § 107(f)

(f) FEDERAL LIEN.—

(1) IN GENERAL.—All costs and damages for which a person is liable to the United States under subsection (a) of this section (other than the owner or operator of a vessel under paragraph (1) of subsection (a)) shall constitute a lien in favor of the United States upon all real property and rights to such property which—

- (A) belong to such person; and
- (B) are subject to or affected by a removal or remedial action.

(2) DURATION.—The lien imposed by this subsection shall arise at the later of the following:

- (A) The time costs are first incurred by the United States with respect to a response action under this chapter.
- (B) The time that the person referred to in paragraph (1) is provided (by certified or registered mail) written notice of potential liability.

Such lien shall continue until the liability for the costs (or a judgment against the person arising out of such liability) is satisfied or becomes unenforceable through operation of the statute of limitations provided in section 9613.

(3) NOTICE AND VALIDITY.—The lien imposed by this subsection shall be subject to the rights of any purchaser, holder of a security interest, or judgment lien creditor whose interest is perfected under applicable State law before notice of the lien has been filed in the appropriate office within the State (or county or other governmental subdivision), as designated by State law, in which the real property subject to the lien is located. Any such purchaser, holder of a security interest, or judgment lien creditor shall be afforded the same protections against the lien imposed by this subsection as are afforded under State law against a judgment lien which arises out of an unsecured obligation and which arises as of the time of the filing of the notice of the lien imposed by this subsection. If the State has not by law designated one office for the receipt of such notices of liens, the notice shall be filed in the office of the clerk of the United States district court for the district in which the real property is located. For purposes of this subsection, the terms "purchaser" and "security interest" shall have the definitions provided under section 6323(h) of the Internal Revenue Code of 1954.

(4) ACTION IN REM.—The costs constituting the lien may be recovered in an action in rem in the United States district court for the district in which the removal or remedial action is occurring or has occurred. Nothing in this subsection shall affect the right of the United States to bring an action against any person to recover all costs and damages for which such person is liable under subsection (a) of this section.

(m) MARITIME LIEN.—All costs and damages for which the owner or operator of a vessel is liable under subsection (a) with respect to a threat or threatened

release from such vessel shall constitute a maritime lien in favor of the United States on such vessel. Such costs may be recovered in an action in rem in the district court of the United States for the district in which the vessel may be found. Nothing in this subsection shall affect the right of the United States to bring an action against the owner or operator of such vessel in any court of competent jurisdiction to recover such costs. ◀

Pub.L. 96-510, Title I, § 107, Dec. 11, 1980, 94 Stat. 2781, as added and amended Pub.L. 99-499, Title I, §§ 107, 127(b), (c), Title II, §§ 201, 207(c), Oct. 17, 1986.

§ 9608. [CERCLA § 108]

Financial responsibility

(a) Establishment and maintenance by owner or operator of vessel; amount; failure to obtain certification of compliance

(1) The owner or operator of each vessel (except a nonself-propelled barge that does not carry hazardous substances as cargo) over three hundred gross tons that uses any port or place in the United States or the navigable waters or any offshore facility, shall establish and maintain, in accordance with regulations promulgated by the President, evidence of financial responsibility of \$300 per gross ton (or for a vessel carrying hazardous substances as cargo, or \$5,000,000, whichever is greater) to cover the liability prescribed under paragraph (1) of section 9607(a) of this title. Financial responsibility may be established by any one, or any combination, of the following: insurance, guarantee, surety bond, or qualification as a self-insurer. Any bond filed shall be issued by a bonding company authorized to do business in the United States. In cases where an owner or operator owns, operates, or charters more than one vessel subject to this subsection, evidence of financial responsibility need be established only to meet the maximum liability applicable to the largest of such vessels.

(2) The Secretary of the Treasury shall withhold or revoke the clearance required by section 91 of Title 46 of any vessel subject to this subsection that does not have certification furnished by the President that the financial responsibility provisions of paragraph (1) of this subsection have been complied with.

(3) The Secretary of Transportation, in accordance with regulations issued by him, shall (A) deny entry to any port or place in the United States or navigable waters to, and (B) detain at the port or place in the United States from which it is about to depart for any other port or place in the United States, any vessel subject to this subsection that, upon request, does not produce certification furnished by the President that the financial responsibility provisions of paragraph (1) of this subsection have been complied with.

► IV.K. Ocean Incineration  
SARA § 127(c)

(4) In addition to the financial responsibility provisions of paragraph (1) of this subsection, the President shall require additional evidence of financial responsibility for incineration vessels in such amounts, and to cover such liabilities recognized by law, as the President deems appropriate, taking into account the potential risks posed by

*incineration and transport for incineration, and any other factors deemed relevant.* ◀

**(b) Establishment and maintenance by owner or operator of production, etc., facilities; amount; adjustment; consolidated form of responsibility; coverage of motor carriers**

(1) Beginning not earlier than five years after December 11, 1980, the President shall promulgate requirements (for facilities in addition to those under subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.] and other Federal law) that classes of facilities establish and maintain evidence of financial responsibility consistent with the degree and duration of risk associated with the production, transportation, treatment, storage, or disposal of hazardous substances. Not later than three years after December 11, 1980, the President shall identify those classes for which requirements will be first developed and publish notice of such identification in the Federal Register. Priority in the development of such requirements shall be accorded to those classes of facilities, owners, and operators which the President determines present the highest level of risk of injury.

▶II.G. Financial Responsibility  
SARA § 108(a)

(2) The level of financial responsibility shall be initially established, and, when necessary, adjusted to protect against the level of risk which the President in his discretion believes is appropriate based on the payment experience of the Fund, commercial insurers, courts settlements and judgments, and voluntary claims satisfaction. To the maximum extent practicable, the President shall cooperate with and seek the advice of the commercial insurance industry in developing financial responsibility requirements. *Financial responsibility may be established by any one, or any combination, of the following: insurance, guarantee, surety bond, letter of credit, or qualification as a self-insurer. In promulgating requirements under this section, the President is authorized to specify policy or other contractual terms, conditions, or defenses which are necessary, or which are unacceptable, in establishing such evidence of financial responsibility in order to effectuate the purposes of this chapter.* ◀

▶II.G. Financial Responsibility  
SARA § 108(b)

(3) Regulations promulgated under this subsection shall incrementally impose financial responsibility requirements [over a period of not less than three and no more than six years] *as quickly as can reasonably be achieved but in no event more than 4 years after the date of promulgation.* Where possible, the level of financial responsibility which the President believes appropriate as a final requirement shall be achieved through incremental, annual increases in the requirements. ◀

(4) Where a facility is owned or operated by more than one person, evidence of financial responsibility covering the facility may be established and maintained by one of the owners or operators, or, in consolidated form, by or on behalf of two or more owners or operators. When evidence of financial responsibility is established in a consolidated form, the proportional share of each participant shall be shown. The evidence shall be accompanied by a statement authorizing the applicant to act for and on behalf

of each participant in submitting and maintaining the evidence of financial responsibility.

(5) The requirements for evidence of financial responsibility for motor carriers covered by this chapter shall be determined under section 30 of the Motor Carrier Act of 1980, Public Law 96-296.

▶II.G. Financial Responsibility  
SARA § 108(c)

**(c) Claims against guarantor; maintenance, etc.**

Any claim authorized by section 9607 or 9611 of this title may be asserted directly against any guarantor providing evidence of financial responsibility as required under this section. In defending such a claim, the guarantor may invoke all rights and defenses which would be available to the owner or operator under this subchapter. The guarantor may also invoke the defense that the incident was caused by the willful misconduct of the owner or operator, but such guarantor may not invoke any other defense that such guarantor might have been entitled to invoke in a proceeding brought by the owner or operator against him.

**(d) Liability of guarantor**

Any guarantor acting in good faith against which claims under this chapter are asserted as a guarantor shall be liable under section 9607 of this title or section 9612(c) of this title only up to the monetary limits of the policy of insurance or indemnity contract such guarantor has undertaken or of the guaranty of other evidence of financial responsibility furnished under this section, and only to the extent that liability is not excluded by restrictive endorsement: *Provided, That this subsection shall not alter the liability of any person under section 9607 of this title.]*

**(c) DIRECT ACTION.—**

**(1) RELEASES FROM VESSELS.—***In the case of a release or threatened release from a vessel, any claim authorized by section 9607 or 9611 may be asserted directly against any guarantor providing evidence of financial responsibility for such vessel under subsection (a). In defending such a claim, the guarantor may invoke all rights and defenses which would be available to the owner or operator under this subchapter. The guarantor may also invoke the defense that the incident was caused by the willful misconduct of the owner or operator, but the guarantor may not invoke any other defense that the guarantor might have been entitled to invoke in a proceeding brought by the owner or operator against him.*

**(2) RELEASES FROM FACILITIES.—***In the case of a release or threatened release from a facility, any claim authorized by section 9607 or 9611 may be asserted directly against any guarantor providing evidence of financial responsibility for such facility under subsection (b), if the person liable under section 9607 is in bankruptcy, reorganization, or arrangement pursuant to the Federal Bankruptcy Code, or if, with reasonable diligence, jurisdiction on the Federal courts cannot be obtained over a person liable under section 9607 who is likely to be solvent at the time of judgment. In the case of any action pursuant to this paragraph, the guarantor shall be entitled to invoke all rights and defenses which would have been available to the person liable under sec-*

tion 9607 if any action had been brought against such person by the claimant and all rights and defenses which would have been available to the guarantor if an action had been brought against the guarantor by such person.

**(d) LIMITATION OF GUARANTOR LIABILITY.—**

**(1) TOTAL LIABILITY.—**The total liability of any guarantor in a direct action suit brought under this section shall be limited to the aggregate amount of the monetary limits of the policy of insurance, guarantee, surety bond, letter of credit, or similar instrument obtained from the guarantor by the person subject to liability under section 9607 for the purpose of satisfying the requirement for evidence of financial responsibility.

**(2) OTHER LIABILITY.—**Nothing in this subsection shall be construed to limit any other State or Federal statutory, contractual, or common law liability of a guarantor, including, but not limited to, the liability of such guarantor for bad faith either in negotiating or in failing to negotiate the settlement of any claim. Nothing in this subsection shall be construed, interpreted, or applied to diminish the liability of any person under section 9607 of this title or other applicable law. ◀

Pub.L. 96-510, Title I, § 108, Dec. 11, 1980, 94 Stat. 2785, as added and amended Pub.L. 99-499, Title I, §§ 108, 127(c), Oct. 17, 1986.

## § 9609. [CERCLA §109]

### [Civil penalties]

Any person who, after notice and an opportunity for a hearing, is found to have failed to comply with the requirements of section 9608 of this title, the regulations issued thereunder, or with any denial or detention order shall be liable to the United States for a civil penalty, not to exceed \$10,000 for each day of violation.]

►II.D. Civil and Criminal Penalties  
SARA § 109(c)

### CIVIL PENALTIES AND AWARDS.

**(a) CLASS I ADMINISTRATIVE PENALTY.—**

**(1) VIOLATIONS.—**A civil penalty of not more than \$25,000 per violation may be assessed by the President in the case of any of the following—

(A) A violation of the requirements of section 9603(a) or (b) (relating to notice).

(B) A violation of the requirements of section 9603(d)(2) (relating to destruction of records, etc.).

(C) A violation of the requirements of section 9608 (relating to financial responsibility, etc.), the regulations issued under section 9608, or with any denial or detention order under section 9608.

(D) A violation of an order under section 9622(d)(3) (relating to settlement agreements for action under section 9604(b)).

(E) Any failure or refusal referred to in section 9622(d) (relating to violations of administrative orders, consent decrees, or agreements under section 9620).

**(2) NOTICE AND HEARINGS.—**No civil penalty may be assessed under this subsection unless the person accused of the violation is given notice and opportunity for a hearing with respect to the violation.

**(3) DETERMINING AMOUNT.—**In determining the amount of any penalty assessed pursuant to this subsection, the President shall take into account the nature, circumstances, extent and gravity of the violation or violations and, with respect to the violator, ability to pay, any prior history of such violations, the degree of culpability, economic benefit or savings (if any) resulting from the violation, and such other matters as justice may require.

**(4) REVIEW.—**Any person against whom a civil penalty is assessed under this subsection may obtain review thereof in the appropriate district court of the United States by filing a notice of appeal in such court within 30 days from the date of such order and by simultaneously sending a copy of such notice by certified mail to the President. The President shall promptly file in such court a certified copy of the record upon which such violation was found or such penalty imposed. If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order or after the appropriate court has entered final judgment in favor of the United States, the President may request the Attorney General of the United States to institute a civil action in an appropriate district court of the United States to collect the penalty, and such court shall have jurisdiction to hear and decide any such action. In hearing such action, the court shall have authority to review the violation and the assessment of the civil penalty on the record.

**(5) SUBPOENAS.—**The President may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, or documents in connection with hearings under this subsection. In case of contumacy or refusal to obey a subpoena issued pursuant to this paragraph and served upon any person, the district court of the United States for any district in which such person is found, resides, or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the administrative law judge or to appear and produce documents before the administrative law judge, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

**(b) CLASS II ADMINISTRATIVE PENALTY.—**A civil penalty of not more than \$25,000 per day for each day during which the violation continues may be assessed by the President in the case of any of the following—

(1) A violation of the notice requirements of section 9603(a) or (b).

(2) A violation of section 9603(d)(2) (relating to destruction of records, etc.).

(3) A violation of the requirements of section 9608 (relating to financial responsibility, etc.), the regula-

tions issued under section 9608, or with any denial or detention order under section 9608.

(4) A violation of an order under section 9622(d)(3) (relating to settlement agreements for action under section 9604(b)).

(5) Any failure or refusal referred to in section 9622(l) (relating to violations of administrative orders, consent decrees, or agreements under section 9620).

In the case of a second or subsequent violation the amount of such penalty may be not more than \$75,000 for each day during which the violation continues. Any civil penalty under this subsection shall be assessed and collected in the same manner, and subject to the same provisions, as in the case of civil penalties assessed and collected after notice and opportunity for hearing on the record in accordance with section 554 of Title 5 of the United States Code. In any proceeding for the assessment of a civil penalty under this subsection the President may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents and may promulgate rules for discovery procedures. Any person who requested a hearing with respect to a civil penalty under this subsection and who is aggrieved by an order assessing the civil penalty may file a petition for judicial review of such order with the United States Court of Appeals for the District of Columbia Circuit or for any other circuit in which such person resides or transacts business. Such a petition may only be filed within the 30-day period beginning on the date the order making such assessment was issued.

(c) **JUDICIAL ASSESSMENT.**—The President may bring an action in the United States district court for the appropriate district to assess and collect a penalty of not more than \$25,000 per day for each day during which the violation (or failure or refusal) continues in the case of any of the following—

(1) A violation of the notice requirements of section 9603(a) or (b).

(2) A violation of section 9603(d)(2) (relating to destruction of records, etc.).

(3) A violation of the requirements of section 9608 (relating to financial responsibility, etc.), the regulations issued under section 9608, or with any denial or detention order under section 9608.

(4) A violation of an order under section 9622(d)(3) (relating to settlement agreements for action under section 9604(b)).

(5) Any failure or refusal referred to in section 9622(l) (relating to violations of administrative orders, consent decrees, or agreements under section 9620).

In the case of a second or subsequent violation (or failure or refusal), the amount of such penalty may be not more than \$75,000 for each day during which the violation (or failure or refusal) continues. For additional provisions providing for judicial assessment of civil penalties for failure to comply with a request or order under section 9604(e) (relating to information gathering and access authorities), see section 9604(e).

(d) **AWARDS.**—The President may pay an award of up to \$10,000 to any individual who provides information

leading to the arrest and conviction of any person for a violation subject to a criminal penalty under this chapter, including any violation of section 9603 and any other violation referred to in this section. The President shall, by regulation, prescribe criteria for such an award and may pay any award under this subsection from the Fund, as provided in section 9611.

(e) **PROCUREMENT PROCEDURES.**—Notwithstanding any other provision of law, any executive agency may use competitive procedures or procedures other than competitive procedures to procure the services of experts for use in preparing or prosecuting a civil or criminal action under this chapter, whether or not the expert is expected to testify at trial. The executive agency need not provide any written justification for the use of procedures other than competitive procedures when procuring such expert services under this chapter and need not furnish for publication in the Commerce Business Daily or otherwise any notice of solicitation or synopsis with respect to such procurement.

(f) **SAVINGS CLAUSE.**—Action taken by the President pursuant to this section shall not affect or limit the President's authority to enforce any provisions of this chapter. ◀

Pub. L. 96-510, Title I, § 109, Dec. 11, 1980, 94 Stat. 2787, as added and amended Pub.L. 99-499, Title I, § 109(c), Oct. 17, 1986.

## § 9610. [CERCLA § 110]

### Employee protection

#### (a) Activities of employee subject to protection

No person shall fire or in any other way discriminate against, or cause to be fired or discriminated against, any employee or any authorized representative of employees by reason of the fact that such employee or representative has provided information to a State or to the Federal Government, filed, instituted, or caused to be filed or instituted any proceeding under this chapter, or has testified or is about to testify in any proceeding resulting from the administration or enforcement of the provisions of this chapter.

#### (b) Administrative grievance procedure in cases of alleged violations

Any employee or a representative of employees who believes that he has been fired or otherwise discriminated against by any person in violation of subsection (a) of this section may, within thirty days after such alleged violation occurs, apply to the Secretary of Labor for a review of such firing or alleged discrimination. A copy of the application shall be sent to such person, who shall be the respondent. Upon receipt of such application, the Secretary of Labor shall cause such investigation to be made as he deems appropriate. Such investigation shall provide an opportunity for a public hearing at the request of any party to such review to enable the parties to present information relating to such alleged violation. The parties shall be given written notice of the time and place of the hearing at least five days prior to the hearing. Any such hearing shall be of record and shall be subject to §554 of Title 5,

Upon receiving the report of such investigation, the Secretary of Labor shall make findings of fact. If he finds that such violation did occur, he shall issue a decision, incorporating an order therein and his findings, requiring the party committing such violation to take such affirmative action to abate the violation as the Secretary of Labor deems appropriate, including, but not limited to, the rehiring or reinstatement of the employee or representative of employees to his former position with compensation. If he finds that there was no such violation, he shall issue an order denying the application. Such order issued by the Secretary of Labor under this subparagraph shall be subject to judicial review in the same manner as orders and decisions are subject to judicial review under this chapter.

**(c) Assessment of costs and expenses against violator subsequent to issuance of order of abatement**

Whenever an order is issued under this section to abate such violation, at the request of the applicant a sum equal to the aggregate amount of all costs and expenses (including the attorney's fees) determined by the Secretary of Labor to have been reasonably incurred by the applicant for, or in connection with, the institution and prosecution of such proceedings, shall be assessed against the person committing such violation.

**(d) Defenses**

This section shall have no application to any employee who acting without discretion from his employer (or his agent) deliberately violates any requirement of this chapter.

**(e) Presidential evaluations of potential loss of shifts of employment resulting from administration or enforcement of provisions; investigations; procedures applicable, etc.**

The President shall conduct continuing evaluations of potential loss of shifts of employment which may result from the administration or enforcement of the provisions of this chapter, including, where appropriate, investigating threatened plant closures or reductions in employment allegedly resulting from such administration or enforcement. Any employee who is discharged, or laid off, threatened with discharge or layoff, or otherwise discriminated against by any person because of the alleged results of such administration or enforcement, or any representative of such employee, may request the President to conduct a full investigation of the matter and at the request of any party, shall hold public hearings, require the parties, including the employer involved, to present information relating to the actual or potential effect of such administration or enforcement on employment and any alleged discharge, layoff, or other discrimination, and the detailed reasons or justification therefore. Any such hearing shall be of record and shall be subject to §554 of Title 5. Upon receiving the report of such investigation, the President shall make findings of fact as to the effect of such administration or enforcement on employment and on the alleged discharge, layoff, or discrimination and shall make such recommendations as he deems appropriate. Such report, findings, and recommendations shall be available to the public. Nothing in this subsection shall be construed to require or authorize the President or any State

to modify or withdraw any action, standard, limitation, or any other requirement of this chapter.

Pub.L. 96-510, Title 1, §110, Dec. 11, 1980, 94 Stat. 2787.

**►IV.E Worker Protection  
SARA § 126**

**WORKER PROTECTION STANDARDS.** Section 126 of Pub.L. 99-499 provided that:

**"(a) PROMULGATION.**—Within one year after the date of the enactment of this section, the Secretary of Labor shall, pursuant to section 6 of the Occupational Safety and Health Act of 1970, promulgate standards for the health and safety protection of employees engaged in hazardous waste operations.

**"(b) PROPOSED STANDARDS.**—The Secretary of Labor shall issue proposed regulations on such standards which shall include, but need not be limited to, the following worker protection provisions:

**"(1) SITE ANALYSIS.**—Requirements for a formal hazard analysis of the site and development of a site specific plan for worker protection.

**"(2) TRAINING.**—Requirements for contractors to provide initial and routine training of workers before such workers are permitted to engage in hazardous waste operations which would expose them to toxic substances.

**"(3) MEDICAL SURVEILLANCE.**—A program of regular medical examination, monitoring, and surveillance of workers engaged in hazardous waste operations which would expose them to toxic substances.

**"(4) PROTECTIVE EQUIPMENT.**—Requirements for appropriate personal protective equipment, clothing, and respirators for work in hazardous waste operations.

**"(5) ENGINEERING CONTROLS.**—Requirements for engineering controls concerning the use of equipment and exposure of workers engaged in hazardous waste operations.

**"(6) MAXIMUM EXPOSURE LIMITS.**—Requirements for maximum exposure limitations for workers engaged in hazardous waste operations, including necessary monitoring and assessment procedures.

**"(7) INFORMATIONAL PROGRAM.**—A program to inform workers engaged in hazardous waste operations of the nature and degree of toxic exposure likely as a result of such hazardous waste operations.

**"(8) HANDLING.**—Requirements for the handling, transporting, labeling, and disposing of hazardous wastes.

**"(9) NEW TECHNOLOGY PROGRAM.**—A program for the introduction of new equipment or technologies that will maintain worker protections.

**"(10) DECONTAMINATION PROCEDURES.**—Procedures for decontamination.

**"(11) EMERGENCY RESPONSE.**—Requirements for emergency response and protection of workers engaged in hazardous waste operations.

**(c) FINAL REGULATIONS.**—Final regulations under subsection (a) shall take effect one year after the date they are promulgated. In promulgating final regulations on standards under subsection (a), the Secretary of Labor shall include each of the provisions listed in paragraphs (1) through (11) of subsection (b) unless the Secretary determines that the evidence in the public record considered as a whole does not support inclusion of any such provision.

**(d) SPECIFIC TRAINING STANDARDS.—(1) OFFSITE INSTRUCTION; FIELD EXPERIENCE.**—Standards promulgated under subsection (a) shall include training standards requiring that general site workers (such as equipment operators, general laborers, and other supervised personnel engaged in hazardous

substance removal or other activities which expose or potentially expose such workers to hazardous substances receive a minimum of 40 hours of initial instruction off the site, and a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor, at the time of assignment. The requirements of the preceding sentence shall not apply to any general site worker who has received the equivalent of such training. Workers who may be exposed to unique or special hazards shall be provided additional training.

(2) **TRAINING OF SUPERVISORS.**—Standards promulgated under subsection (a) shall include training standards requiring that onsite managers and supervisors directly responsible for the hazardous waste operations (such as foremen) receive the same training as general site workers set forth in paragraph (1) of this subsection and at least eight additional hours of specialized training on managing hazardous waste operations. The requirements of the preceding sentence shall not apply to any person who has received the equivalent of such training.

(3) **CERTIFICATION; ENFORCEMENT.**—Such training standards shall contain provisions for certifying that general site workers, onsite managers, and supervisors have received the specified training and shall prohibit any individual who has not received the specified training from engaging in hazardous waste operations covered by the standards.

(4) **TRAINING OF EMERGENCY RESPONSE PERSONNEL.**—Such training standards shall set forth requirements for the training of workers who are responsible for responding to hazardous emergency situations who may be exposed to toxic substances in carrying out their responsibilities.

(e) **INTERIM REGULATIONS.**—The Secretary of Labor shall issue interim final regulations under this section within 60 days after the enactment of this section which shall provide no less protection under this section for workers employed by contractors and emergency response workers than the protections contained in the Environmental Protection Agency Manual (1981) "Health and Safety Requirements for Employees Engaged in Field Activities" and existing standards under the Occupational Safety and Health Act of 1970 found in subpart C of part 1926 of title 29 of the Code of Federal Regulations. Such interim final regulations shall take effect upon issuance and shall apply until final regulations become effective under subsection (c).

(f) **COVERAGE OF CERTAIN STATE AND LOCAL EMPLOYEES.**—Not later than 50 days after the promulgation of final regulations under subsection (a), the Administrator shall promulgate standards identical to those promulgated by the Secretary of Labor under subsection (a). Standards promulgated under this subsection shall apply to employees of State and local governments in each State which does not have in effect an approved State plan under section 18 of the Occupational Safety and Health Act of 1970 providing for standards for the health and safety protection of employees engaged in hazardous waste operations.

(g) **GRANT PROGRAM.**—

(1) **GRANT PURPOSES.**—Grants for the training and education of workers who are or may be engaged in activities related to hazardous waste removal or containment or emergency response may be made under this subsection.

(2) **ADMINISTRATION.**—Grants under this subsection shall be administered by the National Institute of Environmental Health Sciences.

(3) **GRANT RECIPIENTS.**—Grants shall be awarded to non-profit organizations which demonstrate experience in implementing and operating worker health and safety training and education programs and demonstrate the ability to reach and involve in training program target populations of workers who are or will be engaged in hazardous waste removal or containment or emergency response operations.

## § 9611. [CERCLA § 111]

### Uses of Fund

#### (a) Authorized purposes ►III.A. Financing Superfund SARA § 111(a)

**IN GENERAL.**—For the purposes specified in this section there is authorized to be appropriated from the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 not more than \$8,500,000,000 for the 5-year period beginning on the date of enactment of the Superfund Amendments and Reauthorization Act of 1986. The preceding sentence constitutes a specific authorization for the funds appropriated under title II of Public Law 99-160 (relating to payment to the Hazardous Substances Trust Fund). ◀

The President shall use the money in the Fund for the following purposes:

(1) [p]Payment of governmental response costs incurred pursuant to section 9604 of this title, including costs incurred pursuant to the Intervention on the High Seas Act [33 U.S.C.A. § 1471 et seq.];.

(2) [p]Payment of any claim for necessary response costs incurred by any other person as a result of carrying out the national contingency plan established under section 1321(c) of Title 33 and amended by section 9605 of this title: *Provided, however,* That such costs must be approved under said plan and certified by the responsible Federal official[;].

(3) [p]Payment of any claim authorized by subsection (b) of this section and finally decided pursuant to section 9612 of this title, including those costs set out in subsection 9612(c)(3) of this title[; and].

(4) [p]Payment of costs specified under subsection (c) of this section.

#### ►I.J. Public Participation SARA § 111(b)

(5) **GRANTS FOR TECHNICAL ASSISTANCE.**—The cost of grants under section 9617(e) (relating to public participation grants for technical assistance). ◀

#### ►IV.D. Lead Contamination SARA § 111(b)

(6) **LEAD CONTAMINATED SOIL.**—Payment of not to exceed \$15,000,000 for the costs of a pilot program for removal, decontamination, or other action with respect to lead-contaminated soil in one to three different metropolitan areas. ◀

The President shall not pay for any administrative costs or expenses out of the Fund unless such costs and expenses are reasonably necessary for and incidental to the implementation of this subchapter.

#### (b) Additional authorized purposes

#### ►I.H. Indian Tribes SARA § 207(d)

**(D) IN GENERAL.**—Claims asserted and compensable but unsatisfied under provisions of section 1321 of Title 33, which are modified by section 304 of this Act may be asserted against the Fund under this subchapter, and other claims resulting from a release or threat of release of a hazardous substance from a vessel or a facility may be

asserted against the Fund under this subchapter for injury to, or destruction or loss of, natural resources, including cost for damage assessment: *Provided, however*, That any such claim may be asserted only by the President, as trustee, for natural resources over which the United States has sovereign rights, or natural resources within the territory or the fishery conservation zone of the United States to the extent they are managed or protected by the United States, or by any State for natural resources within the boundary of that State belonging to, managed by, controlled by, or appertaining to the State, *or by any Indian tribe or by the United States acting on behalf of any Indian tribe for natural resources belonging to, managed by, controlled by, or appertaining to such tribe, or held in trust for the benefit of such tribe, or belonging to a member of such tribe if such resources are subject to a trust restriction on alienation.* ◀

▶I.N. Natural Resource Damages  
SARA § 111(c)

**(2) LIMITATION ON PAYMENT OF NATURAL RESOURCE CLAIMS.—**

**(A) GENERAL REQUIREMENTS.—***No natural resource claim may be paid from the Fund unless the President determines that the claimant has exhausted all administrative and judicial remedies to recover the amount of such claim from persons who may be liable under section 9607.*

**(B) DEFINITION.—***As used in this paragraph, the term "natural resource claim" means any claim for injury to, or destruction or loss of, natural resources. The term does not include any claim for the cost of natural resource damage assessment.* ◀

**(c) Peripheral matters and limitations**

▶I.H. Indian Tribes  
SARA §§ 111(d), 207(d)

Uses of the Fund under subsection (a) of this section include—

(1) [t]The costs of assessing both short-term and long-term injury to, destruction of, or loss of any natural resources resulting from a release of a hazardous substance[;].

(2) [t]The costs of Federal or State or *Indian tribe* efforts in the restoration, rehabilitation, or replacement or acquiring the equivalent of any natural resources injured, destroyed, or lost as a result of a release of a hazardous substance[;]. ◀

(3) [s]Subject to such amounts as are provided in appropriation Acts, the costs of a program to identify, investigate, and take enforcement and abatement action against releases of hazardous substances[;].

▶I.L. Health Related Authorities  
SARA § 111(d)

(4) [the costs of epidemiologic studies] *Any costs incurred in accordance with subsection (m) of this section (relating to ATSDR) and section 9604(i), including the costs of epidemiologic and laboratory studies, health assessments, preparation of toxicologic profiles, diagnosis, and maintenance of a registry of persons exposed to hazardous substances to allow long-term health effect studies, and diagnostic services not otherwise available to deter-*

*mine whether persons in populations exposed to hazardous substances in connection with a release or a suspected release are suffering from long-latency diseases[;].* ◀

(5) [s]Subject to such amounts as are provided in appropriation Acts, the costs of providing equipment and similar overhead, related to the purposes of this chapter and section 1321 of Title 33, and needed to supplement equipment and services available through contractors or other non-Federal entities, and of establishing and maintaining damage assessment capability, for any Federal agency involved in strike forces, emergency task forces, or other response teams under the national contingency plan[; and].

(6) [s]Subject to such amounts as are provided in appropriation Acts, the costs of a program to protect the health and safety of employees involved in response to hazardous substance releases. Such program shall be developed jointly by the Environmental Protection Agency, the Occupational Safety and Health Administration, and the National Institute for Occupational Safety and Health and shall include, but not be limited to, measures for identifying and assessing hazards to which persons engaged in removal, remedy, or other response to hazardous substances may be exposed, methods to protect workers from such hazards, and necessary regulatory and enforcement measures to assure adequate protection of such employees.

▶I.D. NCP/HRS/NPL  
SARA § 111(d)

**(7) EVALUATION COSTS UNDER PETITION PROVISIONS OF SECTION 9605(d).—***Costs incurred by the President in evaluating facilities pursuant to petitions under section 9605(d) (relating to petitions for assessment of release).* ◀

▶I.B. Response Authorities  
SARA § 111(d)

**(8) CONTRACT COSTS UNDER SECTION 9604(a)(1).—***The costs of contracts or arrangements entered into under section 9604(a)(1) to oversee and review the conduct of remedial investigations and feasibility studies undertaken by persons other than the President and the costs of appropriate Federal and State oversight of remedial activities at National Priorities List sites resulting from consent orders or settlement agreements.* ◀

▶I.I. Property Acquisition  
SARA § 111(d)

**(9) ACQUISITION COSTS UNDER SECTION 9604(j).—***The cost incurred by the President in acquiring real estate or interests in real estate under section 9604(j) (relating to acquisition of property).* ◀

▶I.M. Research and Development  
SARA § 111(d)

**(10) RESEARCH, DEVELOPMENT, AND DEMONSTRATION COSTS UNDER SECTION 9660.—***The cost of carrying out section 9660 (relating to research, development, and demonstration), except that the amounts available for such purposes shall not exceed the amounts specified in subsection (m) of this section.* ◀

►I.C. Federal/State Cost Sharing  
SARA § 111(d)

**(11) LOCAL GOVERNMENT REIMBURSEMENT.**—Reimbursements to local governments under section 9623, except that during the 5-fiscal-year period beginning October 1, 1986, not more than 0.1 percent of the total amount appropriated from the Fund may be used for such reimbursements. ◀

►IV.E. Worker Protection  
SARA § 111(d)

**(12) WORKER TRAINING AND EDUCATION GRANTS.**—The costs of grants under section 126(g) of the Superfund Amendments and Reauthorization Act of 1986 for training and education of workers to the extent that such costs do not exceed \$10,000,000 for each of the fiscal years 1987, 1988, 1989, 1990, and 1991. ◀

►II.D. Civil and Criminal Penalties  
SARA § 111(d)

**(13) AWARDS UNDER SECTION 9609.**—The costs of any awards granted under section 9609(d). ◀

►IV.D. Lead Contamination  
SARA § 111(d)

**(14) LEAD POISONING STUDY.**—The cost of carrying out the study under subsection (f) of section 118 of the Superfund Amendments and Reauthorization Act of 1986 (relating to lead poisoning in children). ◀

(d) Additional limitations

(1) No money in the Fund may be used under subsection (c)(1) and (2) of this section, nor for the payment of any claim under subsection (b) of this section, where the injury, destruction, or loss of natural resources and the release of a hazardous substance from which such damages resulted have occurred wholly before December 11, 1980.

(2) No money in the Fund may be used for the payment of any claim under subsection (b) of this section where such expenses are associated with injury or loss resulting from long-term exposure to ambient concentrations of air pollutants from multiple or diffuse sources.

(e) Funding requirements respecting money in Fund

(1) Claims against or presented to the Fund shall not be valid or paid in excess of the total money in the Fund at any one time. Such claims become valid only when additional money is collected, appropriated, or otherwise added to the Fund. Should the total claims outstanding at any time exceed the current balance of the Fund, the President shall pay such claims, to the extent authorized under this section, in full in the order in which they were finally determined.

►I.N. Natural Resource Damages  
SARA § 111(e)

(2) In any fiscal year, 85 percent of the money credited to the Fund under subchapter II of this chapter shall be available only for the purposes specified in paragraphs (1), (2), and (4) of subsection (a) of this section. *No money in the Fund may be used for the payment of any claim under subsection (a)(3) or subsection (b) of this section in any fiscal year for which the President determines that all of the Fund is needed for response to threats to public health from releases or threatened releases of hazardous substances.* ◀

►I.O. Federal Facilities  
SARA § 111(f)

(3) No money in the Fund shall be available for remedial action, other than actions specified in subsection (c) of this section, with respect to federally owned facilities[.]; *except that money in the Fund shall be available for the provision of alternative water supplies (including the reimbursement of costs incurred by a municipality) in any case involving groundwater contamination outside the boundaries of a federally owned facility in which the federally owned facility is not the only potentially responsible party.* ◀

(4) Paragraphs (1) and (4) of subsection (a) of this section shall in the aggregate be subject to such amounts as are provided in appropriation Acts.

(f) Obligation of moneys by Federal officials; obligation of moneys or settlement of claims by State officials

►I.H. Indian Tribes  
SARA § 207(d)

The President is authorized to promulgate regulations designating one or more Federal officials who may obligate money in the Fund in accordance with this section or portions thereof. The President is also authorized to delegate authority to obligate money in the Fund or to settle claims to officials of a State or Indian tribe operating under a contract or cooperative agreement with the Federal Government pursuant to section 9604(d) of this title. ◀

(g) Notice to potential injured parties by owner and operator of vessel or facility causing release of substance; rules and regulations

The President shall provide the promulgation of rules and regulations with respect to the notice to be provided to potential injured parties by an owner and operator of any vessel, or facility from which a hazardous substance has been released. Such rules and regulations shall consider the scope and form of the notice which would be appropriate to carry out the purposes of this subchapter. Upon promulgation of such rules and regulations, the owner and operator of any vessel or facility from which a hazardous substance has been released shall provide notice in accordance with such rules and regulations. With respect to releases from public vessels, the President shall provide such notification as is appropriate to potential injured parties. Until the promulgation of such rules and regulations, the owner and operator of any vessel or facility from which a hazardous substance has been released shall provide reasonable notice to potential injured parties by publication in local newspapers serving the affected area.

►I.N. Natural Resource Damages  
SARA § 111(c)

(h) Assessment of damages for injury, etc. to natural resources from release of substances; determination, etc.

(1) In accordance with regulations promulgated under section 9651(c) of this title, damages for injury to, destruction of, or loss of natural resources resulting from a release of a hazardous substance, for the purposes of this chapter and section 1321(1)(4) and (5) of Title 33, shall be assessed by Federal officials designated by the President under the national contingency plan published under section 9605 of this title, and such officials shall act for the President as trustee under this section and section 1321(1)(5) of Title 33.

(2) Any determination or assessment of damages for in-

jury to, destruction of, or loss of natural resources for the purposes of this chapter and section 1321(f)(4) and (5) of Title 33 shall have the force and effect of a rebuttable presumption on behalf of any claimant (including a trustee under section 9607 of this title or a Federal agency) in any judicial or adjudicatory administrative proceeding under this chapter or section 1321 of Title 33.]

—Section 111(h) of CERCLA is repealed. ◀

(i) Restoration, etc., of natural resources

►I.H. Indian Tribes  
SARA § 207(d)

Except in a situation requiring action to avoid an irreversible loss of natural resources or to prevent or reduce any continuing danger to natural resources or similar need for emergency action, funds may not be used under this chapter for the restoration, rehabilitation, or replacement or acquisition of the equivalent of any natural resources until a plan for the use of such funds for such purposes has been developed and adopted by affected Federal agencies and the Governor or Governors of any State having sustained damage to natural resources within its borders, belonging to, managed by or appertaining to such State, and by the governing body of any Indian tribe having sustained damage to natural resources belonging to, managed by, controlled by, or appertaining to such tribe, or held in trust for the benefit of such tribe, or belonging to a member of such tribe if such resources are subject to a trust restriction on alienation, after adequate public notice and opportunity for hearing and consideration of all public comment. ◀

(j) Use of Post-closure Liability Fund

The President shall use the money in the Post-closure Liability Fund for any of the purposes specified in subsection (a) of this section with respect to a hazardous waste disposal facility for which liability has transferred to such fund under section 9607(k) of this title, and, in addition, for payment of any claim or appropriate request for costs of response, damages, or other compensation for injury or loss under section 9607 of this title or any other State or Federal law, resulting from a release of a hazardous substance from such a facility.

►IV.F. Reports to Congress  
SARA § 111(g)

[(k) Audit review, etc., by Inspector General of Federal department or agency delegated with responsibility to obligate moneys

The Inspector General of each department or agency to which responsibility to obligate money in the Fund is delegated shall provide an audit review team to audit all payments, obligations, reimbursements, or other uses of the Fund, to assure that the Fund is being properly administered and that claims are being appropriately and expeditiously considered. Each such Inspector General shall submit to the Congress an interim report one year after the establishment of the Fund and a final report two years after the establishment of the Fund. Each such Inspector General shall thereafter provide such auditing of the Fund as is appropriate. Each Federal agency shall cooperate with the Inspector General in carrying out this subsection.]

(k) INSPECTOR GENERAL.—In each fiscal year, the Inspector General of each department, agency, or in-

strumentality of the United States which is carrying out any authority of this chapter shall conduct an annual audit of all payments, obligations, reimbursements, or other uses of the Fund in the prior fiscal year, to assure that the Fund is being properly administered and that claims are being appropriately and expeditiously considered. The audit shall include an examination of a sample of agreements with States (in accordance with the provisions of the Single Audit Act) carrying out response actions under this subchapter and an examination of remedial investigations and feasibility studies prepared for remedial actions. The Inspector General shall submit to the Congress an annual report regarding the audit report required under this subsection. The report shall contain such recommendations as the Inspector General deems appropriate. Each department, agency, or instrumentality of the United States shall cooperate with its inspector general in carrying out this subsection. ◀

(l) Foreign claimants

To the extent that the provisions of this chapter permit, a foreign claimant may assert a claim to the same extent that a United States claimant may assert a claim if—

(1) the release of a hazardous substance occurred (A) in the navigable water or (B) in or on the territorial sea or adjacent shoreline of a foreign country of which the claimant is a resident;

(2) the claimant is not otherwise compensated for his loss;

(3) the hazardous substance was released from a facility or from a vessel located adjacent to or within the navigable waters or was discharged in connection with activities conducted under the Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331 et seq.) or the Deepwater Port Act of 1974, as amended (33 U.S.C. 1501 et seq.); and

(4) recovery is authorized by a treaty or an executive agreement between the United States and foreign country involved, or if the Secretary of State, in consultation with the Attorney General and other appropriate officials, certifies that such country provides a comparable remedy for United States claimants.

►I.L. Health Related Authorities  
SARA § 111(h)

(m) AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY.—There shall be directly available to the Agency for Toxic Substances and Disease Registry to be used for the purpose of carrying out activities described in subsection (c)(4) and section 9604(i) not less than \$50,000,000 per fiscal year for each of fiscal years 1987 and 1988, not less than \$55,000,000 for fiscal year 1989, and not less than \$60,000,000 per fiscal year for each of fiscal years 1990 and 1991. Any funds so made available which are not obligated by the end of the fiscal year in which made available shall be returned to the Fund. ◀

►I.M. Research and Development  
SARA § 111(h)

(n) LIMITATIONS ON RESEARCH, DEVELOPMENT, AND DEMONSTRATION PROGRAM.—

(1) SECTION 9660(b).—For each of the fiscal years 1987, 1988, 1989, 1990, and 1991, not more than \$20,000,000 of the amounts available in the

Fund may be used for the purposes of carrying out the applied research, development, and demonstration program for alternative or innovative technologies and training program authorized under section 9660(b) (relating to research, development, and demonstration) other than basic research. Such amounts shall remain available until expended.

(2) SECTION 9660(a).—From the amounts available in the Fund, not more than the following amounts may be used for the purposes of section 9660(a) (relating to hazardous substance research, demonstration, and training activities):

(A) For the fiscal year 1987, \$3,000,000.

(B) For the fiscal year 1988, \$10,000,000.

(C) For the fiscal year 1989, \$20,000,000.

(D) For the fiscal year 1990, \$30,000,000.

(E) For the fiscal year 1991, \$35,000,000.

No more than 10 percent of such amounts shall be used for training under section 9660(a) in any fiscal year.

(3) SECTION 9660(d).—For each of the fiscal years 1987, 1988, 1989, 1990, and 1991, not more than \$5,000,000 of the amounts available in the Fund may be used for the purposes of section 9660(d) (relating to university hazardous substance research centers). ◀

▶II.N. Response Claims  
SARA § 111(h)

(a) NOTIFICATION PROCEDURES FOR LIMITATIONS ON CERTAIN PAYMENTS.—Not later than 90 days after the enactment of this subsection, the President shall develop and implement procedures to adequately notify, as soon as practicable after a site is included on the National Priorities List, concerned local and State officials and other concerned persons of the limitations, set forth in subsection (a)(2) of this section, on the payment of claims for necessary response costs incurred with respect to such site. ◀

▶III.A. Financing Superfund  
SARA § 111(i)

(p) GENERAL REVENUE SHARE OF SUPERFUND.—

(1) IN GENERAL.—The following sums are authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, to the Hazardous Substance Superfund:

(A) For fiscal year 1986, \$212,500,000.

(B) For fiscal year 1987, \$212,500,000.

(C) For fiscal year 1988, \$212,500,000.

(D) For fiscal year 1989, \$212,500,000.

(E) For fiscal year 1990, \$212,500,000.

In addition there is authorized to be appropriated to the Hazardous Substance Superfund for each fiscal year an amount equal to so much of the aggregate amount authorized to be appropriated under this subsection (and paragraph (2) of section 221(b) of the Hazardous Substance Response Revenue Act of 1980) as has not been appropriated before the beginning of the fiscal year involved.

(2) COMPUTATION.—The amounts authorized to be appropriated under paragraph (1) of this subsection in a given fiscal year shall be available only to the extent that such amount exceeds the amount

determined by the Secretary under section 9631(b)(1)(B) for the prior fiscal year. ◀

Pub.L. 96-510, Title I, § 111, Dec. 11, 1980, 94 Stat. 2788, as added and amended Pub.L. 99-499, Title I, § 111, Title II, § 207(d), Oct. 17, 1986.

## § 9612. [CERCLA § 112]

### Claims procedure

▶II.N. Response Claims  
SARA § 112(a)

(a) Presentment of assertable claims against owner, operator, guarantor, or other person; election of available remedies upon failure to satisfy presentment

All claims which may be asserted against the Fund pursuant to section 9611 of this title shall be presented in the first instance to the owner, operator, or guarantor of the vessel or facility from which a hazardous substance has been released, if known to the claimant, and to any other person known to the claimant who may be liable under section 9607 of this title. In any case where the claim has not been satisfied within sixty days of presentation in accordance with this subsection, the claimant may elect to commence an action in court against such owner, operator, guarantor, or other person or to present the claim to the Fund for payment.]

(a) CLAIMS AGAINST THE FUND FOR RESPONSE COSTS.—No claims may be asserted against the Fund pursuant to section 9611(a) unless such claim is presented in the first instance to the owner, operator, or guarantor of the vessel or facility from which a hazardous substance has been released, if known to the claimant, and to any other person known to the claimant who may be liable under section 9607. In any case where the claim has not been satisfied within 60 days of presentation in accordance with this subsection, the claimant may present the claim to the Fund for payment. No claim against the Fund may be approved or certified during the pendency of an action by the claimant in court to recover costs which are the subject of the claim. ◀

(b) Forms and procedures applicable]

(b)(1) PRESCRIBING FORMS AND PROCEDURES.—

▶II.D. Civil and Criminal Penalties  
SARA § 109(a)

(1) The President shall prescribe appropriate forms and procedures for claims filed hereunder, which shall include a provision requiring the claimant to make a sworn verification of the claim to the best of his knowledge. Any person who knowingly gives or causes to be given any false information as a part of any such claim shall, upon conviction, be fined [up to \$5,000 or imprisoned for not more than one year, or both.] in accordance with the applicable provisions of title 18 of the United States Code or imprisoned for not more than 3 years (or not more than 5 years in the case of a second or subsequent conviction), or both. ◀

▶II.N. Response Claims  
SARA § 112(b)

(2)(A) Upon receipt of any claim, the President shall as soon as practicable inform any known affected parties of the claim and shall attempt to promote and arrange a

settlement between the claimant and any person who may be liable. If the claimant and alleged liable party or parties can agree upon a settlement, it shall be final and binding upon the parties thereto, who will be deemed to have waived all recourse against the Fund.

(B) Where a liable party is unknown or cannot be determined, the claimant and the President shall attempt to arrange settlement of any claim against the Fund. The President is authorized to award and make payment of such a settlement, subject to such proof and procedures as he may promulgate by regulation.

(C) Except as provided in subparagraph (D) of this paragraph, the President shall use the facilities and services of private insurance and claims adjusting organizations or State agencies in implementing this subsection and may contract to pay compensation for those facilities and services. Any contract made under the provisions of this paragraph may be made without regard to the provisions of section 5 of Title 41, upon a showing by the President that advertising is not reasonably practicable. When the services of a State agency are used hereunder, no payment may be made on a claim asserted on behalf of that State or any of its agencies or subdivisions unless the payment has been approved by the President.

(D) To the extent necessitated by extraordinary circumstances, where the services of such private organizations or State agencies are inadequate, the President may use Federal personnel to implement this subsection.

(3) If no settlement is reached within forty-five days of filing of a claim through negotiation pursuant to this section, the President may, if he is satisfied that the information developed during the processing of the claim warrants it, make and pay an award of the claim. If the claimant is dissatisfied with the award, he may appeal it in the manner provided for in subparagraph (G) of paragraph (4) of this subsection. If the President declines to make an award, he shall submit the claim for decision to a member of the Board of Arbitrators established pursuant to paragraph (4).

(4)(A) Within ninety days of December 11, 1980, the President shall establish a Board of Arbitrators to implement this subsection. The Board shall consist of as many members as the President may determine will be necessary to implement this subsection expeditiously, and he may increase or decrease the size of the Board at any time in his discretion in order to enable it to respond to the demands of such implementation. Each member of the Board shall be selected through utilization of the procedures of the American Arbitration Association: *Provided, however*, That no regular employee of the President or any of the Federal departments, administrations, or agencies to whom he delegated responsibilities under this chapter shall act as a member of the Board.

(B) Hearings conducted hereunder shall be public and shall be held in such place as may be agreed upon by the parties thereto, or, in the absence of such agreement, in such place as the President determines, in his discretion, will be most convenient for the parties thereto.

(C) Hearings before a member of the Board shall be informal, and the rules of evidence prevailing in judicial proceedings need not be required. Each member of the Board shall have the power to administer oaths and to subpoena the attendance and testimony of witnesses and the produc-

tion of books, records, and other evidence relative or pertinent to the issues presented to him for decision. Testimony may be taken by interrogatory or deposition. Each person appearing before a member of the Board shall have the right to counsel. Subpenas shall be issued and enforced in accordance with procedures in subsection (d) of section 555 of Title 5, and rules promulgated by the President. If a person fails or refuses to obey a subpoena, the President may invoke the aid of the district court of the United States where the person is found, resides, or transacts business in requiring the attendance and testimony of the person and the production by him of books, papers, documents, or any tangible things.

(D) In any proceeding before a member of the Board, the claimant shall bear the burden of proving his claim. Should a member of the Board determine that further investigations, monitoring, surveys, testing, or other information gathering would be useful and necessary in deciding the claim, he may request the President in writing to undertake such activities pursuant to section 9604(b) of this title. The President shall dispose of such a request in his sole discretion, taking into account various competing demands and the availability of the technical and financial capacity to conduct such studies, monitoring, and investigations. Should the President decide to undertake the requested actions, all time requirements for the processing and deciding of claims hereunder shall be suspended until the President reports the results thereof to the member of the Board.

(E) All costs and expenses approved by the President attributable to the employment of any member of the Board shall be payable from the Fund, including fees and mileage expenses for witnesses summoned by such members on the same basis and to the same extent as if such witnesses were summoned before a district court of the United States.

(F) All decisions rendered by members of the Board shall be in writing, with notification to all appropriate parties, and shall be rendered within ninety days of submission of a claim to a member, unless all the parties to the claim agree in writing to an extension or unless the President extends the time limit pursuant to subparagraph (I) of this subsection.

(G) All decisions rendered by members of the Board shall be final, and any party to the proceeding may appeal such a decision within thirty days of notification of the award or decision. Any such appeal shall be made to the Federal district court for the district where the arbitral hearing took place. In any such appeal, the award or decision of the member of the Board shall be considered binding and conclusive, and shall not be overturned except for arbitrary or capricious abuse of the member's discretion: *Provided, however*, That no such award or decision shall be admissible as evidence of any issue of fact or law in any proceeding brought under any other provision of this chapter or under any other provision of law. Nor shall any prearbitral settlement reached pursuant to subsection (b)(2) (A) of this section be admissible as evidence in any such proceeding.

(H) Within twenty days of the expiration of the appeal period for any arbitral award or decision, or within twenty days of the final judicial determination of any appeal taken pursuant to this subsection, the President shall pay any such award from the Fund. The President shall determine the method, terms, and time of payment.

(1) If any any time the President determines that, because of a large number of claims arising from any incident or set of incidents, it is in the best interests, of the parties concerned, he may extend the time for prearbitral negotiation or for rendering an arbitral decision pursuant to this subsection by a period not to exceed sixty days. He may also group such claims for submission to a member of the Board of Arbitrators.]

(2) **PAYMENT OR REQUEST FOR HEARING.**—*The President may, if satisfied that the information developed during the processing of the claim warrants it, make and pay an award of the claim, except that no claim may be awarded to the extent that a judicial judgment has been made on the costs that are the subject of the claim. If the President declines to pay all or part of the claim, the claimant may, within 30 days after receiving notice of the President's decision, request an administrative hearing.*

(3) **BURDEN OF PROOF.**—*In any proceeding under this subsection, the claimant shall bear the burden of proving his claim.*

(4) **DECISIONS.**—*All administrative decisions made hereunder shall be in writing, with notification to all appropriate parties, and shall be rendered within 90 days of submission of a claim to an administrative law judge, unless all the parties to the claim agree in writing to an extension or unless the President, in his discretion, extends the time limit for a period not to exceed sixty days.*

(5) **FINALITY AND APPEAL.**—*All administrative decisions hereunder shall be final, and any party to the proceeding may appeal a decision within 30 days of notification of the award or decision. Any such appeal shall be made to the Federal district court for the district where the release or threat of release took place. In any such appeal, the decision shall be considered binding and conclusive, and shall not be overturned except for arbitrary or capricious abuse of discretion.*

(6) **PAYMENT.**—*Within 20 days after the expiration of the appeal period for any administrative decision concerning an award, or within 20 days after the final judicial determination of any appeal taken pursuant to this subsection, the President shall pay any such award from the Fund. The President shall determine the method, terms, and time of payment. ◀*

**(c) Subrogation rights; actions maintainable**

(1) Payment of any claim by the Fund under this section shall be subject to the United States Government acquiring by subrogation the rights of the claimant to recover those costs of removal or damages for which it has compensated the claimant from the person responsible or liable for such release.

(2) Any person, including the Fund, who pays compensation pursuant to this chapter to any claimant for damages or costs resulting from a release of a hazardous substance shall be subrogated to all rights, claims, and causes of action for such damages and costs of removal that the claimant has under this chapter or any other law.

(3) Upon request of the President, the Attorney General shall commence an action on behalf of the Fund to recover any compensation paid by the Fund to any claimant pursuant to this subchapter, and, with respect to any limitation of liability, all interest, administrative and adjudicative costs, and attorney's fees incurred by the Fund by reason

of the claim. Such an action may be commenced against any owner, operator, or guarantor, or against any other person who is liable, pursuant to any law, to the compensated claimant or to the Fund, for the damages or costs for which compensation was paid.

**►II.F. Statutes of Limitations  
SARA § 112(c)**

**[(d) Time for presentation of claims or maintenance of actions**

No claim may be presented, nor may an action be commenced for damages under this subchapter, unless that claim is presented or action commenced within three years from the date of the discovery of the loss or December 11, 1980, whichever is later: *Provided, however,* That the time limitations contained herein shall not begin to run against a minor until he reaches eighteen years of age or a legal representative is duly appointed for him, nor against an incompetent person until his incompetency ends or a legal representative is duly appointed for him.]

**(d). STATUTE OF LIMITATIONS.—**

**(1) CLAIMS FOR RECOVERY OF COSTS.—**

*No claim may be presented under this section for recovery of the costs referred to in section 9607(a) after the date 6 years after the date of completion of all response action.*

**(2) CLAIMS FOR RECOVERY OF DAMAGES.—***No claim may be presented under this section for recovery of the damages referred to in section 9607(a) unless the claim is presented within 3 years after the later of the following:*

**(A)** *The date of the discovery of the loss and its connection with the release in question.*

**(B)** *The date on which final regulations are promulgated under section 9651(c).*

**(3) MINORS AND INCOMPETENTS.—***The time limitations contained herein shall not begin to run—*

**(A)** *against a minor until the earlier of the date when such minor reaches 18 years of age or the date on which a legal representative is duly appointed for the minor, or*

**(B)** *against an incompetent person until the earlier of the date on which such person's incompetency ends or the date on which a legal representative is duly appointed for such incompetent person. ◀*

**(e) Other statutory or common law claims not waived, etc.**

Regardless of any State statutory or common law to the contrary, no person who asserts a claim against the Fund pursuant to this subchapter shall be deemed or held to have waived any other claim not covered or assertable against the Fund under this subchapter arising from the same incident, transaction, or set of circumstances, nor to have split a cause of action. Further, no person asserting a claim against the Fund pursuant to this subchapter shall as a result of any determination of a question of fact or law made in connection with that claim be deemed or held to be collaterally estopped from raising such question in connection with any other claim not covered or assertable against the Fund under this subchapter arising from the same incident, transaction, or set of circumstances.

►II.N. Natural Resource Damages  
SARA § 112(d)

**(f) DOUBLE RECOVERY PROHIBITED.**—Where the President has paid out of the Fund for any response costs or any costs specified under section 9611(c)(1) or (2), no other claim may be paid out of the Fund for the same costs. ◀

Pub.L. 96-510, Title I, § 112, Dec. 11, 1980, 94 Stat. 2792, as added and amended Pub.L. 99-499, Title I, §§ 109(a), 112, Oct. 17, 1986.

## § 9613. [CERCLA § 113]

### Civil proceedings

#### (a) Review of regulations in Circuit Court of Appeals of the United States for the District of Columbia

Review of any regulation promulgated under this chapter may be had upon application by any interested person only in the Circuit Court of Appeals of the United States for the District of Columbia. Any such application shall be made within ninety days from the date of promulgation of such regulations. Any matter with respect to which review could have been obtained under this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement or to obtain damages or recovery of response costs.

#### (b) Jurisdiction; venue

##### ►II.A. Judicial Review SARA § 113(c)

Except as provided in [subsection] subsections (a) and (h) of this section, the United States district courts shall have exclusive original jurisdiction over all controversies arising under this chapter, without regard to the citizenship of the parties or the amount in controversy. Venue shall lie in any district in which the release or damages occurred, or in which the defendant resides, may be found, or has his principal office. For the purposes of this section, the Fund shall reside in the District of Columbia. ◀

#### (c) Controversies or other matters resulting from tax collection or tax regulation review

The provisions of subsections (a) and (b) of this section shall not apply to any controversy or other matter resulting from the assessment of collection of any tax, as provided by subchapter II of this chapter, or to the review of any regulation promulgated under Title 26.

#### (d) Litigation commenced prior to December 11, 1980

No provision of this chapter shall be deemed or held to moot any litigation concerning any release of any hazardous substance, or any damages associated therewith, commenced prior to December 11, 1980.

##### ►II.K. Service of Process SARA § 113(a)

**(e) NATIONWIDE SERVICE OF PROCESS.**—In any action by the United States under this chapter, process may be served in any district where the defendant is found, resides, transacts business, or has appointed an agent for the service of process. ◀

##### ►II.H. Contribution SARA § 113(b)

#### (f) CONTRIBUTION.—

**(1) CONTRIBUTION.**—Any person may seek contribution from any other person who is liable or potentially liable under section 9607(a), during or following any civil action under section 9606 or under section 9607(a). Such claims shall be brought in accordance with this section and the Federal Rules of Civil Procedure, and shall be governed by Federal law. In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate. Nothing in this subsection shall diminish the right of any person to bring an action for contribution in the absence of a civil action under section 9606 or section 9607.

**(2) SETTLEMENT.**—A person who has resolved its liability to the United States or a State in an administrative or judicially approved settlement shall not be liable for claims for contribution regarding matters addressed in the settlement. Such settlement does not discharge any of the other potentially liable persons unless its terms so provide, but it reduces the potential liability of the others by the amount of the settlement.

**(3) PERSONS NOT PARTY TO SETTLEMENT.**—(A) If the United States or a State has obtained less than complete relief from a person who has resolved its liability to the United States or the State in an administrative or judicially approved settlement, the United States or the State may bring an action against any person who has not so resolved its liability.

(B) A person who has resolved its liability to the United States or a State for some or all of a response action or for some or all of the costs of such action in an administrative or judicially approved settlement may seek contribution from any person who is not party to a settlement referred to in paragraph (2).

(C) In any action under this paragraph, the rights of any person who has resolved its liability to the United States or a State shall be subordinate to the rights of the United States or the State. Any contribution action brought under this paragraph shall be governed by Federal law. ◀

##### ►II.F. Statutes of Limitations SARA § 113(b)

#### (g) PERIOD IN WHICH ACTION MAY BE BROUGHT.—

**(1) ACTIONS FOR NATURAL RESOURCE DAMAGES.**—Except as provided in paragraphs (3) and (4), no action may be commenced for damages (as defined in section 9601(6)) under this chapter, unless that action is commenced within 3 years after the later of the following:

(A) The date of the discovery of the loss and its connection with the release in question.

(B) The date on which regulations are promulgated under section 9651(c).

With respect to any facility listed on the National Priorities List (NPL), any Federal facility identified under section 9620 relating to Federal facilities, or any vessel or facility at which a remedial action under this chapter is otherwise scheduled, an action for damages under this chapter must be commenced

within 3 years after the completion of the remedial action (excluding operation and maintenance activities) in lieu of the dates referred to in subparagraph (A) or (B). In no event may an action for damages under this chapter with respect to such a vessel or facility be commenced (i) prior to 60 days after the Federal or State natural resource trustee provides to the President and the potentially responsible party a notice of intent to file suit, or (ii) before selection of the remedial action if the President is diligently proceeding with a remedial investigation and feasibility study under section 9604(b) or section 9620 (relating to Federal facilities). The limitation in the preceding sentence on commencing an action before giving notice or before selection of the remedial action does not apply to actions filed on or before the enactment of the Superfund Amendments and Reauthorization Act of 1986.

**(2) ACTIONS FOR RECOVERY OF COSTS.—**An initial action for recovery of the costs referred to in section 9607 must be commenced—

(A) for a removal action, within 3 years after completion of the removal action, except that such cost recovery action must be brought within 6 years after a determination to grant a waiver under section 9604(c)(1)(C) for continued response action; and

(B) for a remedial action, within 6 years after initiation of physical on-site construction of the remedial action, except that, if the remedial action is initiated within 3 years after the completion of the removal action, costs incurred in the removal action may be recovered in the cost recovery action brought under this subparagraph.

In any such action described in this subsection, the court shall enter a declaratory judgment on liability for response costs or damages that will be binding on any subsequent action or actions to recover further response costs or damages. A subsequent action or actions under section 9607 for further response costs at the vessel or facility may be maintained at any time during the response action, but must be commenced no later than 3 years after the date of completion of all response action. Except as otherwise provided in this paragraph, an action may be commenced under section 9607 for recovery of costs at any time after such costs have been incurred.

**(3) CONTRIBUTION.—**No action for contribution for any response costs or damages may be commenced more than 3 years after—

(A) the date of judgment in any action under this chapter for recovery of such costs or damages, or

(B) the date of an administrative order under section 9622(a) (relating to de minimis settlements) or 9622(h) (relating to cost recovery settlements) or entry of a judicially approved settlement with respect to such costs or damages.

**(4) SUBROGATION.—**No action based on rights subrogated pursuant to this section by reason of payment of a claim may be commenced under this sub-

chapter more than 3 years after the date of payment of such claim.

**(5) ACTIONS TO RECOVER INDEMNIFICATION PAYMENTS.—**Notwithstanding any other provision of this subsection, where a payment pursuant to an indemnification agreement with a response action contractor is made under section 9619, an action under section 9607 for recovery of such indemnification payment from a potentially responsible party may be brought at any time before the expiration of 3 years from the date on which such payment is made.

**(6) MINORS AND INCOMPETENTS.—**The time limitations contained herein shall not begin to run—

(A) against a minor until the earlier of the date when such minor reaches 18 years of age or the date on which a legal representative is duly appointed for such minor, or

(B) against an incompetent person until the earlier of the date on which such incompetent's incompetency ends or the date on which a legal representative is duly appointed for such incompetent. ◀

▶II.A. Judicial Review  
SARA § 113(c)

**(h) TIMING OF REVIEW.—**No Federal court shall have jurisdiction under Federal law other than under section 1332 of title 28 of the United States Code (relating to diversity of citizenship jurisdiction) or under State law which is applicable or relevant and appropriate under section 9621 (relating to cleanup standards) to review any challenges to removal or remedial action selected under section 9604, or to review any order issued under section 9606(a), in any action except one of the following:

(1) An action under section 9607 to recover response costs or damages or for contribution.

(2) An action to enforce an order issued under section 9606(a) or to recover a penalty for violation of such order.

(3) An action for reimbursement under section 9606(b)(2).

(4) An action under section 9659 (relating to citizens suits) alleging that the removal or remedial action taken under section 9604 or secured under section 9606 was in violation of any requirement of this chapter. Such an action may not be brought with regard to a removal where a remedial action is to be undertaken at the site.

(5) An action under section 9606 in which the United States has moved to compel a remedial action.

**(i) INTERVENTION.—**In any action commenced under this chapter or under the Solid Waste Disposal Act in a court of the United States, any person may intervene as a matter of right when such person claims an interest relating to the subject of the action and is so situated that the disposition of the action may, as a practical matter, impair or impede the person's ability to protect that interest, unless the President or the State shows that the person's interest is adequately represented by existing parties.

**(j) JUDICIAL REVIEW.—**

**(1) LIMITATION.—**In any judicial action under this chapter, judicial review of any issues concern-

ing the adequacy of any response action taken or ordered by the President shall be limited to the administrative record. Otherwise applicable principles of administrative law shall govern whether any supplemental materials may be considered by the court.

(2) **STANDARD.**—In considering objections raised in any judicial action under this chapter, the court shall uphold the President's decision in selecting the response action unless the objecting party can demonstrate, on the administrative record, that the decision was arbitrary and capricious or otherwise not in accordance with law.

(3) **REMEDY.**—If the court finds that the selection of the response action was arbitrary and capricious or otherwise not in accordance with law, the court shall award (A) only the response costs or damages that are not inconsistent with the national contingency plan, and (B) such other relief as is consistent with the National Contingency Plan.

(4) **PROCEDURAL ERRORS.**—In reviewing alleged procedural errors, the court may disallow costs or damages only if the errors were so serious and related to matters of such central relevance to the action that the action would have been significantly changed had such errors not been made.

**(K) ADMINISTRATIVE RECORD AND PARTICIPATION PROCEDURES.—**

(1) **ADMINISTRATIVE RECORD.**—The President shall establish an administrative record upon which the President shall base the selection of a response action. The administrative record shall be available to the public at or near the facility at issue. The President also may place duplicates of the administrative record at any other location.

**(2) PARTICIPATION PROCEDURES.—**

(A) **REMOVAL ACTION.**—The President shall promulgate regulations in accordance with chapter 5 of title 5 of the United States Code establishing procedures for the appropriate participation of interested persons in the development of the administrative record on which the President will base the selection of removal actions and on which judicial review of removal actions will be based.

(B) **REMEDIAL ACTION.**—The President shall provide for the participation of interested persons, including potentially responsible parties, in the development of the administrative record on which the President will base the selection of remedial actions and on which judicial review of remedial actions will be based. The procedures developed under this subparagraph shall include, at a minimum, each of the following:

(i) Notice to potentially affected persons and the public, which shall be accompanied by a brief analysis of the plan and alternative plans that were considered.

(ii) A reasonable opportunity to comment and provide information regarding the plan.

(iii) An opportunity for a public meeting in the affected area, in accordance with section 9617(a)(2) (relating to public participation).

(iv) A response to each of the significant comments, criticisms, and new data submitted in written or oral presentations.

(v) A statement of the basis and purpose of the selected action.

For purposes of this subparagraph, the administrative record shall include all items developed and received under this subparagraph and all items described in the second sentence of section 9617(d). The President shall promulgate regulations in accordance with chapter 5 of title 5 of the United States Code to carry out the requirements of this subparagraph.

(C) **INTERIM RECORDS.**—Until such regulations under subparagraphs (A) and (B) are promulgated, the administrative record shall consist of all items developed and received pursuant to current procedures for selection of the response action, including procedures for the participation of interested parties and the public. The development of an administrative record and the selection of response action under this chapter shall not include an adjudicatory hearing.

(D) **POTENTIALLY RESPONSIBLE PARTIES.**—The President shall make reasonable efforts to identify and notify potentially responsible parties as early as possible before selection of a response action. Nothing in this paragraph shall be construed to be a defense to liability.

(f) **NOTICE OF ACTIONS.**—Whenever any action is brought under this chapter in a court of the United States by a plaintiff other than the United States, the plaintiff shall provide a copy of the complaint to the Attorney General of the United States and to the Administrator of the Environmental Protection Agency. ◀

Pub. L. 96-510, Title 1, § 113, Dec. 11, 1980, 94 Stat. 2795, as added and amended Pub. L. 99-499, Title 1, § 113, Oct. 17, 1986.

## § 9614. [CERCLA § 114]

### Relationship to other law

#### (a) Additional State liability or requirements with respect to release of substances within State

Nothing in this chapter shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State.

#### (b) Recovery under other State or Federal law of compensation for removal costs or damages, or payment of claims

Any person who receives compensation for removal costs or damages or claims pursuant to this chapter shall be precluded from recovering compensation for the same removal costs or damages or claims pursuant to any other State or Federal law. Any person who receives compensation for removal costs or damages or claims pursuant to any other Federal or State law shall be precluded from

receiving compensation for the same removal costs or damages or claims as provided in this chapter.

►IV.C. Federal/State Cost Sharing  
SARA § 114(a)

(c) Contributions to other funds; limitations, etc.

Except as provided in this chapter, no person may be required to contribute to any fund, the purpose of which is to pay compensation for claims for any costs of response or damages or claims which may be compensated under this subchapter. Nothing in this section shall preclude any State from using general revenues for such a fund, or from imposing a tax or fee upon any person or upon any substance in order to finance the purchase or prepositioning of hazardous substance response equipment or other preparations for the response to a release of hazardous substances which affects such State.]◄

►IV.G. Recycled Oil  
SARA § 114(a)

(c) RECYCLED OIL.—

(1) SERVICE STATION DEALERS, ETC.—No person (including the United States or any State) may recover, under the authority of subsection (a)(3) or (a)(4) of section 9607, from a service station dealer for any response costs or damages resulting from a release or threatened release of recycled oil, or use the authority of section 9606 against a service station dealer other than a person described in subsection (a)(1) or (a)(2) of section 9607, if such recycled oil—

(A) is not mixed with any other hazardous substance, and

(B) is stored, treated, transported, or otherwise managed in compliance with regulations or standards promulgated pursuant to section 3014 of the Solid Waste Disposal Act and other applicable authorities.

Nothing in this paragraph shall affect or modify in any way the obligations or liability of any person under any other provision of State or Federal law, including common law, for damages, injury, or loss resulting from a release or threatened release of any hazardous substance or for removal or remedial action or the costs of removal or remedial action.

(2) PRESUMPTION.—Solely for the purposes of this subsection, a service station dealer may presume that a small quantity of used oil is not mixed with other hazardous substances if it—

(A) has been removed from the engine of a light duty motor vehicle or household appliances by the owner of such vehicle or appliances, and

(B) is presented, by such owner, to the dealer for collection, accumulation, and delivery to an oil recycling facility.

(3) DEFINITION.—For purposes of this subsection, the terms "used oil" and "recycled oil" have the same meanings as set forth in sections 1004(36) and 1004(37) of the Solid Waste Disposal Act and regulations promulgated pursuant to that Act.

(4) EFFECTIVE DATE.—The effective date of paragraphs (1) and (2) of this subsection shall be the effective date of regulations or standards pro-

mulgated under section 3014 of the Solid Waste Disposal Act that include, among other provisions, a requirement to conduct corrective action to respond to any releases of recycled oil under subtitle C or subtitle I of such Act. ◄

(d) Financial responsibility of owner or operator of vessel

or facility under State or local law, rule, or regulation

Except as provided in this subchapter, no owner or operator of a vessel or facility who establishes and maintains evidence of financial responsibility in accordance with this subchapter shall be required under any State or local law, rule, or regulation to establish or maintain any other evidence of financial responsibility in connection with liability for the release of a hazardous substance from such vessel or facility. Evidence of compliance with the financial responsibility requirements of this subchapter shall be accepted by a State in lieu of any other requirement of financial responsibility imposed by such State in connection with liability for the release of a hazardous substance from such vessel or facility.

Pub.L. 96-510, Title I, § 114, Dec. 11, 1980, 94 Stat. 2795, as added and amended Pub.L. 99-499, Title I, § 114(a), Oct. 17, 1986.

## § 9615. [CERCLA § 115]

### Presidential delegation and assignment of duties or powers and promulgation of regulations

The President is authorized to delegate and assign any duties or powers imposed upon or assigned to him and to promulgate any regulations necessary to carry out the provisions of this subchapter.

Pub.L. 96-510, Title I, § 115, Dec. 11, 1980, 94 Stat. 2796.

►I.G. Schedules  
SARA § 116

## § 9616. [CERCLA § 116]

### SCHEDULES.

(a) ASSESSMENT AND LISTING OF FACILITIES.—It shall be a goal of this chapter that, to the maximum extent practicable—

(1) not later than January 1, 1988, the President shall complete preliminary assessments of all facilities that are contained (as of the date of enactment of the Superfund Amendments and Reauthorization Act of 1986) on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) including in each assessment a statement as to whether a site inspection is necessary and by whom it should be carried out; and

(2) not later than January 1, 1989, the President shall assure the completion of site inspections at all facilities for which the President has stated a site inspection is necessary pursuant to paragraph (1).

(b) EVALUATION.—Within 4 years after enactment of the Superfund Amendments and Reauthorization Act of 1986, each facility listed (as of the date of such enactment)

in the CERCLIS shall be evaluated if the President determines that such evaluation is warranted on the basis of a site inspection or preliminary assessment. The evaluation shall be in accordance with the criteria established in section 9605 under the National Contingency Plan for determining priorities among release for inclusion on the National Priorities List. In the case of a facility listed in the CERCLIS after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the facility shall be evaluated within 4 years after the date of such listing if the President determines that such evaluation is warranted on the basis of a site inspection or preliminary assessment.

(c) **EXPLANATIONS.**—If any of the goals established by subsection (a) or (b) are not achieved, the President shall publish an explanation of why such action could not be completed by the specified date.

(d) **COMMENCEMENT OF RI/FS.**—The President shall assure that remedial investigations and feasibility studies (RI/FS) are commenced for facilities listed on the National Priorities List, in addition to those commenced prior to the date of enactment of the Superfund Amendments and Reauthorization Act of 1986, in accordance with the following schedule:

(1) not fewer than 275 by the date 36 months after the date of enactment of the Superfund Amendment and Reauthorization Act of 1986, and

(2) if the requirement of paragraph (1) is not met, not fewer than an additional 175 by the date 4 years after such date of enactment, an additional 200 by the date 5 years after such date of enactment, and a total of 650 by the date 5 years after such date of enactment.

(e) **COMMENCEMENT OF REMEDIAL ACTION.**—The President shall assure that substantial and continuous physical on-site remedial action commences at facilities on the National Priorities List, in addition to those facilities on which remedial action has commenced prior to the date of enactment of the Superfund Amendments and Reauthorization Act of 1986, at a rate not fewer than:

(1) 175 facilities during the first 36-month period after enactment of this subsection; and

(2) 200 additional facilities during the following 24 months after such 36-month period. ◀

As added Pub.L. 99-499, Title I, §116, Oct. 17, 1986.

►I.J. Public Participation  
SARA § 117

## § 9617. [CERCLA § 117]

### PUBLIC PARTICIPATION.

(a) **PROPOSED PLAN.**—Before adoption of any plan for remedial action to be undertaken by the President, by a State, or by any other person, under section 9604, 9606, 9620, or 9622, the President or State, as appropriate, shall take both of the following actions:

(1) Publish a notice and brief analysis of the proposed plan and make such plan available to the public.

(2) Provide a reasonable opportunity for submission of written and oral comments and an opportunity

ty for a public meeting at or near the facility at issue regarding the proposed plan and regarding any proposed findings under section 9621(d)(4) (relating to cleanup standards). The President or the State shall keep a transcript of the meeting and make such transcript available to the public. The notice and analysis published under paragraph (1) shall include sufficient information as may be necessary to provide a reasonable explanation of the proposed plan and alternative proposals considered.

(b) **FINAL PLAN.**—Notice of the final remedial action plan adopted shall be published and the plan shall be made available to the public before commencement of any remedial action. Such final plan shall be accompanied by a discussion of any significant changes (and the reasons for such changes) in the proposed plan and a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations under subsection (a).

(c) **EXPLANATION OF DIFFERENCES.**—After adoption of a final remedial action plan—

(1) if any remedial action is taken,

(2) if any enforcement action under section 9606 is taken, or

(3) if any settlement or consent decree under section 9606 or section 9622 is entered into, and if such action, settlement, or decree differs in any significant respects from the final plan, the President or the State shall publish an explanation of the significant differences and the reasons such changes were made.

(d) **PUBLICATION.**—For the purposes of this section, publication shall include, at a minimum, publication in a major local newspaper of general circulation. In addition, each item developed, received, published, or made available to the public under this section shall be available for public inspection and copying at or near the facility at issue.

(e) **GRANTS FOR TECHNICAL ASSISTANCE.**—

(1) **AUTHORITY.**—Subject to such amounts as are provided in appropriations Acts and in accordance with rules promulgated by the President, the President may make grants available to any group of individuals which may be affected by a release or threatened release at any facility which is listed on the National Priorities List under the National Contingency Plan. Such grants may be used to obtain technical assistance in interpreting information with regard to the nature of the hazard, remedial investigation and feasibility study, record of decision, remedial design, selection and construction of remedial action, operation and maintenance, or removal action at such facility.

(2) **AMOUNT.**—The amount of any grant under this subsection may not exceed \$50,000 for a single grant recipient. The President may waive the \$50,000 limitation in any case where such waiver is necessary to carry out the purposes of this subsection. Each grant recipient shall be required, as a condition of the grant, to contribute at least 20 percent of the total of costs of the technical assistance for which such grant is made. The President may waive the 20 per-

cent contribution requirement if the grant recipient demonstrates financial need and such waiver is necessary to facilitate public participation in the selection of remedial action at the facility. Not more than one grant may be made under this subsection with respect to a single facility, but the grant may be renewed to facilitate public participation at all stages of remedial action. ◀

As added Pub.L. 99-499, Title I, § 117, Oct. 17, 1986.

## § 9618. [CERCLA § 118]

### ►I.A. Scope of Superfund SARA § 118(a)

#### HIGH PRIORITY FOR DRINKING WATER SUPPLIES.

For purposes of taking action under section 9604 or 9606 and listing facilities on the National Priorities List, the President shall give a high priority to facilities where the release of hazardous substances or pollutants or contaminants has resulted in the closing of drinking water wells or has contaminated a principal drinking water supply. ◀

As added Pub.L. 99-499, Title I, § 118(a), Oct. 17, 1986.

**MISCELLANEOUS PROVISIONS.** Subsections (b)-(p) of section 118 of Pub.L. 99-499 provided that:

### ►IV.H. Radon SARA § 118(b)

"(b) **REMOVAL AND TEMPORARY STORAGE OF CONTAINERS OF CONTAMINATED SOIL.**—Not later than 90 days after the enactment of this Act, the Administrator shall make a grant of \$7,500,000 to the State of New Jersey for transportation from residential areas in the State of New Jersey and temporary storage of approximately 14,000 containers of radon contaminated soil which is the subject of a remedial action for which a remedial investigation and feasibility study has been initiated before such date. Such containers shall be transported to and temporarily stored at any site in the State of New Jersey designated by the Governor of such State. For purposes of section 111(a) of CERCLA, the grant under this subsection for transportation and storage of such containers shall be treated as payment of governmental response cost incurred pursuant to section 104 of CERCLA. ◀

"(c) **UNCONSOLIDATED QUATERNARY AQUIFER.**—Notwithstanding any other provision of law, no person may—

"(1) locate or authorize the location of a landfill, surface impoundment, waste pile, injection well, or land treatment facility over the Unconsolidated Quaternary Aquifer, or the recharge zone or streamflow source zone of such aquifer, in the Rockaway River Basin, New Jersey (as such aquifer and zones are described in the Federal Register, January 24, 1984, pages 2946-2948); or

"(2) place or authorize the placement of solid waste in a landfill, surface impoundment, waste pile, injection well, or land treatment facility over such aquifer or zone. This subsection may be enforced under sections 309(a) and (b) of the Federal Water Pollution Control Act. For purposes of section 309(c) of such Act, a violation of this subsection shall be considered a violation of section 301 of such Act.

### ►IV.I. Studies SARA § 118(d)

"(d) **STUDY OF SHORTAGES OF SKILLED PERSONNEL.**—The Comptroller General shall study the problem of shortages

of skilled personnel in the Environmental Protection Agency to carry out response actions under CERCLA. In particular the Comptroller General shall study—

"(1) the types of skilled personnel needed for response actions for which there are shortages in the Environmental Protection Agency,

"(2) the extent of such shortages,

"(3) pay differential between the public and private sectors for the skilled positions involved in response actions,

"(4) the extent to which skilled personnel of Federal and State governments involved in response actions are leaving their positions for employment in the private sector,

"(5) the success of programs of the Department of Defense and the Office of Personnel Management in retaining skilled personnel, and

"(6) the types of training required to improve the skills of employees carrying out response actions.

The Comptroller General shall complete the study required by this subsection and submit a report on the results thereof to Congress not later than July 1, 1987. ◀

"(e) **STATE REQUIREMENTS NOT APPLICABLE TO CERTAIN TRANSFERS.**—No State or local requirement shall apply to the transfer and disposal of any hazardous substance or pollutant or contaminant from a facility at which a release or threatened release has occurred to a facility for which a final permit under section 3005(a) of the Solid Waste Disposal Act is in effect if the following conditions apply—

"(1) Such permit was issued after January 1, 1983 and before November 1, 1984.

"(2) The transfer and disposal is carried out pursuant to a cooperative agreement between the Administrator and the State.

"(3) The facility at which the release or threatened release has occurred is identified as the McColl Site in Fullerton, California. The terms used in this section shall have the same meaning as when used in title I of CERCLA.

### ►IV.D. Lead Contamination SARA § 118(f)

"(f) **STUDY OF LEAD POISONING IN CHILDREN.**—(1) The Administrator of the Agency for Toxic Substances and Disease Registry shall, in consultation with the Administrator of the Environmental Protection Agency and other officials as appropriate, not later than March 1, 1987, submit to the Congress, a report on the nature and extent of lead poisoning in children from environmental sources. Such report shall include, at a minimum, the following information—

"(A) an estimate of the total number of children, arrayed according to Standard Metropolitan Statistical Area or other appropriate geographic unit, exposed to environmental sources of lead at concentrations sufficient to cause adverse health effects;

"(B) an estimate of the total number of children exposed to environmental sources of lead arrayed according to source or source types;

"(C) a statement of the long term consequences for public health of unabated exposures to environmental sources of lead and including but not limited to, diminution in intelligence, increases in morbidity and mortality; and

"(D) methods and alternatives available for reducing exposures of children to environmental sources of lead.

"(2) Such report shall also score and evaluate specific sites at which children are known to be exposed to environmental sources of lead due to releases, utilizing the Hazard Ranking system of the National Priorities List.

"(3) The costs of preparing and submitting the report required by this section shall be borne by the Hazardous Substance Superfund established under subchapter A of chapter 98 of Internal Revenue Code of 1954. ◀

"(g) **FEDERALLY LICENSED DAM.**—For purposes of CERCLA in the case of the Milltown Dam in the State of Montana licensed under part 1 of the Federal Power Act and designated as FERC license number 2543-004, if a hazardous substance, pollutant, or contaminant—

"(1) has been released into the environment upstream of the dam, and

"(2) has subsequently come to be located in the reservoir created by such dam

notwithstanding section 101(20) of such Act, the term 'owner or operator' does not include the owner or operator of the dam unless such owner or operator is a person who would otherwise be liable for such release or threatened release under section 107 of such Act.

►I.A. Scope of Superfund  
SARA § 118(h)

"(h) **COMMUNITY RELOCATION AT TIMES BEACH SITE.**—For purposes of any Missouri dioxin site at which a temporary or permanent relocation decision has been made, or is under active consideration, by the Administrator as of the enactment of this Act, the terms 'remove' and 'removal' as used in CERCLA shall be deemed to include the costs of permanent relocation of residents where it is determined that such permanent relocation is cost effective or may be necessary to protect health or welfare. In the case of a business located in an area of evacuation or relocation at such facility, such terms may also include the payment of those installments of principal and interest on business debt which accrue between the date of evacuation or temporary relocation and 30 days following the date that permanent relocation is actually accomplished or, if permanent relocation is formally rejected as the appropriate response, the date on which evacuation or temporary relocation ceases. In the case of an individual unemployed as a result of such evacuation or relocation, such terms may also include the provision of assistance identical to that authorized by sections 407, 408, and 409 of the Disaster Relief Act of 1974; except that the costs of such assistance shall be paid from the Trust Fund established under amendments made to the Internal Revenue Code of 1954 by this Act. Section 104(c)(1) of CERCLA shall not apply to obligations from the Fund for permanent relocation under this paragraph. ◀

"(i) **LIMITED WAIVERS IN STATE OF ILLINOIS.**—

"(1) **MOBILE INCINERATORS.**—In the case of remedial actions specifically involving mobile incinerator units in the State of Illinois, if such remedial actions are undertaken by the State under the authority of a State Superfund law or equivalent authority, the State may, with the approval of the Administrator, waive any permit requirement under subtitle C of the Solid Waste Disposal Act which would be otherwise applicable to such action to the extent that the following conditions are met:

"(A) **NO TRANSFER.**—The incinerator does not involve the transfer of a hazardous substance or pollutant or contaminant from the facility at which the release or threatened release occurs to an offsite facility.

"(B) **REMEDIAL ACTION.**—The remedial action provides each of the following:

"(i) Changes in the character or composition of the hazardous substance or pollutant or contaminant concerned so that it no longer presents a risk to public health.

"(ii) Protection against accidental emissions during operation.

"(iii) Protection of public health, considering the multimedia impacts of the treatment process.

"(C) **PUBLIC PARTICIPATION.**—The State provides procedures for public participation regard-

ing the response action which are at least equivalent to the level of public participation procedures applicable under CERCLA and under the Solid Waste Disposal Act.

"(2) **EFFECT OF WAIVER.**—The waiver of any permit requirement under this subsection shall not be construed to waive any standard or level or control which—

"(A) is applicable to any hazardous substance or pollutant or contaminant involved in the remedial action; and

"(B) would otherwise be contained in the permit.

Such waiver of any permit requirement under subtitle C of the Solid Waste Disposal Act shall only apply to the extent that the facility or remedial action involves the onsite treatment with a mobile incineration unit of waste present at such site. The waiver shall not apply to any other regulated or potentially regulated activity, including the use of the mobile incineration unit for actions not authorized by the State.

"(3) **EXPIRATION OF AUTHORITY.**—The authority of this subsection shall terminate at the end of 3 years, unless the State demonstrates, to the satisfaction of the Administrator, that the operation of mobile incinerators in the State has sufficiently protected public health and the environment and is consistent with the criteria required for a permit under subtitle C of the Solid Waste Disposal Act.

►IV.I. Studies  
SARA § 118(j)

"(j) **STUDY OF JOINT USE OF TRUCKS.**—

"(1) **STUDY.**—The Administrator, in consultation with the Secretary of Transportation, shall conduct a study of problems associated with the use of any vehicle for purposes other than the transportation of hazardous substances when that vehicle is used at other times for the transportation of hazardous substances. At a minimum, the Administrator shall consider—

"(A) whether such joint use of vehicles should be prohibited, and

"(B) whether, if such joint use is permitted, special safeguards should be taken to minimize threats to public health and the environment.

"(2) **REPORT.**—The Administrator shall submit a report, along with recommendations, to Congress on the results of the study conducted under paragraph (1) not later than 180 days after the date of the enactment of this Act. ◀

►IV.H. Radon  
SARA § 118(k)

"(k) **RADON ASSESSMENT AND MITIGATION.**—

"(1) **NATIONAL ASSESSMENT OF RADON GAS.**—No later than one year after the enactment of this Act, the Administrator shall submit to the Congress a report which shall, to the extent possible—

"(A) identify the locations in the United States where radon is found in structures where people normally live or work, including educational institutions;

"(B) assess the levels of radon gas that are present in such structures;

"(C) determine the level of radon gas and radon daughters which poses a threat to human health and assess for each location identified under subparagraph (A) the extent of the threat to human health;

"(D) determine methods of reducing or eliminating the threat to human health of radon gas and radon daughters; and

"(E) include guidance and public information materials based on the findings or research of mitigating radon.

**"(2) RADON MITIGATION DEMONSTRATION PROGRAM.—**

**"(A) DEMONSTRATION PROGRAM.—**The Administrator shall conduct a demonstration program to test methods and technologies of reducing or eliminating radon gas and radon daughters where it poses a threat to human health. The Administrator shall take into consideration any demonstration program underway in the Reading Prong of Pennsylvania, New Jersey, and New York and at other sites prior to enactment. The demonstration program under this section shall be conducted in the Reading Prong, and at such other sites as the Administrator considers appropriate.

**"(B) ANNUAL REPORTS.—**The Administrator shall submit annual reports not later than February 1 of each year (beginning February 1, 1987) on the status of the demonstration program carried out under this subsection and on any such demonstration program initiated prior to enactment.

**"(C) LIABILITY.—**Liability, if any, for persons undertaking activities pursuant to the radon mitigation demonstration program authorized under this subsection shall be determined under principles of existing law.

**"(3) CONSTRUCTION OF SECTION.—**Nothing in this subsection shall be construed to authorize the Administrator to carry out any regulatory program or any activity other than research, development, and related reporting, information dissemination, and coordination activities specified in this subsection. Nothing in paragraph (1) or (2) shall be construed to limit the authority of the Administrator or of any other agency or instrumentality of the United States under any other authority of law. ◀

►I.M. Research and Development  
SARA § 118(l)

**"(4) GULF COAST HAZARDOUS SUBSTANCE RESEARCH, DEVELOPMENT, AND DEMONSTRATION CENTER.—**

**"(1) ESTABLISHMENT OF HAZARDOUS SUBSTANCE RESEARCH, DEVELOPMENT, AND DEMONSTRATION CENTER.—**The Administrator shall establish a hazardous substance research, development, and demonstration center (hereinafter in this subsection referred to as the 'Center') for the purpose of conducting research to aid in more effective hazardous substance response and waste management throughout the Gulf Coast.

**"(2) PURPOSES OF THE CENTER.—**The Center shall carry out a program of research, evaluation, testing, development, and demonstration of alternative or innovative technologies which may be utilized in response actions or in normal handling of hazardous wastes to achieve better protection of human health and the environment.

**"(3) OPERATION OF CENTER.—(A)** For purposes of operating the Center, the Administrator is authorized to enter into contracts and cooperative agreements with, and make grants to, a university related institute involved with the improvement of waste management. Such institute shall be located in Jefferson County, Texas.

**"(B)** The Center shall be authorized to make grants, accept contributions, and enter into agreements with universities located in the States of Texas, Louisiana, Mississippi, Alabama, and Florida in order to carry out the purposes of the Center.

**"(4) AUTHORIZATION OF APPROPRIATIONS.—**There are authorized to be appropriated to the Ad-

ministrator for purposes of carrying out this subsection for fiscal years beginning after September 30, 1986, not more than \$5,000,000. ◀

►IV.H. Radon  
SARA § 118(m)

**"(m) RADON PROTECTION AT CURRENT NATIONAL PRIORITIES LIST SITES.—**It is the sense of the Congress that the President, in selecting response action for facilities included on the National Priorities List published under section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 because of the presence of radon, is not required by statute or regulations to use fully demonstrated methods, particularly those involving the offsite transport and disposition of contaminated material, but may use innovative or alternative methods which protect human health and the environment in a more cost-effective manner. ◀

►I.M. Research and Development  
SARA § 118(n)

**"(n) SPILL CONTROL TECHNOLOGY.—**

**"(1) ESTABLISHMENT OF PROGRAM.—**Within 180 days of enactment of this subsection, the Secretary of the United States Department of Energy is directed to carry out a program of testing and evaluation of technologies which may be utilized in responding to liquefied gaseous and other hazardous substance spills at the Liquefied Gaseous Fuels Spill Test Facility that threaten public health or the environment.

**"(2) TECHNOLOGY TRANSFER.—**In carrying out the program established under this subsection, the Secretary shall conduct a technology transfer program that, at a minimum—

**"(A)** documents and archives spill control technology;

**"(B)** investigates and analyzes significant hazardous spill incidents;

**"(C)** develops and provides generic emergency action plans;

**"(D)** documents and archives spill test results; **(E)** develops emergency action plans to respond to spills;

**"(F)** conducts training of spill response personnel; and

**"(G)** establishes safety standards for personnel engaged in spill response activities.

**"(3) CONTRACTS AND GRANTS.—**The Secretary is directed to enter into contracts and grants with a nonprofit organization in Albany County, Wyoming, that is capable of providing the necessary technical support and which is involved in environmental activities related to such hazardous substance related emergencies.

**"(4) USE OF SITE.—**The Secretary shall arrange for the use of the Liquefied Gaseous Fuels Spill Test Facility to carry out the provisions of this subsection. ◀

►I.M. Research and Development  
SARA § 118(o)

**"(o) PACIFIC NORTHWEST HAZARDOUS SUBSTANCE RESEARCH, DEVELOPMENT, AND DEMONSTRATION CENTER.—**

**"(1) ESTABLISHMENT.—**The Administrator shall establish a hazardous substance research, development, and demonstration center (hereinafter in this subsection referred to as the 'Center') for the purpose of conducting research to aid in more effective hazardous substance response in the Pacific Northwest.

**"(2) PURPOSES OF CENTER.—**The Center shall carry out a program of research, evaluation, testing, development, and demonstration of alternative or innovative technologies which may be utilized in response actions to achieve more permanent protection of human health and welfare and the environment.

**"(3) OPERATION OF CENTER.—**

**"(A) NONPROFIT ENTITY.—**For the purposes of operating the Center, the Administrator is authorized to enter into contracts and cooperative agreements with, and make grants to, a nonprofit private entity as defined in section 201(f) of Public Law 96-517 which entity shall agree to provide the basic technical and management personnel. Such nonprofit private entity shall also agree to provide at least two permanent research facilities, one of which shall be located in Benton County, Washington, and one of which shall be located in Clallam County, Washington.

**"(B) AUTHORITY.—**The Center shall be authorized to make grants, accept contributions, and enter into agreements with universities located in the States of Washington, Oregon, Idaho, and Montana in order to carry out the purposes of the Center.

**"(4) HAZARDOUS WASTE RESEARCH AT THE HANFORD SITE.—**

**"(A) INTERAGENCY AGREEMENTS.—**The Administrator and the Secretary of Energy are authorized to enter into interagency agreements with one another for the purpose of providing for research, evaluation, testing, development, and demonstration into alternative or innovative technologies to characterize and assess the nature and extent of hazardous waste (including radioactive mixed waste) contamination at the Hanford site, in the State of Washington.

**"(B) FUNDING.—**There is authorized to be appropriated to the Secretary of Energy for purposes of carrying out this paragraph for fiscal years beginning after September 30, 1986, not more than \$5,000,000. All sums appropriated under this subparagraph shall be provided to the Administrator by the Secretary of Energy, pursuant to the interagency agreement entered into under subparagraph (A), for the purpose of the Administrator entering into contracts and cooperative agreements with, and making grants to, the Center in order to carry out the research, evaluation, testing, development, and demonstration described in paragraph (1).

**"(5) AUTHORIZATION OF APPROPRIATIONS.—**There is authorized to be appropriated to the Administrator for purposes of carrying out this subsection (other than paragraph (4)) for fiscal years beginning after September 30, 1986, not more than \$5,000,000. ◀

►I.D. NCPIHRSINPL  
SARA § 118(p)

**"(p) SILVER CREEK TAILINGS.—**Effective with the date of enactment of this Act, the facility listed in Group 7 in EPA National Priorities List Update #4 (50 Federal Register 37956, September 18, 1985), the site in Park City, Utah, which is located on tailings from noncoal mining operations, shall be deemed removed from the list of sites recommended for inclusion on the National Priorities List, unless the President determines upon site specific data not used in the proposed listing of such facility, that the facility meets requirements of the Hazard Ranking System or any revised Hazard Ranking System. ◀"

So in original. Probably should be "divia."

►II.C. Response Action Contractors  
SARA § 119

**§ 9619. [CERCLA § 119]****RESPONSE ACTION CONTRACTORS.****(a) LIABILITY OF RESPONSE ACTION CONTRACTORS.—****(1) RESPONSE ACTION CONTRACTORS.—**

A person who is a response action contractor with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from a vessel or facility shall not be liable under this subchapter or under any other Federal law to any person for injuries, costs, damages, expenses, or other liability (including but not limited to claims for indemnification or contribution and claims by third parties for death, personal injury, illness or loss of or damage to property or economic loss) which results from such release or threatened release.

**(2) NEGLIGENCE, ETC.—**Paragraph (1) shall not apply in the case of a release that is caused by conduct of the response action contractor which is negligent, grossly negligent, or which constitutes intentional misconduct.

**(3) EFFECT ON WARRANTIES; EMPLOYER LIABILITY.—**Nothing in this subsection shall affect the liability of any person under any warranty under Federal, State, or common law. Nothing in this subsection shall affect the liability of an employer who is a response action contractor to any employee of such employer under any provision of law, including any provision of any law relating to worker's compensation.

**(4) GOVERNMENTAL EMPLOYEES.—**A state employee or an employee of a political subdivision who provides services relating to response action while acting within the scope of his authority as a governmental employee shall have the same exemption from liability (subject to the other provisions of this subsection) as is provided to the response action contractor under this section.

**(b) SAVINGS PROVISIONS.—**

**(1) LIABILITY OF OTHER PERSONS.—**The defense provided by section 9607(b)(3) shall not be available to any potentially responsible party with respect to any costs or damages caused by any act or omission of a response action contractor. Except as provided in subsection (a)(4) and the preceding sentence, nothing in this section shall affect the liability under this chapter or under any other Federal or State law of any person, other than a response action contractor.

**(2) BURDEN OF PLAINTIFF.—**Nothing in this section shall affect the plaintiff's burden of establishing liability under this subchapter.

**(c) INDEMNIFICATION.—**

**(1) IN GENERAL.—**The President may agree to hold harmless and indemnify any response action contractor meeting the requirements of this subsection against any liability (including the expenses of litigation or settlement) for negligence arising out of the contractor's performance in carrying out response action activities under this subchapter, unless such liability was caused by conduct of the contractor which was grossly negligent or which constituted intentional misconduct.

**(2) APPLICABILITY.—**This subsection shall apply only with respect to a response action carried out under written agreement with—

(A) the President;

(B) any Federal agency;

(C) a State or political subdivision which has entered into a contract or cooperative agreement in accordance with section 9604(d)(1) of this title; or

(D) any potentially responsible party carrying out any agreement under section 9622 (relating to settlements) or section 9606 (relating to abatement).

(3) **SOURCE OF FUNDING.**—This subsection shall not be subject to section 1301 or 1341 of title 31 of the United States Code or section 3732 of the Revised Statutes (41 U.S.C. 11) or to section 3 of the Superfund Amendments and Reauthorization Act of 1986. For purposes of section 9611, amounts expended pursuant to this subsection for indemnification of any response action contractor (except with respect to federally owned or operated facilities) shall be considered governmental response costs incurred pursuant to section 9604. If sufficient funds are unavailable in the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 to make payments pursuant to such indemnification or if the Fund is repealed, there are authorized to be appropriated such amounts as may be necessary to make such payments.

(4) **REQUIREMENTS.**—An indemnification agreement may be provided under this subsection only if the President determines that each of the following requirements are met:

(A) The liability covered by the indemnification agreement exceeds or is not covered by insurance available, at a fair and reasonable price, to the contractor at the time the contractor enters into the contract to provide response action, and adequate insurance to cover such liability is not generally available at the time the response action contract is entered into.

(B) The response action contractor has made diligent efforts to obtain insurance coverage from non-Federal sources to cover such liability.

(C) In the case of a response action contract covering more than one facility, the response action contractor agrees to continue to make such diligent efforts each time the contractor begins work under the contract at a new facility.

(5) **LIMITATIONS.**—

(A) **LIABILITY COVERED.**—Indemnification under this subsection shall apply only to response action contractor liability which results from a release of any hazardous substance or pollutant or contaminant if such release arises out of response action activities.

(B) **DEDUCTIBLES AND LIMITS.**—An indemnification agreement under this subsection shall include deductibles and shall place limits on the amount of indemnification to be made available.

(C) **CONTRACTS WITH POTENTIALLY RESPONSIBLE PARTIES.**—

(i) **DECISION TO INDEMNIFY.**—In deciding whether to enter into an indemnification agreement with a response action contractor carrying out a written contract or agreement with any potentially responsible party, the President shall determine an amount which the potentially responsible party is able to indemnify the contractor. The President may enter into such an indemnification agreement only if the President determines that such amount of indemnification is inadequate to cover any reasonable potential liability of the contractor arising out of the contractor's negligence in performing the contract or agreement with such party. The President shall make the determinations in the preceding sentences (with respect to the amount and the adequacy of the amount) taking into account the total net assets and resources of potentially responsible parties with respect to the facility at the time of such determinations.

(ii) **CONDITIONS.**—The President may pay a claim under an indemnification agreement referred to in clause (i) for the amount determined under clause (i) only if the contractor has exhausted all administrative, judicial, and common law claims for indemnification against all potentially responsible parties participating in the clean-up of the facility with respect to the liability of the contractor arising out of the contractor's negligence in performing the contract or agreement with such party. Such indemnification agreement shall require such contractor to pay any deductible established under subparagraph (B) before the contractor may recover any amount from the potentially responsible party or under the indemnification agreement.

(D) **RCRA FACILITIES.**—No owner or operator of a facility regulated under the Solid Waste Disposal Act may be indemnified under this subsection with respect to such facility.

(E) **PERSONS RETAINED OR HIRED.**—A person retained or hired by a person described in subsection (e)(2)(B) shall be eligible for indemnification under this subsection only if the President specifically approves of the retaining or hiring of such person.

(6) **COST RECOVERY.**—For purposes of section 9607, amounts expended pursuant to this subsection for indemnification of any person who is a response action contractor with respect to any release or threatened release shall be considered a cost of response incurred by the United States Government with respect to such release.

(7) **REGULATIONS.**—The President shall promulgate regulations for carrying out the provisions of this subsection. Before promulgation of the regulations, the President shall develop guidelines to carry

out this section. Development of such guidelines shall include reasonable opportunity for public comment.

(8) **STUDY.**—The Comptroller General shall conduct a study in the fiscal year ending September 30, 1989, on the application of this subsection, including whether indemnification agreements under this subsection are being used, the number of claims that have been filed under such agreements, and the need for this subsection. The Comptroller General shall report the findings of the study to Congress no later than September 30, 1989.

(d) **EXCEPTION.**—The exemption provided under subsection (a) and the authority of the President to offer indemnification under subsection (c) shall not apply to any person covered by the provisions of paragraph (1), (2), (3), or (4) of section 9607(a) with respect to the release or threatened release concerned if such person would be covered by such provisions even if such person had not carried out any actions referred to in subsection (e) of this section.

(e) **DEFINITIONS.**—For purposes of this section—

(1) **RESPONSE ACTION CONTRACT.**—The term "response action contract" means any written contract or agreement entered into by a response action contractor (as defined in paragraph (2)(A) of this subsection) with—

(A) the President;

(B) any Federal agency;

(C) a State or political subdivision which has entered into a contract or cooperative agreement in accordance with section 9604(d)(1) of this title; or

(D) any potentially responsible party carrying out an agreement under section 9606 or 9622;

to provide any remedial action under this chapter at a facility listed on the National Priorities List, or any removal under this chapter, with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from the facility or to provide any evaluation, planning, engineering, surveying and mapping, design, construction, equipment, or any ancillary services thereto for such facility.

(2) **RESPONSE ACTION CONTRACTOR.**—The term "response action contractor" means—

(A) any—

(i) person who enters into a response action contract with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from a facility and is carrying out such contract; and

(ii) person, public or nonprofit private entity, conducting a field demonstration pursuant to section 9660(b); and

(B) any person who is retained or hired by a person described in subparagraph (A) to provide any services relating to a response action.

(3) **INSURANCE.**—The term "insurance" means liability insurance which is fair and reasonably priced, as determined by the President, and which is made available at the time the contractor enters into

the response action contract to provide response action.

(f) **COMPETITION.**—Response action contractors and subcontractors for program management, construction management, architectural and engineering, surveying and mapping, and related services shall be selected in accordance with title IX of the Federal Property and Administrative Services Act of 1949. The Federal selection procedures shall apply to appropriate contracts negotiated by all Federal governmental agencies involved in carrying out this chapter. Such procedures shall be followed by response action contractors and subcontractors. ◀

As added Pub.L. 99-499, Title I, § 119, Oct. 17, 1986.

►I.O. Federal Facilities  
SARA § 120(a)

## § 9620. [CERCLA § 120]

### FEDERAL FACILITIES.

#### (a) APPLICATION OF CHAPTER TO FEDERAL GOVERNMENT.—

(1) **IN GENERAL.**—Each department, agency, and instrumentality of the United States (including the executive, legislative, and judicial branches of government) shall be subject to, and comply with, this chapter in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 9607 of this title. Nothing in this section shall be construed to affect the liability of any person or entity under sections 9606 and 9607.

(2) **APPLICATION OF REQUIREMENTS TO FEDERAL FACILITIES.**—All guidelines, rules, regulations, and criteria which are applicable to preliminary assessments carried out under this chapter for facilities at which hazardous substances are located, applicable to evaluations of such facilities under the National Contingency Plan, applicable to inclusion on the National Priorities List, or applicable to remedial actions at such facilities shall also be applicable to facilities which are owned or operated by a department, agency, or instrumentality of the United States in the same manner and to the extent as such guidelines, rules, regulations, and criteria are applicable to other facilities. No department, agency, or instrumentality of the United States may adopt or utilize any such guidelines, rules, regulations, or criteria which are inconsistent with the guidelines, rules, regulations, and criteria established by the Administrator under this chapter.

(3) **EXCEPTIONS.**—This subsection shall not apply to the extent otherwise provided in this section with respect to applicable time periods. This subsection shall also not apply to any requirements relating to bonding, insurance, or financial responsibility. Nothing in this chapter shall be construed to require a State to comply with section 9604(c)(3) in the case of a facility which is owned or operated by any department, agency, or instrumentality of the United States.

(4) **STATE LAWS.**—State laws concerning

removal and remedial action, including State laws regarding enforcement, shall apply to removal and remedial action at facilities owned or operated by a department, agency, or instrumentality of the United States when such facilities are not included on the National Priorities List. The preceding sentence shall not apply to the extent a State law would apply any standard or requirement to such facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by any such department, agency, or instrumentality.

(b) **NOTICE.**—Each department, agency, and instrumentality of the United States shall add to the inventory of Federal agency hazardous waste facilities required to be submitted under section 3016 of the Solid Waste Disposal Act (in addition to the information required under section 3016(a)(3) of such Act) information on contamination from each facility owned or operated by the department, agency, or instrumentality if such contamination affects contiguous or adjacent property owned by the department, agency, or instrumentality or by any other person, including a description of the monitoring data obtained.

(c) **FEDERAL AGENCY HAZARDOUS WASTE COMPLIANCE DOCKET.**—The Administrator shall establish a special Federal Agency Hazardous Waste Compliance Docket (hereinafter in this section referred to as the "docket") which shall contain each of the following:

(1) All information submitted under section 3016 of the Solid Waste Disposal Act and subsection (b) of this section regarding any Federal facility and notice of each subsequent action taken under this chapter with respect to the facility.

(2) Information submitted by each department, agency, or instrumentality of the United States under section 3005 or 3010 of such Act.

(3) Information submitted by the department, agency, or instrumentality under section 9603 of this title.

The docket shall be available for public inspection at reasonable times. Six months after establishment of the docket and every 6 months thereafter, the Administrator shall publish in the Federal Register a list of the Federal facilities which have been included in the docket during the immediately preceding 6-month period. Such publication shall also indicate where in the appropriate regional office of the Environmental Protection Agency additional information may be obtained with respect to any facility on the docket. The Administrator shall establish a program to provide information to the public with respect to facilities which are included in the docket under this subsection.

(d) **ASSESSMENT AND EVALUATION.**—Not later than 18 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986, the Administrator shall take steps to assure that a preliminary assessment is conducted for each facility on the docket. Following such preliminary assessment, the Administrator shall, where appropriate—

(1) evaluate such facilities in accordance with the criteria established in accordance with section 9605 under the National Contingency Plan for determining priorities among releases; and

(2) include such facilities on the National Priorities List maintained under such plan if the facility meets such criteria. Such criteria shall be applied in the same manner as the criteria are applied to facilities which are owned or operated by other persons. Evaluation and listing under this subsection shall be completed not later than 30 months after such date of enactment. Upon the receipt of a petition from the Governor of any State, the Administrator shall make such an evaluation of any facility included in the docket.

(e) **REQUIRED ACTION BY DEPARTMENT.**—

(1) **RI/FS.**—Not later than 6 months after the inclusion of any facility on the National Priorities List, the department, agency, or instrumentality which owns or operates such facility shall, in consultation with the Administrator and appropriate State authorities, commence a remedial investigation and feasibility study for such facility. In the case of any facility which is listed on such list before the date of the enactment of this section, the department, agency, or instrumentality which owns or operates such facility shall, in consultation with the Administrator and appropriate State authorities, commence such an investigation and study for such facility within one year after such date of enactment. The Administrator and appropriate State authorities shall publish a timetable and deadlines for expeditious completion of such investigation and study.

(2) **COMMENCEMENT OF REMEDIAL ACTION; INTERAGENCY AGREEMENT.**—The Administrator shall review the results of each investigation and study conducted as provided in paragraph (1). Within 180 days thereafter, the head of the department, agency, or instrumentality concerned shall enter into an interagency agreement with the Administrator for the expeditious completion by such department, agency, or instrumentality of all necessary remedial action at such facility. Substantial continuous physical onsite remedial action shall be commenced at each facility not later than 15 months after completion of the investigation and study. All such interagency agreements, including review of alternative remedial action plans and selection of remedial action, shall comply with the public participation requirements of section 9617.

(3) **COMPLETION OF REMEDIAL ACTIONS.**—Remedial actions at facilities subject to interagency agreements under this section shall be completed as expeditiously as practicable. Each agency shall include in its annual budget submissions to the Congress a review of alternative agency funding which could be used to provide for the costs of remedial action. The budget submission shall also include a statement of the hazard posed by the facility to human health, welfare, and the environment and identify the specific consequences of failure to begin and complete remedial action.

(4) **CONTENTS OF AGREEMENT.**—Each interagency agreement under this subsection shall include, but shall not be limited to, each of the following:

(A) A review of alternative remedial actions and selection of a remedial action by the head

of the relevant department, agency, or instrumentality and the Administrator or, if unable to reach agreement on selection of a remedial action, selection by the Administrator.

(B) A schedule for the completion of each such remedial action.

(C) Arrangements for long-term operation and maintenance of the facility.

(5) **ANNUAL REPORT.**—Each department, agency, or instrumentality responsible for compliance with this section shall furnish an annual report to the Congress concerning its progress in implementing the requirements of this section. Such reports shall include, but shall not be limited to, each of the following items:

(A) A report on the progress in reaching interagency agreements under this section.

(B) The specific cost estimates and budgetary proposals involved in each interagency agreement.

(C) A brief summary of the public comments regarding each proposed interagency agreement.

(D) A description of the instances in which no agreement was reached.

(E) A report on progress in conducting investigations and studies under paragraph (1).

(F) A report on progress in conducting remedial actions.

(G) A report on progress in conducting remedial action at facilities which are not listed on the National Priorities List.

With respect to instances in which no agreement was reached within the required time period, the department, agency, or instrumentality filing the report under this paragraph shall include in such report an explanation of the reasons why no agreement was reached. The annual report required by this paragraph shall also contain a detailed description on a State-by-State basis of the status of each facility subject to this section, including a description of the hazard presented by each facility, plans and schedules for initiating and completing response action, enforcement status (where appropriate), and an explanation of any postponements or failure to complete response action. Such reports shall also be submitted to the affected States.

(6) **SETTLEMENTS WITH OTHER PARTIES.**—If the Administrator, in consultation with the head of the relevant department, agency, or instrumentality of the United States, determines that remedial investigations and feasibility studies or remedial action will be done properly at the Federal facility by another potentially responsible party within the deadlines provided in paragraphs (1), (2), and (3) of this subsection, the Administrator may enter into an agreement with such party under section 9622 (relating to settlements). Following approval by the Attorney General of any such agreement relating to a remedial action, the agreement shall be entered in the appropriate United States

district court as a consent decree under section 9506 of this title.

(f) **STATE AND LOCAL PARTICIPATION.**—The Administrator and each department, agency, or instrumentality responsible for compliance with this section shall afford to relevant State and local officials the opportunity to participate in the planning and selection of the remedial action, including but not limited to the review of all applicable data as it becomes available and the development of studies, reports, and action plans. In the case of State officials, the opportunity to participate shall be provided in accordance with section 9621.

(g) **TRANSFER OF AUTHORITIES.**—Except for authorities which are delegated by the Administrator to an officer or employee of the Environmental Protection Agency, no authority vested in the Administrator under this section may be transferred, by executive order of the President or otherwise, to any officer or employee of the United States or to any other person.

(h) **PROPERTY TRANSFERRED BY FEDERAL AGENCIES.**—

(1) **NOTICE.**—After the last day of the 6-month period beginning on the effective date of regulations under paragraph (2) of this subsection, whenever any department, agency, or instrumentality of the United States enters into any contract for the sale or other transfer of real property which is owned by the United States and on which any hazardous substance was stored for one year or more, known to have been released, or disposed of, the head of such department, agency, or instrumentality shall include in such contract notice of the type and quantity of such hazardous substance and notice of the time at which such storage, release, or disposal took place, to the extent such information is available on the basis of a complete search of agency files.

(2) **FORM OF NOTICE; REGULATIONS.**—Notice under this subsection shall be provided in such form and manner as may be provided in regulations promulgated by the Administrator. As promptly as practicable after the enactment of this subsection but not later than 18 months after the date of such enactment, and after consultation with the Administrator of the General Services Administration, the Administrator shall promulgate regulations regarding the notice required to be provided under this subsection.

(3) **CONTENTS OF CERTAIN DEEDS.**—After the last day of the 6-month period beginning on the effective date of regulations under paragraph (2) of this subsection, in the case of any real property owned by the United States on which any hazardous substance was stored for one year or more, known to have been released, or disposed of, each deed entered into for the transfer of such property by the United States to any other person or entity shall contain—

(A) to the extent such information is available on the basis of a complete search of agency files—

(i) a notice of the type and quantity of such hazardous substances,

(ii) notice of the time at which such storage, release, or disposal took place, and

(iii) a description of the remedial action taken, if any, and

(B) a covenant warranting that—

(i) all remedial action necessary to protect human health and the environment with respect to any such substance remaining on the property has been taken before the date of such transfer, and

(ii) any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States.

The requirements of subparagraph (B) shall not apply in any case in which the person or entity to whom the property is transferred is a potentially responsible party with respect to such real property.

(i) **OBLIGATIONS UNDER SOLID WASTE DISPOSAL ACT.**—Nothing in this section shall affect or impair the obligation of any department, agency, or instrumentality of the United States to comply with any requirement of the Solid Waste Disposal Act (including corrective action requirements).

(j) **NATIONAL SECURITY.**—

(1) **SITE SPECIFIC PRESIDENTIAL ORDERS.**—The President may issue such orders regarding response actions at any specified site or facility of the Department of Energy or the Department of Defense as may be necessary to protect the national security interests of the United States at that site or facility. Such orders may include, where necessary to protect such interests, an exemption from any requirement contained in this subchapter or under title III of the Superfund Amendments and Reauthorization Act of 1986 with respect to the site or facility concerned. The President shall notify the Congress within 30 days of the issuance of an order under this paragraph providing for any such exemption. Such notification shall include a statement of the reasons for the granting of the exemption. An exemption under this paragraph shall be for a specified period which may not exceed one year. Additional exemptions may be granted, each upon the President's issuance of a new order under this paragraph for the site or facility concerned. Each such additional exemption shall be for a specified period which may not exceed one year. It is the intention of the Congress that whenever an exemption is issued under this paragraph the response action shall proceed as expeditiously as practicable. The Congress shall be notified periodically of the progress of any response action with respect to which an exemption has been issued under this paragraph. No exemption shall be granted under this paragraph due to lack of appropriation unless the President shall have specifically requested such appropriation as a part of the budgetary process and the Congress shall have failed to make available such requested appropriation.

(2) **CLASSIFIED INFORMATION.**—Notwithstanding any other provision of law, all requirements of the Atomic Energy Act and all Ex-

ecutive orders concerning the handling of restricted data and national security information, including "need to know" requirements, shall be applicable to any grant of access to classified information under the provisions of this chapter or under title III of the Superfund Amendments and Reauthorization Act of 1986. ◀

As added Pub. L. 99-499, Title I, § 120(a), Oct. 17, 1986.

**LIMITED GRANDFATHER.** Section 120(b) of Pub. L. 99-499 provided that: "Section 120 of CERCLA shall not apply to a response action or remedial action for which a plan is under development by the Department of Energy on the date of enactment of this Act with respect to facilities—

- (1) owned or operated by the United States and subject to the jurisdiction of such Department;
- (2) located in St. Charles and St. Louis counties, Missouri, or the city of St. Louis, Missouri, and
- (3) published in the National Priorities List.

In preparing such plans, the Secretary of Energy shall consult with the Administrator of the Environmental Protection Agency."

► I.F. Cleanup Standards  
SARA § 121(a)

## § 9621. [CERCLA §121]

### CLEANUP STANDARDS.

(a) **SELECTION OF REMEDIAL ACTION.**—The President shall select appropriate remedial actions determined to be necessary to be carried out under section 9606 or secured under section 9606 which are in accordance with this section and, to the extent practicable, the national contingency plan, and which provide for cost-effective response. In evaluating the cost effectiveness of proposed alternative remedial actions, the President shall take into account the total short- and long-term costs of such actions, including the costs of operation and maintenance for the entire period during which such activities will be required.

(b) **GENERAL RULES.**—(1) Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substance pollutants, and contaminants is a principal element, are to be preferred over remedial actions not involving such treatment. The offsite transport and disposal of hazardous substances or contaminated materials without such treatment should be the least favored alternative remedial action where practicable treatment technologies are available. The President shall conduct an assessment of permanent recovery technologies that, in whole or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or contaminant. In making such assessment, the President shall specifically address the long-term effectiveness of various alternatives. In assessing alternative remedial actions, the President shall, at a minimum, take into account—

- (A) the long-term uncertainties associated with land disposal;
- (B) the goals, objectives, and requirements of the Solid Waste Disposal Act;

(C) the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;

(D) short- and long-term potential for adverse health effects from human exposure;

(E) long-term maintenance costs;

(F) the potential for future remedial action costs if the alternative remedial action in question were to fail; and

(G) the potential threat to human health and the environment associated with excavation, transportation, and redisposal, or containment.

The President shall select a remedial action that is protective of human health and the environment, that is cost effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. If the President selects a remedial action not appropriate for a preference under this subsection, the President shall publish an explanation as to why a remedial action involving such reductions was not selected.

(2) The President may select an alternative remedial action meeting the objectives of this subsection whether or not such action has been achieved in practice at any other facility or site that has similar characteristics. In making such a selection, the President may take into account the degree of support for such remedial action by parties interested in such site.

(c) **REVIEW.**—If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section 9604 or 9606, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

(d) **DEGREE OF CLEANUP.**—(1) Remedial actions selected under this section or otherwise required or agreed to by the President under this chapter shall attain a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment. Such remedial actions shall be relevant and appropriate under the circumstances presented by the release or threatened release of such substance, pollutant, or contaminant.

(2)(A) With respect to any hazardous substance, pollutant or contaminant that will remain onsite, if—

(i) any standard, requirement, criteria, or limitation under any Federal environmental law, including, but not limited to, the Toxic Substances Control Act, the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act, the Marine Protection, Research and Sanctuaries Act, or the Solid Waste Disposal Act; or

(ii) any promulgated standard, requirement,

criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard, requirement, criteria, or limitation, including each such State standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the State in a timely manner,

is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant, the remedial action selected under section 9604 or secured under section 9606 shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation. Such remedial action shall require a level or standard of control which at least attains Maximum Contaminant Level Goals established under the Safe Drinking Water Act and water quality criteria established under section 304 or 303 of the Clean Water Act, where such goals or criteria are relevant and appropriate under the circumstances of the release or threatened release.

(B)(i) In determining whether or not any water quality criteria under the Clean Water Act is relevant and appropriate under the circumstances of the release or threatened release, the President shall consider the designated or potential use of the surface or groundwater, the environmental media affected, the purposes for which such criteria were developed, and the latest information available.

(ii) For the purposes of this section, a process for establishing alternate concentration limits to those otherwise applicable for hazardous constituents in groundwater under subparagraph (A) may not be used to establish applicable standards under this paragraph if the process assumes a point of human exposure beyond the boundary of the facility, as defined at the conclusion of the remedial investigation and feasibility study, except where—

(I) there are known and projected points of entry of such groundwater into surface water; and

(II) on the basis of measurements or projections, there is or will be no statistically significant increase of such constituents from such groundwater in such surface water at the point of entry or at any point where there is reason to believe accumulation of constituents may occur downstream; and

(III) the remedial action includes enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into surface water then the assumed point of human exposure may be at such known and projected points of entry.

(C)(i) Clause (ii) of this subparagraph shall be applicable only in cases where, due to the President's selection, in compliance with subsection (b)(1), of a proposed remedial action which does not permanently and significantly reduce the volume, toxicity, or mobility of hazardous substances,

*pollutants, or contaminants, the proposed disposition of waste generated by or associated with the remedial action selected by the President is land disposal in a State referred to in clause (ii).*

*(ii) Except as provided in clauses (iii) and (iv), a State standard, requirement, criteria, or limitation (including any State siting standard or requirement) which could effectively result in the statewide prohibition of land disposal of hazardous substances, pollutants, or contaminants shall not apply.*

*(iii) Any State standard, requirement, criteria, or limitation referred to in clause (ii) shall apply where each of the following conditions is met:*

*(I) The State standard, requirement, criteria, or limitation is of general applicability and was adopted by formal means.*

*(II) The State standard, requirement, criteria, or limitation was adopted on the basis of hydrologic, geologic, or other relevant considerations and was not adopted for the purposes of precluding onsite remedial actions or other land disposal for reasons unrelated to protection of human health and the environment.*

*(III) The State arranges for, and assures payment of the incremental costs of utilizing, a facility for disposition of the hazardous substances, pollutants, or contaminants concerned.*

*(iv) Where the remedial action selected by the President does not conform to a State standard and the State has initiated a law suit against the Environmental Protection Agency prior to May 1, 1986, to seek to have the remedial action conform to such standard, the President shall conform the remedial action to the State standard. The State shall assure the availability of an offsite facility for such remedial action.*

*(3) In the case of any removal or remedial action involving the transfer of any hazardous substance or pollutant or contaminant offsite, such hazardous substance or pollutant or contaminant shall only be transferred to a facility which is operating in compliance with section 3004 and 3005 of the Solid Waste Disposal Act (or, where applicable, in compliance with the Toxic Substances Control Act or other applicable Federal law) and all applicable State requirements. Such substance or pollutant or contaminant may be transferred to a land disposal facility only if the President determines that both of the following requirements are met:*

*(A) The unit to which the hazardous substance or pollutant or contaminant is transferred is not releasing any hazardous waste, or constituent thereof, into the groundwater or surface water or soil.*

*(B) All such releases from other units at the facility are being controlled by a corrective action program approved by the Administrator under subtitle C of the Solid Waste Disposal Act.*

*The President shall notify the owner or operator of such facility of determinations under this paragraph.*

*(4) The President may select a remedial action meeting the requirements of paragraph (1) that does not attain a level or standard of control at least equivalent to a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation as required by paragraph (2)*

*(including subparagraph (B) thereof), if the President finds that—*

*(A) the remedial action selected is only part of a total remedial action that will attain such level or standard of control when completed;*

*(B) compliance with such requirement at that facility will result in greater risk to human health and the environment than alternative options;*

*(C) compliance with such requirements is technically impracticable from an engineering perspective;*

*(D) the remedial action selected will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, criteria, or limitation, through use of another method or approach;*

*(E) with respect to a State standard, requirement, criteria, or limitation, the State has not consistently applied (or demonstrated the intention to consistently apply) the standard, requirement, criteria, or limitation in similar circumstances at other remedial actions within the State; or*

*(F) in the case of a remedial action to be undertaken solely under section 9604 using the Fund, selection of a remedial action that attains such level or standard of control will not provide a balance between the need for protection of public health and welfare and the environment at the facility under consideration, and the availability of amounts from the Fund to respond to other sites which present or may present a threat to public health or welfare or the environment, taking into consideration the relative immediacy of such threats. The President shall publish such findings, together with an explanation and appropriate documentation.*

*(e) PERMITS AND ENFORCEMENT.—(1) No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section.*

*(2) A State may enforce any Federal or State standard, requirement, criteria, or limitation to which the remedial action is required to conform under this chapter in the United States district court for the district in which the facility is located. Any consent decree shall require the parties to attempt expeditiously to resolve disagreements concerning implementation of the remedial action informally with the appropriate Federal and State agencies. Where the parties agree, the consent decree may provide for administrative enforcement. Each consent decree shall also contain stipulated penalties for violations of the decree in an amount not to exceed \$25,000 per day, which may be enforced by either the President or the State. Such stipulated penalties shall not be construed to impair or affect the authority of the court to order compliance with the specific terms of any such decree.*

*(f) STATE INVOLVEMENT.—(1) The President shall promulgate regulations providing for substantial and meaningful involvement by each State in initiation, development, and selection of remedial actions to be undertaken in that State. The regulations, at a minimum, shall include each of the following:*

(A) State involvement in decisions whether to perform a preliminary assessment and site inspection.

(B) Allocation of responsibility for hazard ranking system scoring.

(C) State concurrence in deleting sites from the National Priorities List.

(D) State participation in the long-term planning process for all remedial sites within the State.

(E) A reasonable opportunity for States to review and comment on each of the following:

(i) The remedial investigation and feasibility study and all data and technical documents leading to its issuance.

(ii) The planned remedial action identified in the remedial investigation and feasibility study.

(iii) The engineering design following selection of the final remedial action.

(iv) Other technical data and reports relating to implementation of the remedy.

(v) Any proposed finding or decision by the President to exercise the authority of subsection (d)(4).

(F) Notice to the State of negotiations with potentially responsible parties regarding the scope of any response action at a facility in the State and an opportunity to participate in such negotiations and, subject to paragraph (2), be a party to any settlement.

(G) Notice to the State and an opportunity to comment on the President's proposed plan for remedial action as well as on alternative plans under consideration. The President's proposed decision regarding the selection of remedial action shall be accompanied by a response to the comments submitted by the State, including an explanation regarding any decision under subsection (d)(4) on compliance with promulgated State standards. A copy of such response shall also be provided to the State.

(H) Prompt notice and explanation of each proposed action to the State in which the facility is located.

Prior to the promulgation of such regulations, the President shall provide notice to the State of negotiations with potentially responsible parties regarding the scope of any response action at a facility in the State, and such State may participate in such negotiations and, subject to paragraph (2), any settlements.

(2)(A) This paragraph shall apply to remedial actions secured under section 9606. At least 30 days prior to the entering of any consent decree, if the President proposes to select a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation, under the authority of subsection (d)(4), the President shall provide an opportunity for the State to concur or not concur in such selection. If the State concurs, the State may become a signatory to the consent decree.

(B) If the State does not concur in such selection, and the State desires to have the remedial action conform to such standard, requirement, criteria, or limitation, the State shall intervene in the action under section 9606 before entry of the consent decree, to seek to have the remedial

action so conform. Such intervention shall be a matter of right. The remedial action shall conform to such standard, requirement, criteria, or limitation if the State establishes, on the administrative record, that the finding of the President was not supported by substantial evidence. If the court determines that the remedial action shall conform to such standard requirement, criteria, or limitation, the remedial action shall be so modified and the State may become a signatory to the decree. If the court determines that the remedial action need not conform to such standard, requirement, criteria, or limitation, and the State pays or assures the payment of the additional costs attributable to meeting such standard, requirement, criteria, or limitation, the remedial action shall be so modified and the State shall become a signatory to the decree.

(C) The President may conclude settlement negotiations with potentially responsible parties without State concurrence.

(3)(A) This paragraph shall apply to remedial actions at facilities owned or operated by a department, agency, or instrumentality of the United States. At least 30 days prior to the publication of the President's final remedial action plan, if the President proposes to select a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation, under the authority of subsection (d)(4), the President shall provide an opportunity for the State to concur or not concur in such selection. If the State concurs, or does not act within 30 days, the remedial action may proceed.

(B) If the State does not concur in such selection as provided in subparagraph (A), and desires to have the remedial action conform to such standard, requirement, criteria, or limitation, the State may maintain an action as follows:

(i) If the President has notified the State of selection of such a remedial action, the State may bring an action within 30 days of such notification for the sole purpose of determining whether the finding of the President is supported by substantial evidence. Such action shall be brought in the United States district court for the district in which the facility is located.

(ii) If the State establishes, on the administrative record, that the President's finding is not supported by substantial evidence, the remedial action shall be modified to conform to such standard, requirement, criteria, or limitation.

(iii) If the State fails to establish that the President's finding was not supported by substantial evidence and if the State pays, within 60 days of judgment, the additional costs attributable to meeting such standard, requirement, criteria, or limitation, the remedial action shall be selected to meet such standard, requirement, criteria, or limitation. If the State fails to pay within 60 days, the remedial action selected by the President shall proceed through completion.

(C) Nothing in this section precludes, and the court shall not enjoin, the Federal agency from taking any remedial action attributable to or not inconsistent with such standard, requirement, criteria, or limitation.

As added Pub. L. 99-499, Title I, § 121(a), Oct. 17, 1986

**EFFECTIVE DATE.** Section 121(b) of Pub.L. 99-499 provided that: "With respect to section 121 of CERCLA, as added by this section—

"(1) The requirements of section 121 of CERCLA shall not apply to any remedial action for which the Record of Decision (hereinafter in this section referred to as the 'ROD') was signed, or the consent decree was lodged, before date of enactment.

"(2) If the ROD was signed, or the consent decree lodged, within the 30-day period immediately following enactment of the Act, the Administrator shall certify in writing that the portion of the remedial action covered by the ROD or consent decree complies to the maximum extent practicable with section 121 of CERCLA.

Any ROD signed before enactment of this Act and reopened after enactment of this Act to modify or supplement the selection of remedy shall be subject to the requirements of section 121 of CERCLA."

►II.M. Settlements  
SARA § 122(a)

§ 9622. [CERCLA § 122]

SETTLEMENTS.

(a) **AUTHORITY TO ENTER INTO AGREEMENTS.**—The President, in his discretion, may enter into an agreement with any person (including the owner or operator of the facility from which a release or substantial threat of release emanates, or any other potentially responsible person), to perform any response action (including any action described in section 9604(b)) if the President determines that such action will be done properly by such person. Whenever practicable and in the public interest, as determined by the President, the President shall act to facilitate agreements under this section that are in the public interest and consistent with the National Contingency Plan in order to expedite effective remedial actions and minimize litigation. If the President decides not to use the procedures in this section, the President shall notify in writing potentially responsible parties at the facility of such decision and the reasons why use of the procedures is inappropriate. A decision of the President to use or not to use the procedures in this section is not subject to judicial review.

(b) **AGREEMENTS WITH POTENTIALLY RESPONSIBLE PARTIES.**—

(1) **MIXED FUNDING.**—An agreement under this section may provide that the President will reimburse the parties to the agreement from the Fund, with interest, for certain costs of actions under the agreement that the parties have agreed to perform but which the President has agreed to finance. In any case in which the President provides such reimbursement, the President shall make all reasonable efforts to recover the amount of such reimbursement under section 9607 or under other relevant authorities.

(2) **REVIEWABILITY.**—The President's decisions regarding the availability of fund financing under this subsection shall not be subject to judicial review under subsection (d).

(3) **RETENTION OF FUNDS.**—If, as part of any agreement, the President will be carrying out any action and the parties will be paying amounts to the President, the President may, notwithstanding any

other provision of law, retain and use such amounts for purposes of carrying out the agreement.

(4) **FUTURE OBLIGATION OF FUND.**—In the case of a completed remedial action pursuant to an agreement described in paragraph (1), the Fund shall be subject to an obligation for subsequent remedial actions at the same facility but only to the extent that such subsequent actions are necessary by reason of the failure of the original remedial action. Such obligation shall be in a proportion equal to, but not exceeding, the proportion contributed by the Fund for the original remedial action. The Fund's obligation for such future remedial action may be met through Fund expenditures or through payment, following settlement or enforcement action, by parties who were not signatories to the original agreement.

(c) **EFFECT OF AGREEMENT.**—

(1) **LIABILITY.**—Whenever the President has entered into an agreement under this section, the liability to the United States under this chapter of each party to the agreement, including any future liability to the United States, arising from the release or threatened release that is the subject of the agreement shall be limited as provided in the agreement pursuant to a covenant not to sue in accordance with subsection (f). A covenant not to sue may provide that future liability to the United States of a settling potentially responsible party under the agreement may be limited to the same proportion as that established in the original settlement agreement. Nothing in this section shall limit or otherwise affect the authority of any court to review in the consent decree process under subsection (d) any covenant not to sue contained in an agreement under this section. In determining the extent to which the liability of parties to an agreement shall be limited pursuant to a covenant not to sue, the President shall be guided by the principle that a more complete covenant not to sue shall be provided for a more permanent remedy undertaken by such parties.

(2) **ACTIONS AGAINST OTHER PERSONS.**—If an agreement has been entered into under this section, the President may take any action under section 9606 against any person who is not a party to the agreement, once the period for submitting a proposal under subsection (e)(2)(B) has expired. Nothing in this section shall be construed to affect either of the following:

(A) The liability of any person under section 9606 or 9607 with respect to any costs or damages which are not included in the agreement.

(B) The authority of the President to maintain an action under this chapter against any person who is not a party to the agreement.

(d) **ENFORCEMENT.**—

(1) **CLEANUP AGREEMENT.**—

(A) **CONSENT DECREE.**—Whenever the President enters into an agreement under this section with any potentially responsible party with respect to remedial action under section 9606, following approval of the agreement by

the Attorney General, except as otherwise provided in the case of certain administrative settlements referred to in subsection (g), the agreement shall be entered in the appropriate United States district court as a consent decree. The President need not make any finding regarding an imminent and substantial endangerment to the public health or the environment in connection with any such agreement or consent decree.

(B) **EFFECT.**—The entry of any consent decree under this subsection shall not be construed to be an acknowledgment by the parties that the release or threatened release concerned constitutes an imminent and substantial endangerment to the public health or welfare or the environment. Except as otherwise provided in the Federal Rules of Evidence, the participation by any party in the process under this section shall not be considered an admission of liability for any purpose, and the fact of such participation shall not be admissible in any judicial or administrative proceeding including a subsequent proceeding under this section.

(C) **STRUCTURE.**—The President may fashion a consent decree so that the entering of such decree and compliance with such decree or with any determination or agreement made pursuant to this section shall not be considered an admission of liability for any purpose.

**(2) PUBLIC PARTICIPATION.**—

(A) **FILING OF PROPOSED JUDGMENT.**—At least 30 days before a final judgment is entered under paragraph (1), the proposed judgment shall be filed with the court.

(B) **OPPORTUNITY FOR COMMENT.**—The Attorney General shall provide an opportunity to persons who are not named as parties to the action to comment on the proposed judgment before its entry by the court as a final judgment. The Attorney General shall consider, and file with the court, any written comments, views, or allegations relating to the proposed judgment. The Attorney General may withdraw or withhold its consent to the proposed judgment if the comments, views, and allegations concerning the judgment disclose facts or considerations which indicate that the proposed judgment is inappropriate, improper, or inadequate.

(3) **9604(b) AGREEMENTS.**—Whenever the President enters into an agreement under this section with any potentially responsible party with respect to action under section 9604(b), the President shall issue an order or enter into a decree setting forth the obligations of such party. The United States district court for the district in which the release or threatened release occurs may enforce such order or decree.

**(6) SPECIAL NOTICE PROCEDURES.**—

(A) **NOTICE.**—Whenever the President determines that a period of negotiation under this subsection would facilitate an agreement with potentially

responsible parties for taking response action (including any action described in section 9604(b)) and would expedite remedial action, the President shall so notify all such parties and shall provide them with information concerning each of the following:

(A) The names and addresses of potentially responsible parties (including owners and operators and other persons referred to in section 9607(a)), to the extent such information is available.

(B) To the extent such information is available, the volume and nature of substances contributed by each potentially responsible party identified at the facility.

(C) A ranking by volume of the substances at the facility, to the extent such information is available.

The President shall make the information referred to in this paragraph available in advance of notice under this paragraph upon the request of a potentially responsible party in accordance with procedures provided by the President. The provisions of subsection (e) of section 9604 regarding protection of confidential information apply to information provided under this paragraph. Disclosure of information generated by the President under this section to persons other than the Congress, or any duly authorized Committee thereof, is subject to other privileges or protections provided by law, including (but not limited to) those applicable to attorney work product. Nothing contained in this paragraph or in other provisions of this chapter shall be construed, interpreted, or applied to diminish the required disclosure of information under other provisions of this or other Federal or State laws.

**(2) NEGOTIATION.**—

(A) **MORATORIUM.**—Except as provided in this subsection, the President may not commence action under section 9604(a), or take any action under section 9606 for 120 days after providing notice and information under this subsection with respect to such action. Except as provided in this subsection, the President may not commence a remedial investigation and feasibility study under section 9604(b) for 90 days after providing notice and information under this subsection with respect to such action. The President may commence any additional studies or investigations authorized under section 9604(b), including remedial design, during the negotiation period.

(B) **PROPOSALS.**—Persons receiving notice and information under paragraph (1) of this subsection with respect to action under section 9606 shall have 60 days from the date of receipt of such notice to make a proposal to the President for undertaking or financing the action under section 9606. Persons receiving notice and information under paragraph (1) of this subsection with respect to action under section 9604(b) shall have 60 days from the date of receipt of such notice to make a proposal to the

President for undertaking or financing the action under section 9604(b).

**(C) ADDITIONAL PARTIES.**—If an additional potentially responsible party is identified during the negotiation period or after an agreement has been entered into under this subsection concerning a release or threatened release, the President may bring the additional party into the negotiation or enter into a separate agreement with such party.

**(3) PRELIMINARY ALLOCATION OF RESPONSIBILITY.**—

**(A) IN GENERAL.**—The President shall develop guidelines for preparing nonbinding preliminary allocations of responsibility. In developing these guidelines the President may include such factors as the President considers relevant, such as: volume, toxicity, mobility, strength of evidence, ability to pay, litigative risks, public interest considerations, precedential value, and inequities and aggravating factors. When it would expedite settlements under this section and remedial action, the President may, after completion of the remedial investigation and feasibility study, provide a nonbinding preliminary allocation of responsibility which allocates percentages of the total cost of response among potentially responsible parties at the facility.

**(B) COLLECTION OF INFORMATION.**—To collect information necessary or appropriate for performing the allocation under subparagraph (A) or for otherwise implementing this section, the President may by subpoena require the attendance and testimony of witnesses and the production of reports, papers, documents, answers to questions, and other information that the President deems necessary. Witnesses shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In the event of contumacy or failure or refusal of any person to obey any such subpoena, any district court of the United States in which venue is proper shall have jurisdiction to order any such person to comply with such subpoena. Any failure to obey such an order of the court is punishable by the court as a contempt thereof.

**(C) EFFECT.**—The nonbinding preliminary allocation of responsibility shall not be admissible as evidence in any proceeding, and no court shall have jurisdiction to review the nonbinding preliminary allocation of responsibility. The nonbinding preliminary allocation of responsibility shall not constitute an apportionment or other statement on the divisibility of harm or causation.

**(D) COSTS.**—The costs incurred by the President in producing the nonbinding preliminary allocation of responsibility shall be reimbursed by the potentially responsible parties whose offer is accepted by the President. Where an offer under this section is not ac-

cepted, such costs shall be considered costs of response.

**(E) DECISION TO REJECT OFFER.**—Where the President, in his discretion, has provided a nonbinding preliminary allocation of responsibility and the potentially responsible parties have made a substantial offer providing for response to the President which he rejects, the reasons for the rejection shall be provided in a written explanation. The President's decision to reject such an offer shall not be subject to judicial review.

**(F) FAILURE TO PROPOSE.**—If the President determines that a good faith proposal for undertaking or financing action under section 9606 has not been submitted within 60 days of the provision of notice pursuant to this subsection, the President may thereafter commence action under section 9604(a) or take an action against any person under section 9606 of this title. If the President determines that a good faith proposal for undertaking or financing action under section 9604(b) has not been submitted within 60 days after the provision of notice pursuant to this subsection, the President may thereafter commence action under section 9604(b).

**(G) SIGNIFICANT THREATS.**—Nothing in this subsection shall limit the President's authority to undertake response or enforcement action regarding a significant threat to public health or the environment within the negotiation period established by this subsection.

**(H) INCONSISTENT RESPONSE ACTION.**—When either the President, or a potentially responsible party pursuant to an administrative order or consent decree under this chapter, has initiated a remedial investigation and feasibility study for a particular facility under this chapter, no potentially responsible party may undertake any remedial action at the facility unless such remedial action has been authorized by the President.

**(I) COVENANT NOT TO SUE.**—

**(1) DISCRETIONARY COVENANTS.**—The President may, in his discretion, provide any person with a covenant not to sue concerning any liability to the United States under this chapter, including future liability, resulting from a release or threatened release of a hazardous substance addressed by a remedial action, whether that action is onsite or off-site, if each of the following conditions is met:

**(A)** The covenant not to sue is in the public interest.

**(B)** The covenant not to sue would expedite response action consistent with the National Contingency Plan under section 9605 of this title.

**(C)** The person is in full compliance with a consent decree under section 9606 (including a consent decree entered into in accordance with this section) for response to the release or threatened release concerned.

**(D)** The response action has been approved by the President.

**(2) SPECIAL COVENANTS NOT TO SUE.**—

In the case of any person to whom the President is authorized under paragraph (1) of this subsection to provide a covenant not to sue, for the portion of remedial action—

(A) which involves the transport and secure disposition offsite of hazardous substances in a facility meeting the requirements of sections 3004 (c), (d), (e), (f), (g), (m), (o), (p), (u), and (v) and 3005(c) of the Solid Waste Disposal Act, where the President has rejected a proposed remedial action that is consistent with the National Contingency Plan that does not include such offsite disposition and has thereafter required offsite disposition; or

(B) which involves the treatment of hazardous substances so as to destroy, eliminate, or permanently immobilize the hazardous constituents of such substances, such that, in the judgment of the President, the substances no longer present any current or currently foreseeable future significant risk to public health, welfare or the environment, no byproduct of the treatment or destruction process presents any significant hazard to public health, welfare or the environment, and all byproducts are themselves treated, destroyed, or contained in a manner which assures that such byproducts do not present any current or currently foreseeable future significant risk to public health, welfare or the environment, the President shall provide such person with a covenant not to sue with respect to future liability to the United States under this chapter for a future release or threatened release of hazardous substances from such facility, and a person provided such covenant not to sue shall not be liable to the United States under section 9606 or 9607 with respect to such release or threatened release at a future time.

(3) **REQUIREMENT THAT REMEDIAL ACTION BE COMPLETED.**— A covenant not to sue concerning future liability to the United States shall not take effect until the President certifies that remedial action has been completed in accordance with the requirements of this chapter at the facility that is the subject of such covenant.

(4) **FACTORS.**— In assessing the appropriateness of a covenant not to sue under paragraph (1) and any condition to be included in a covenant not to sue under paragraph (1) or (2), the President shall consider whether the covenant or condition is in the public interest on the basis of such factors as the following:

(A) The effectiveness and reliability of the remedy, in light of the other alternative remedies considered for the facility concerned.

(B) The nature of the risks remaining at the facility.

(C) The extent to which performance standards are included in the order or decree.

(D) The extent to which the response action provides a complete remedy for the facility, including a reduction in the hazardous nature of the substances at the facility.

(E) The extent to which the technology used in the response action is demonstrated to be effective.

(F) Whether the Fund or other sources of funding would be available for any additional remedial actions that might eventually be necessary at the facility.

(G) Whether the remedial action will be carried out, in whole or in significant part, by the responsible parties themselves.

(5) **SATISFACTORY PERFORMANCE.**— Any covenant not to sue under this subsection shall be subject to the satisfactory performance by such party of its obligations under the agreement concerned.

(6) **ADDITIONAL CONDITION FOR FUTURE LIABILITY.**— (A) Except for the portion of the remedial action which is subject to a covenant not to sue under paragraph (2) or under subsection (g) (relating to de minimis settlements), a covenant not to sue a person concerning future liability to the United States shall include an exception to the covenant that allows the President to sue such person concerning future liability resulting from the release or threatened release that is the subject of the covenant where such liability arises out of conditions which are unknown at the time the President certifies under paragraph (3) that remedial action has been completed at the facility concerned.

(B) In extraordinary circumstances, the President may determine, after assessment of relevant factors such as those referred to in paragraph (4) and volume, toxicity, mobility, strength of evidence, ability to pay, litigative risks, public interest considerations, precedential value, and inequities and aggravating factors, not to include the exception referred to in subparagraph (A) if other terms, conditions, or requirements of the agreement containing the covenant not to sue are sufficient to provide all reasonable assurances that public health and the environment will be protected from any future releases at or from the facility.

(C) The President is authorized to include any provisions allowing future enforcement action under section 9606 or 9607 that in the discretion of the President are necessary and appropriate to assure protection of public health, welfare, and the environment.

(g) **DE MINIMIS SETTLEMENTS.**—

(1) **EXPEDITED FINAL SETTLEMENT.**— Whenever practicable and in the public interest, as determined by the President, the President shall, as promptly as possible, reach a final settlement with a potentially responsible party in an administrative or civil action under section 9606 or 9607 if such settlement involves only a minor portion of the response costs at the facility concerned and, in the judgment of the President, the conditions in either of the following subparagraph (A) or (B) are met:

(A) Both of the following are minimal in comparison to other hazardous substances at the facility:

(i) The amount of the hazardous substances contributed by that party to the facility

(ii) The toxic or other hazardous effects of the

substances contributed by that party to the facility.

(B) The potentially responsible party—

(i) is the owner of the real property on or in which the facility is located;

(ii) did not conduct or permit the generation, transportation, storage, treatment, or disposal of any hazardous substance at the facility; and

(iii) did not contribute to the release or threat of release of a hazardous substance at the facility through any action or omission.

This subparagraph (B) does not apply if the potentially responsible party purchased the real property with actual or constructive knowledge that the property was used for the generation, transportation, storage, treatment, or disposal of any hazardous substance.

(2) **COVENANT NOT TO SUE.**—The President may provide a covenant not to sue with respect to the facility concerned to any party who has entered into a settlement under this subsection unless such a covenant would be inconsistent with the public interest as determined under subsection (f).

(3) **EXPEDITED AGREEMENT.**—The President shall reach any such settlement or grant any such covenant not to sue as soon as possible after the President has available the information necessary to reach such a settlement or grant such a covenant.

(4) **CONSENT DECREE OR ADMINISTRATIVE ORDER.**—A settlement under this subsection shall be entered as a consent decree or embodied in an administrative order setting forth the terms of the settlement. In the case of any facility where the total response costs exceed \$500,000 (excluding interest), if the settlement is embodied as an administrative order, the order may be issued only with the prior written approval of the Attorney General. If the Attorney General or his designee has not approved or disapproved the order within 30 days of this referral, the order shall be deemed to be approved unless the Attorney General and the Administrator have agreed to extend the time. The district court for the district in which the release or threatened release occurs may enforce any such administrative order.

(5) **EFFECT OF AGREEMENT.**—A party who has resolved its liability to the United States under this subsection shall not be liable for claims for contribution regarding matters addressed in the settlement. Such settlement does not discharge any of the other potentially responsible parties unless its terms so provide, but it reduces the potential liability of the others by the amount of the settlement.

(6) **SETTLEMENTS WITH OTHER POTENTIALLY RESPONSIBLE PARTIES.**—Nothing in this subsection shall be construed to affect the authority of the President to reach settlements with other potentially responsible parties under this chapter.

(h) **COST RECOVERY SETTLEMENT AUTHORITY.**—

(i) **AUTHORITY TO SETTLE.**—The head of any

department or agency with authority to undertake a response action under this chapter pursuant to the national contingency plan may consider, compromise, and settle a claim under section 9607 for costs incurred by the United States Government if the claim has not been referred to the Department of Justice for further action. In the case of any facility where the total response costs exceed \$500,000 (excluding interest), any claim referred to in the preceding sentence may be compromised and settled only with the prior written approval of the Attorney General.

(2) **USE OF ARBITRATION.**—Arbitration in accordance with regulations promulgated under this subsection may be used as a method of settling claims of the United States where the total response costs for the facility concerned do not exceed \$500,000 (excluding interest). After consultation with the Attorney General, the department or agency head may establish and publish regulations for the use of arbitration or settlement under this subsection.

(3) **RECOVERY OF CLAIMS.**—If any person fails to pay a claim that has been settled under this subsection, the department or agency head shall request the Attorney General to bring a civil action in an appropriate district court to recover the amount of such claim, plus costs, attorneys' fees, and interest from the date of the settlement. In such an action, the terms of the settlement shall not be subject to review.

(4) **CLAIMS FOR CONTRIBUTION.**—A person who has resolved its liability to the United States under this subsection shall not be liable for claims for contribution regarding matters addressed in the settlement. Such settlement shall not discharge any of the other potentially liable persons unless its terms so provide, but it reduces the potential liability of the others by the amount of the settlement.

(i) **SETTLEMENT PROCEDURES.**—

(1) **PUBLICATION IN FEDERAL REGISTER.**—At least 30 days before any settlement (including any settlement arrived at through arbitration) may become final under subsection (h), or under subsection (g) in the case of a settlement embodied in an administrative order, the head of the department or agency which has jurisdiction over the proposed settlement shall publish in the Federal Register notice of the proposed settlement. The notice shall identify the facility concerned and the parties to the proposed settlement.

(2) **COMMENT PERIOD.**—For a 30-day period beginning on the date of publication of notice under paragraph (1) of a proposed settlement, the head of the department or agency which has jurisdiction over the proposed settlement shall provide an opportunity for persons who are not parties to the proposed settlement to file written comments relating to the proposed settlement.

(3) **CONSIDERATION OF COMMENTS.**—The head of the department or agency shall consider any comments filed under paragraph (2) in determining whether or not to consent to the proposed settlement.

and may withdraw or withhold consent to the proposed settlement if such comments disclose facts or considerations which indicate the proposed settlement is inappropriate, improper, or inadequate.

**(j) NATURAL RESOURCES.—**

**(1) NOTIFICATION OF TRUSTEE.—**Where a release or threatened release of any hazardous substance that is the subject of negotiations under this section may have resulted in damages to natural resources under the trusteeship of the United States, the President shall notify the Federal natural resource trustee of the negotiations and shall encourage the participation of such trustee in the negotiations.

**(2) COVENANT NOT TO SUE.—**An agreement under this section may contain a covenant not to sue under section 9607(a)(4)(C) for damages to natural resources under the trusteeship of the United States resulting from the release or threatened release of hazardous substances that is the subject of the agreement, but only if the Federal natural resource trustee has agreed in writing to such covenant. The Federal natural resource trustee may agree to such covenant if the potentially responsible party agrees to undertake appropriate actions necessary to protect and restore the natural resources damaged by such release or threatened release of hazardous substances.

**(k) SECTION NOT APPLICABLE TO VESSELS.—**The provisions of this section shall not apply to releases from a vessel.

**(l) CIVIL PENALTIES.—**A potentially responsible party which is a party to an administrative order or consent decree entered pursuant to an agreement under this section or section 9620 (relating to Federal facilities) or which is a party to an agreement under section 9620 and which fails or refuses to comply with any term or condition of the order, decree or agreement shall be subject to a civil penalty in accordance with section 9609.

**(m) APPLICABILITY OF GENERAL PRINCIPLES OF LAW.—**In the case of consent decrees and other settlements under this section (including covenants not to sue), no provision of this chapter shall be construed to preclude or otherwise affect the applicability of general principles of law regarding the setting aside or modification of consent decrees or other settlements. ◀

As added Pub. L. 99-499, Title I, § 122(a), Oct. 17, 1986.

## § 9623. [CERCLA § 123]

### REIMBURSEMENT TO LOCAL GOVERNMENTS.

▶ I.C. Federal/State Cost Sharing  
SARA § 123

**(a) APPLICATION.—**Any general purpose unit of local government for a political subdivision which is affected by a release or threatened release at any facility may apply to the President for reimbursement under this section.

**(b) REIMBURSEMENT.—**

**(1) TEMPORARY EMERGENCY MEASURES.—**The President is authorized to reimburse local community authorities for expenses incurred before or after the enactment of the Superfund Amendments and Reauthorization Act of 1986 in carrying out temporary emergency measures

necessary to prevent or mitigate injury to human health or the environment associated with the release or threatened release of any hazardous substance or pollutant or contaminant. Such measures may include, where appropriate, security fencing to limit access, response to fires and explosions, and other measures which require immediate response at the local level.

**(2) LOCAL FUNDS NOT SUPPLANTED.—**Reimbursement under this section shall not supplant local funds normally provided for response.

**(c) AMOUNT.—**The amount of any reimbursement to any local authority under subsection (b)(1) may not exceed \$25,000 for a single response. The reimbursement under this section with respect to a single facility shall be limited to the units of local government having jurisdiction over the political subdivision in which the facility is located.

**(d) PROCEDURE.—**Reimbursements authorized pursuant to this section shall be in accordance with rules promulgated by the Administrator within one year after the enactment of the Superfund Amendments and Reauthorization Act of 1986. ◀

As added Pub. L. 99-499, Title I, § 123, Oct. 17, 1986.

## § 9624. [CERCLA § 124]

### METHANE RECOVERY.

▶ II.B. Liability Limits  
SARA § 124(a)

**(a) IN GENERAL.—**In the case of a facility at which equipment for the recovery or processing (including recirculation of condensate) of methane has been installed, for purposes of this chapter:

(1) The owner or operator of such equipment shall not be considered an "owner or operator", as defined in section 9601(20), with respect to such facility.

(2) The owner or operator of such equipment shall not be considered to have arranged for disposal or treatment of any hazardous substance at such facility pursuant to section 9607 of this title.

(3) The owner or operator of such equipment shall not be subject to any action under section 9606 with respect to such facility.

**(b) EXCEPTIONS.—**Subsection (a) does not apply with respect to a release or threatened release of a hazardous substance from a facility described in subsection (a) if either of the following circumstances exist:

(1) The release or threatened release was primarily caused by activities of the owner or operator of the equipment described in subsection (a).

(2) The owner or operator of such equipment would be covered by paragraph (1), (2), (3), or (4) of subsection (a) of section 9607 with respect to such release or threatened release if he were not the owner or operator of such equipment.

In the case of any release or threatened release referred to in paragraph (1), the owner or operator of the equipment described in subsection (a) shall be liable under this chapter only for costs or damages primarily caused by the activities of such owner or operator. ◀

As added Pub. L. 99-499, Title I, § 124(a), Oct. 17, 1986.

**REGULATION UNDER THE SOLID WASTE DISPOSAL ACT.** Section 124(b) of Pub.L. 99-499 provided that:

"Unless the Administrator of the Environmental Protection Agency promulgates regulations under subtitle C of the Solid Waste Disposal Act addressing the extraction of wastes from landfills as part of the process of recovering methane from such landfills, the owner and operator of equipment used to recover methane from a landfill shall not be deemed to be managing, generating, transporting, treating, storing, or disposing of hazardous or liquid wastes within the meaning of that subtitle. If the aqueous or hydrocarbon phase of the condensate or any other waste material removed from the gas recovered from the landfill meets any of the characteristics identified under section 3001 of subtitle C of the Solid Waste Disposal Act, the preceding sentence shall not apply and such condensate phase or other waste material shall be deemed a hazardous waste under that subtitle, and shall be regulated accordingly."

### § 9625. [CERCLA § 125]

#### SECTION 3001(b)(3)(A)(i) WASTE.

► I.D. NCP/HRS/NPL  
SARA § 125

(a) **REVISION OF HAZARD RANKING SYSTEM.**—This section shall apply only to facilities which are not included or proposed for inclusion on the National Priorities List and which contain substantial volumes of waste described in section 3001(b)(3)(A)(i) of the Solid Waste Disposal Act. As expeditiously as practicable, the President shall revise the hazard ranking system in effect under the National Contingency Plan with respect to such facilities in a manner which assures appropriate consideration of each of the following site-specific characteristics of such facilities:

(1) The quantity, toxicity, and concentrations of hazardous constituents which are present in such waste and a comparison thereof with other wastes.

(2) The extent of, and potential for, release of such hazardous constituents into the environment.

(3) The degree of risk to human health and the environment posed by such constituents.

(b) **INCLUSION PROHIBITED.**—Until the hazard ranking system is revised as required by this section, the President may not include on the National Priorities List any facility which contains substantial volumes of waste described in section 3001(b)(3)(A)(i) of the Solid Waste Disposal Act on the basis of an evaluation made principally on the volume of such waste and not on the concentrations of the hazardous constituents of such waste. Nothing in this section shall be construed to affect the President's authority to include any such facility on the National Priorities List based on the presence of other substances at such facility or to exercise any other authority of this chapter with respect to such other substances. ◀

As added Pub.L. 99-499, Title I, § 125, Oct. 17, 1986.

► I.H. Indian Tribes  
SARA § 207(e)

### § 9626. [CERCLA § 126]

#### INDIAN TRIBES.

(a) **TREATMENT GENERALLY.**—The governing body of an Indian tribe shall be afforded substantially the same treatment as a State with respect to the provisions of section 9603(a) (regarding notification of releases), section 9604(c)(2) (regarding consultation on remedial actions), section 9604(e) (regarding access to information), section 9604(i) (regarding health authorities) and section 9605 (regarding roles and responsibilities under the national contingency plan and submittal of priorities for remedial action, but not including the provision regarding the inclusion of at least one facility per State on the National Priorities List).

(b) **COMMUNITY RELOCATION.**—Should the President determine that proper remedial action is the permanent relocation of tribal members away from a contaminated site because it is cost effective and necessary to protect their health and welfare, such finding must be concurred in by the affected tribal government before relocation shall occur. The President, in cooperation with the Secretary of the Interior, shall also assure that all benefits of the relocation program are provided to the affected tribe and that alternative land of equivalent value is available and satisfactory to the tribe. Any lands acquired for relocation of tribal members shall be held in trust by the United States for the benefit of the tribe.

(c) **STUDY.**—The President shall conduct a survey, in consultation with the Indian tribes, to determine the extent of hazardous waste sites on Indian lands. Such survey shall be included within a report which shall make recommendations on the program needs of tribes under this chapter, with particular emphasis on how tribal participation in the administration of such programs can be maximized. Such report shall be submitted to Congress along with the President's budget request for fiscal year 1988.

(d) **LIMITATION.**—Notwithstanding any other provision of this chapter, no action under this chapter by an Indian tribe shall be barred until the later of the following:

(1) The applicable period of limitations has expired.

(2) 2 years after the United States, in its capacity as trustee for the tribe, gives written notice to the governing body of the tribe that it will not present a claim or commence an action on behalf of the tribe or fails to present a claim or commence an action within the time limitations specified in this chapter. ◀

As added Pub.L. 99-499, Title II, § 207(e), Oct. 17, 1986.

## SUBCHAPTER II—HAZARDOUS SUBSTANCE RESPONSE REVENUE

### Part A—Hazardous Substance Response Trust Fund

#### § 9631. [CERCLA § 221]

##### Establishment of Hazardous Substance Response Trust Fund

###### (a) Creation of Trust Fund

###### ►III.A. Financing Superfund SARA § 204(a)

There is established in the Treasury of the United States a trust fund to be known as the ["Hazardous Substance Trust Fund"] "*Hazardous Substances Superfund*" (hereinafter in this part referred to as the "Response Trust Fund"), consisting of such amounts as may be appropriate or transferred to such Trust Fund as provided in this section. ◀

###### (b) Transfers to Response Trust Fund

###### (1) Amounts equivalent to certain taxes, etc.

There are hereby appropriated, out of any money in the Treasury not otherwise appropriated, to the Response Trust Fund amounts determined by the Secretary of the Treasury (hereinafter in this subtitle referred to as the "Secretary") to be equivalent to—

(A) the amounts received in the Treasury under section 4611 or 4661 of Title 26,

(B) the amounts recovered on behalf of the Response Trust Fund under this chapter,

(C) all moneys recovered or collected under section 1321(b)(6)(B) of Title 33,

(D) penalties assessed under subchapter I of this chapter, and

(E) punitive damages under section 9607(e)(8) of this title.

###### (2) Authorization for appropriations

There is authorized to be appropriated to the Emergency Response Trust Fund for fiscal year—

(A) 1981, \$44,000,000.

(B) 1982, \$44,000,000.

(C) 1983, \$44,000,000.

(D) 1984, \$44,000,000, and

(E) 1985, \$44,000,000, plus an amount equal to so much of the aggregate amount authorized to be appropriated under subparagraphs (A), (B), (C), and (D) as has not been appropriated before October 1, 1984.

###### (3) Transfer of funds

There shall be transferred to the Response Trust Fund—

(A) one-half of the unobligated balance remaining before December 11, 1980, under the Fund in section 1321 of Title 33, and

(B) the amounts appropriated under section 1364(b) of Title 33 during any fiscal year.

###### ►III.A. Financing Superfund SARA § 204(b)

###### (c) Expenditures from Response Trust Fund

###### (1) In general

Amounts in the Response Trust Fund shall be

available in connection with releases or threats of releases of hazardous substances into the environment only for purposes of making expenditures which are described in section 9611 (other than subsection (j) thereof) of this title, as in effect on December 11, 1980, including—

(A) response costs,

(B) claims asserted and compensable but unsatisfied under section 1321 of Title 33,

(C) claims for injury to, or destruction or loss of, natural resources, and

(D) related costs described in section 9611(c) of this title.

###### (2) Limitations on expenditures

At least 85 percent of the amounts appropriated to the Response Trust Fund under subsection (b)(1)(A) and (2) of this section shall be reserved—

(A) for the purposes specified in paragraphs (1), (2), and (4) of section 9611(a) of this title, and

(B) for the repayment of advances made under section 9633(c) of this title, other than advances subject to the limitation of section 9533(c)(2)(C) of this title.]

###### (c) EXPENDITURES FROM TRUST FUND.—

*Amounts in the Hazardous Substances Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 shall be available for expenditure only as provided in section 9611 of this title.* ◀

Pub.L. 96-510, Title II, § 221, Dec. 11, 1980, 94 Stat. 2801, as added and amended Pub.L. 99-499, Title II, § 204, Oct. 17, 1986.

#### § 9632. [CERCLA § 222]

##### Liability of United States limited to amount in Trust Fund

###### (a) General rule

Any claim filed against the Response Trust Fund may be paid out of such Trust Fund. Nothing in this chapter (or in any amendment made by this Act) shall authorize the payment by the United States Government of any additional amount with respect to any such claim out of any source other than the Response Trust Fund.

###### (b) Order in which unpaid claims are to be paid

If at any time the Response Trust Fund is unable (by reason of subsection (a) of this section or the limitation of section 9631(c)(2) of this title) to pay all of the claims payable out of such Trust Fund at such time, such claims shall, to the extent permitted under subsection (a) of this section, be paid in full in the order in which they were finally determined.

Pub.L. 96-510, Title II, § 222, Dec. 11, 1980, 94 Stat. 2802.

#### § 9633. [CERCLA § 223]

##### Administrative provisions

###### (a) Method of transfer

The amounts appropriated by section 9631(b)(1) of this title shall be transferred at least monthly from the general

fund of the Treasury to the Response Trust Fund on the basis of estimates made by the Secretary of the amounts referred to in such section. Proper adjustments shall be made in the amount subsequently transferred to the extent prior estimates were in excess of or less than the amounts required to be transferred.

**(b) Management of Trust Fund**

**(1) Report**

The Secretary shall be the trustee of the Response Trust Fund, and shall report to the Congress for each fiscal year ending on or after September 30, 1981, on the financial condition and the results of the operations of such Trust Fund during such fiscal year and on its expected condition and operations during the next 5 fiscal years. Such report shall be printed as a House document of the session of the Congress to which the report is made.

**(2) Investment**

It shall be the duty of the Secretary to invest such portion of such Trust Fund as is not, in his judgment, required to meet current withdrawals. Such investments shall be in public debt securities with maturities suitable for the needs of such Trust Fund and bearing interest at rates determined by the Secretary, taking into consideration current market yields on outstanding marketable obligations of the United States of comparable maturities. The income on such investments shall be credited to and form a part of such Trust Fund.

**(c) Authority to borrow**

**(1) In general**

There are authorized to be appropriated to the Response Trust Fund, as repayable advances, such sums as may be necessary to carry out the purposes of such Trust Fund.

**(2) Limitations on advances to Response Trust Fund**

**(A) Aggregate advances**

The maximum aggregate amount of repayable advances to the Response Trust Fund which is outstanding at any one time shall not exceed an amount which the Secretary estimates will be equal to the sum of the amounts which will be appropriated or transferred to such Trust Fund under paragraph (1)(A) of section 9631(b) of this title for the following 12 months, and

**(B) Advances for payment of response costs**

No amount may be advanced after March 31, 1983, to the Response Trust Fund for the purpose of paying response costs described in section 9611(a)(1), (2), or (4) of this title, unless such costs are incurred incident to any

spill the effects of which the Secretary determines to be catastrophic.

**(C) Advances for other costs**

The maximum aggregate amount advanced to the Response Trust Fund which is outstanding at any one time for the purpose of paying costs other than costs described in 9611(a)(1), (2), or (4) of this title shall not exceed one-third of the amount of the estimate made under subparagraph (A).

**(D) Final repayment**

No advance shall be made to the Response Trust Fund after September 30, 1985, and all advances to such Fund shall be repaid on or before such date.

**(3) Repayment of advances**

Advances made pursuant to this subsection shall be repaid, and interest on such advances shall be paid, to the general fund of the Treasury when the Secretary determines that moneys are available for such purposes in the Trust Fund to which the advance was made. Such interest shall be at rates computed in the same manner as provided in subsection (b) of this section and shall be compounded annually.

Pub.L. 96-510, Title II, § 223, Dec. 11, 1980, 94 Stat. 2802.

**Part B—Post-Closure Liability Trust Fund  
§ 9641. [CERCLA § 232]**

**Post-closure Liability Trust Fund**

**(a) Creation of Trust Fund**

There is established in the Treasury of the United States a trust fund to be known as the "Post-closure Liability Trust Fund", consisting of such amounts as may be appropriated, credited, or transferred to such Trust Fund.

**(b) Expenditures from Post-closure Liability Trust Fund**

Amounts in the Post-closure Liability Trust Fund shall be available only for the purposes described in sections 9607(k) and 9611(j) of this title (as in effect on December 11, 1980).

**(c) Administrative provisions**

The provisions of sections 9632 and 9633 of this title shall apply with respect to the Trust Fund established under this section, except that the amount of any repayable advances outstanding at any one time shall not exceed \$200,000,000.

Pub.L. 96-510, Title II, § 232, Dec. 11, 1980, 94 Stat. 2804.

## SUBCHAPTER III—MISCELLANEOUS PROVISIONS

### § 9651. [CERCLA § 301]

#### Reports and studies

##### (a) Implementation experiences; identification and disposal of waste

(1) The President shall submit to the Congress, within four years after December 11, 1980, a comprehensive report on experience with the implementation of this chapter including, but not limited to—

(A) the extent to which the chapter and Fund are effective in enabling Government to respond to and mitigate the effects of releases of hazardous substances;

(B) a summary of past receipts and disbursements from the Fund;

(C) a projection of any future funding needs remaining after the expiration of authority to collect taxes, and of the threat to public health, welfare, and the environment posed by the projected releases which create any such needs;

(D) the record and experience of the Fund in recovering Fund disbursements from liable parties;

(E) the record of State participation in the system of response, liability, and compensation established by this chapter;

(F) the impact of the taxes imposed by subchapter II of this chapter on the Nation's balance of trade with other countries;

(G) an assessment of the feasibility and desirability of a schedule of taxes which would take into account one or more of the following: the likelihood of a release of a hazardous substance, the degree of hazard and risk of harm to public health, welfare, and the environment resulting from any such release, incentives to proper handling, recycling, incineration, and neutralization of hazardous wastes, and disincentives to improper or illegal handling or disposal of hazardous materials, administrative and reporting burdens on Government and industry, and the extent to which the tax burden falls on the substances and parties which create the problems addressed by this chapter. In preparing the report, the President shall consult with appropriate Federal, State, and local agencies, affected industries and claimants, and such other interested parties as he may find useful. Based upon the analyses and consultation required by this subsection, the President shall also include in the report any recommendations for legislative changes he may deem necessary for the better effectuation of the purposes of this chapter, including but not limited to recommendations concerning authorization levels, taxes, State participation, liability and liability limits, and financial responsibility provisions for the Response Trust Fund and the Post-closure Liability Trust Fund;

(H) an exemption from or an increase in the substances or the amount of taxes imposed by section 4661 of Title 26 for copper, lead, and zinc oxide, and for feedstocks when used in the manufac-

ture and production of fertilizers, based upon the expenditure experience of the Response Trust Fund;

(I) the economic impact of taxing coal-derived substances and recycled metals.

(2) The Administrator of the Environmental Protection Agency (in consultation with the Secretary of the Treasury) shall submit to the Congress (i) within four years after December 11, 1980, a report identifying additional wastes designated by rule as hazardous after the effective date of this chapter and pursuant to section 3001 of the Solid Waste Disposal Act [42 U.S.C.A. § 6921] and recommendations on appropriate tax rates for such wastes for the Post-closure Liability Trust Fund. The report shall, in addition, recommend a tax rate, considering the quantity and potential danger to human health and the environment posed by the disposal of any wastes which the Administrator, pursuant to subsection 3001(b)(2)(B) and subsection 3001(b)(3)(A) of the Solid Waste Disposal Act of 1980 [42 U.S.C.A. §§ 6921(b)(2)(B) and 6921(b)(3)(A)], has determined should be subject to regulation under subtitle C of such Act [42 U.S.C.A. § 6921 et seq.], (ii) within three years after December 11, 1980, a report on the necessity for and the adequacy of the revenue raised, in relation to estimated future requirements, of the Post-closure Liability Trust Fund.

##### (b) Private insurance protection

The President shall conduct a study to determine (1) whether adequate private insurance protection is available on reasonable terms and conditions to the owners and operators of vessels and facilities subject to liability under section 9607 of this title, and (2) whether the market for such insurance is sufficiently competitive to assure purchasers of features such as a reasonable range of deductibles, coinsurance provisions, and exclusions. The President shall submit the results of his study, together with his recommendations, within two years of December 11, 1980, and shall submit an interim report on his study within one year of December 11, 1980.

##### (c) Regulations respecting assessment of damages to natural resources

###### ►I.N. Natural Resource Damages SARA § 107(d)

(1) The President, acting through Federal officials designated by the National Contingency Plan published under section 9605 of this title, shall study and, not later than two years after December 11, 1980, shall promulgate regulations for the assessment of damages for injury to, destruction of, or loss of natural resources resulting from a release of oil or a hazardous substance for the purposes of this chapter and section 1321(f)(4) and (5) of Title 33. *Notwithstanding the failure of the President to promulgate the regulations required under this subsection on the required date, the President shall promulgate such regulations not later than 6 months after the enactment of the Superfund Amendments and Reauthorization Act of 1986.*

(2) Such regulations shall specify (A) standard procedures for simplified assessments requiring minimal field observation, including establishing measures of damages

based on units of discharge or release or units of affected area, and (B) alternative protocols for conducting assessments in individual cases to determine the type and extent of short- and long-term injury, destruction, or loss. Such regulations shall identify the best available procedures to determine such damages, including both direct and indirect injury, destruction, or loss and shall take into consideration factors including, but not limited to, replacement value, and ability of the ecosystem or resource to recover.

(3) Such regulations shall be reviewed and revised as appropriate every two years.

**(d) Issues, alternatives, and policy considerations involving selection of location for waste treatment, storage, and disposal facilities**

The Administrator of the Environmental Protection Agency shall, in consultation with other Federal agencies and appropriate representatives of State and local governments and nongovernmental agencies, conduct a study and report to the Congress within two years of December 11, 1980, on the issues, alternatives, and policy considerations involved in the selection of locations for hazardous waste treatment, storage, and disposal facilities. This study shall include—

(A) an assessment of current and projected treatment, storage, and disposal capacity needs and shortfalls for hazardous waste by management category on a State-by-State basis;

(B) an evaluation of the appropriateness of a regional approach to siting and designing hazardous waste management facilities and the identification of hazardous waste management regions, interstate or intrastate, or both, with similar hazardous waste management needs;

(C) solicitation and analysis of proposals for the construction and operation of hazardous waste management facilities by nongovernmental entities, except that no proposal solicited under terms of this subsection shall be analyzed if it involves cost to the United States Government or fails to comply with the requirements of subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.] and other applicable provisions of law;

(D) recommendations on the appropriate balance between public and private sector involvement in the siting, design, and operation of new hazardous waste management facilities;

(E) documentation of the major reasons for public opposition to new hazardous waste management facilities; and

(F) an evaluation of the various options for overcoming obstacles to siting new facilities, including needed legislation for implementing the most suitable option or options.

**(e) Adequacy of existing common law and statutory remedies**

(1) In order to determine the adequacy of existing common law and statutory remedies in providing legal redress for harm to man and the environment caused by the release of hazardous substances into the environment, there shall be submitted to the Congress a study within twelve months of December 11, 1980—

(2) This study shall be conducted with the assistance of the American Bar Association, the American Law Institute, the Association of American Trial Lawyers, and the National Association of State Attorneys General with the President of each entity selecting three members from each organization to conduct the study. The study chairman and one reporter shall be elected from among the twelve members of the study group.

(3) As part of their review of the adequacy of existing common law and statutory remedies, the study group shall evaluate the following:

(A) the nature, adequacy, and availability of existing remedies under present law in compensating for harm to man from the release of hazardous substances;

(B) the nature of barriers to recovery (particularly with respect to burdens of going forward and of proof and relevancy) and the role such barriers play in the legal system;

(C) the scope of the evidentiary burdens placed on the plaintiff in proving harm from the release of hazardous substances, particularly in light of the scientific uncertainty over causation with respect to—

(i) carcinogens, mutagens, and teratogens, and

(ii) the human health effects of exposure to low doses of hazardous substances over long periods of time;

(D) the nature and adequacy of existing remedies under present law in providing compensation for damages to natural resources from the release of hazardous substances;

(E) the scope of liability under existing law and the consequences, particularly with respect to obtaining insurance, of any changes in such liability;

(F) barriers to recovery posed by existing statutes of limitations.

(4) The report shall be submitted to the Congress with appropriate recommendations. Such recommendations shall explicitly address—

(A) the need for revisions in existing statutory or common law, and

(B) whether such revisions should take the form of Federal statutes or the development of a model code which is recommended for adoption by the States.

(5) The Fund shall pay administrative expenses incurred for the study. No expenses shall be available to pay compensation, except expenses on a per diem basis for the one reporter, but in no case shall the total expenses of the study exceed \$300,000.

**(f) Modification of national contingency plan**

The President, acting through the Administrator of the Environmental Protection Agency, the Secretary of Transportation, the Administrator of the Occupational Safety and Health Administration, and the Director of the National Institute for Occupational Safety and Health shall study and, not later than two years after December 11, 1980, shall modify the national contingency plan to provide for the protection of the health and safety of employees involved in response actions.

►IV.C. Pollution Insurance  
SARA § 208

(g) **INSURABILITY STUDY.**—

(1) **STUDY BY COMPTROLLER GENERAL.**—  
The Comptroller General of the United States, in consultation with the persons described in paragraph (2), shall undertake a study to determine the insurability, and effects on the standard of care, of the liability of each of the following:

(A) Persons who generate hazardous substances; liability for costs and damages under this chapter.

(B) Persons who own or operate facilities; liability for costs and damages under this chapter.

(C) Persons liable for injury to persons or property caused by the release of hazardous substances into the environment.

(2) **CONSULTATION.**—In conducting the study under this subsection, the Comptroller General shall consult with the following:

(A) Representatives of the Administrator.

(B) Representatives of persons described in subparagraphs (A) through (C) of the preceding paragraph.

(C) Representatives (i) of groups or organizations comprised generally of persons adversely affected by releases or threatened releases of hazardous substances and (ii) of groups organized for protecting the interests of consumers.

(D) Representatives of property and casualty insurers.

(E) Representatives of reinsurers.

(F) Persons responsible for the regulation of insurance at the State level.

(3) **ITEMS EVALUATED.**—The study under this section shall include, among other matters, an evaluation of the following:

(A) Current economic conditions in, and the future outlook for, the commercial market for insurance and reinsurance.

(B) Current trends in statutory and common law remedies.

(C) The impact of possible changes in traditional standards of liability, proof, evidence, and damages on existing statutory and common law remedies.

(D) The effect of the standard of liability and extent of the persons upon whom it is imposed under this chapter on the protection of human health and the environment and on the availability, underwriting, and pricing of insurance coverage.

(E) Current trends, if any, in the judicial interpretation and construction of applicable insurance contracts, together with the degree to which amendments in the language of such contracts and the description of the risks assumed, could affect such trends.

(F) The frequency and severity of a representative sample of claims closed during the calendar

year immediately preceding the enactment of this subsection.

(G) Impediments to the acquisition of insurance or other means of obtaining liability coverage other than those referred to in the preceding subparagraphs.

(H) The effects of the standards of liability and financial responsibility requirements imposed pursuant to this chapter on the cost of, and incentives for, developing and demonstrating alternative and innovative treatment technologies as well as waste generation minimization.

(4) **SUBMISSION.**—The Comptroller General shall submit a report on the results of the study to Congress with appropriate recommendations within 12 months after the enactment of this subsection. ◀

►IV.F. Reports to Congress  
SARA § 212

(h) **REPORT AND OVERSIGHT REQUIREMENTS.**—

(1) **ANNUAL REPORT BY EPA.**—On January 1 of each year the Administrator of the Environmental Protection Agency shall submit an annual report to Congress of such Agency on the progress achieved in implementing this chapter during the preceding fiscal year. In addition such report shall specifically include each of the following:

(A) A detailed description of each feasibility study carried out at a facility under subchapter I of this chapter.

(B) The status and estimated date of completion of each such study.

(C) Notice of each such study which will not meet a previously published schedule for completion and the new estimated date for completion.

(D) An evaluation of newly developed feasible and achievable permanent treatment technologies.

(E) Progress made in reducing the number of facilities subject to review under section 9621(c).

(F) A report on the status of all remedial and enforcement actions undertaken during the prior fiscal year, including a comparison to remedial and enforcement actions undertaken in prior fiscal years.

(G) An estimate of the amount of resources, including the number of work years or personnel, which would be necessary for each department, agency, or instrumentality which is carrying out any activities of this chapter to complete the implementation of all duties vested in the department, agency, or instrumentality under this chapter.

(2) **REVIEW BY INSPECTOR GENERAL.**—Consistent with the authorities of the Inspector General Act of 1978 the Inspector General of the Environmental Protection Agency shall review any report submitted under paragraph (1) related to EPA's activities for reasonableness and accuracy and

submit to Congress, as a part of such report a report on the results of such review.

(3) **CONGRESSIONAL OVERSIGHT.**—After receiving the reports under paragraphs (1) and (2) of this subsection in any calendar year, the appropriate authorizing committees of Congress shall conduct oversight hearings to ensure that this chapter is being implemented according to the purposes of this chapter and congressional intent in enacting this chapter. ◀

Pub.L. 96-510, Title III, § 301, Dec. 11, 1980, 94 Stat. 2805, as added Pub.L. 99-499, Title I, § 107(d), Title II, §§ 208, 212, Oct. 17, 1986.

### § 9652. [CERCLA § 302]

**Effective dates; savings provisions**

(a) Unless otherwise provided, all provisions of this chapter shall be effective on December 11, 1980.

(b) Any regulation issued pursuant to any provisions of section 1321 of Title 33 which is repealed or superseded by this chapter and which is in effect on the date immediately preceding the effective date of this chapter shall be deemed to be a regulation issued pursuant to the authority of this chapter and shall remain in full force and effect unless or until superseded by new regulations issued thereunder.

(c) Any regulation—

(1) respecting financial responsibility,

(2) issued pursuant to any provision of law repealed or superseded by this chapter, and

(3) in effect on the date immediately preceding the effective date of this chapter shall be deemed to be a regulation issued pursuant to the authority of this chapter and shall remain in full force and effect unless or until superseded by new regulations issued thereunder.

(d) Nothing in this chapter shall affect or modify in any way the obligations or liabilities of any person under other Federal or State law, including common law, with respect to releases of hazardous substances or other pollutants or contaminants. The provisions of this chapter shall not be considered, interpreted, or construed in any way as reflecting a determination, in part or whole, of policy regarding the inapplicability of strict liability, or strict liability doctrines, to activities relating to hazardous substances, pollutants, or contaminants or other such activities.

Pub.L. 96-510, Title III, § 302, Dec. 11, 1980, 94 Stat. 2808.

### § 9653. [CERCLA § 303]

**Termination of authority to collect taxes**

Unless reauthorized by the Congress, the authority to collect taxes conferred by this chapter shall terminate on September 30, 1985, or when the sum of the amounts received in the Treasury under section 4611 and under 4661 of Title 26 total \$1,350,000,000, whichever occurs first. The Secretary of the Treasury shall estimate when this level of \$1,350,000,000 will be reached and shall by regulation

provide procedures for the termination of the tax authorized by this chapter and imposed under sections 4611 and 4661 of Title 26.

Pub.L. 96-510, Title III, § 303, Dec. 11, 1980, 94 Stat. 2808.

### § 9654. [CERCLA § 304(b), (c)]

**Applicability of Federal water pollution control funding, etc., provisions**

(a) Omitted

(b) One-half of the unobligated balance remaining before December 11, 1980, under subsection (k) of section 1321 of Title 33 and all sums appropriated under section 1364(b) of Title 33 shall be transferred to the Fund established under subchapter II of this chapter.

(c) In any case in which any provision of section 1321 of Title 33 is determined to be in conflict with any provisions of this chapter, the provisions of this chapter shall apply.

Pub.L. 96-510, Title III, § 304, Dec. 11, 1980, 94 Stat. 2809.

### § 9655. [CERCLA § 305]

**Legislative veto of rule or regulation**

(a) **Transmission to Congress upon promulgation or repromulgation of rule or regulation; disapproval procedures**

Notwithstanding any other provision of law, simultaneously with promulgation of or repromulgation of any rule or regulation under authority of subchapter I of this chapter, the head of the department, agency, or instrumentality promulgating such rule or regulation shall transmit a copy thereof to the Secretary of the Senate and the Clerk of the House of Representatives. Except as provided in subsection (b) of this section, the rule or regulation shall not become effective, if—

(1) within ninety calendar days of continuous session of Congress after the date of promulgation, both Houses of Congress adopt a concurrent resolution, the matter after the resolving clause of which is as follows: "That Congress disapproves the rule or regulation promulgated by the \_\_\_\_\_ dealing with the matter of \_\_\_\_\_, which rule or regulation was transmitted to Congress on \_\_\_\_\_", the blank spaces therein being appropriately filled; or

(2) within sixty calendar days of continuous session of Congress after the date of promulgation, one House of Congress adopts such a concurrent resolution and transmits such resolution to the other House, and such resolution is not disapproved by such other House within thirty calendar days of continuous session of Congress after such transmittal.

(b) **Approval; effective dates**

If, at the end of sixty calendar days of continuous session of Congress after the date of promulgation of a rule or regulation, no committee of either House of Congress has reported or been discharged from further considera-

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Ammonium picrate	131748	Phenol, 2,4,6-trinitro-, ammonium salt.	1*	4	P009	A	10 (4.54)
Ammonium silicofluoride	16919190		1000	1		C	1000 (454)
Ammonium sulfamate	7773060		5000	1		D	5000 (2270)
Ammonium sulfide	12135761		5000	1		B	100 (45.4)
Ammonium sulfite	10198040		5000	1		D	5000 (2270)
Ammonium tartrate	14307438		5000	1		D	5000 (2270)
	3164292						
Ammonium thiocyanate	1762954		5000	1		D	5000 (2270)
Ammonium thiosulfate	7783188		5000	1		D	5000 (2270)
Ammonium vanadate	7803556	Vanadic acid, ammonium salt.	1*	4	P110	C	1000 (454)
Amyl acetate	628637		1000	1		D	5000 (2270)
iso-	123922						
sec-	628380						
tert-	625181						
Aniline	62533	Benzenamine	1000	1,4	U012	D	5000 (2270)
Anthracene	120127		1*	2		D	5000 (2270)
Antimony II	7440360		1*	2		D	5000 (2270)
ANTIMONY AND COMPOUNDS			1*	2			**
Antimony pentachloride	7647189		1000	1		C	1000 (454)
Antimony potassium tartrate	28300745		1000	1		B	100 (45.4)
Antimony tribromide	7789819		1000	1		C	1000 (454)
Antimony trichloride	10025919		1000	1		C	1000(454)
Antimony trifluoride	7783564		1000	1		C	1000 (454)
Antimony trioxide	1309644		5000	1		C	1000 (454)
Aroclor 1016	12674112	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1221	11104282	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1232	11141165	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1242	53469219	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1248	12672296	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1254	11097691	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Aroclor 1260	11096825	Polychlorinated Biphenyls (PCBs).	10	1,2		A	10# (4.54)
Arsenic II	7440382		1*	2,3		X	1#(0.454)
Arsenic acid	1327522		1*	4	P010	X	1# (0.454)
	7778394						**
ARSENIC AND COMPOUNDS			1*	2			**
Arsenic disulfide	1303328		5000	1		D	5000# (2270)
Arsenic(III) oxide	1327533	Arsenic trioxide	5000	1,4	P012	D	5000# (2270)
Arsenic(V) oxide	1303282	Arsenic pentoxide	5000	1,4	P011	D	5000#(2270)
Arsenic pentoxide	1303282	Arsenic(V) oxide	5000	1,4	P011	D	5000# (2270)
Arsenic trichloride	7784341		5000	1		D	5000# (2270)
Arsenic trioxide	1327533	Arsenic(III) oxide	5000	1,4	P012	D	5000# (2270)
Arsenic trisulfide	1303339		5000	1		D	5000# (2270)
Arsine, diethyl-	692422	Diethylarsine	1*	4	P038	X	1# (0.454)
Asbestos III	1332214		1*	2,3		X	1# (0.454)
Auramine	492808	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-)	1*	4	U014	X	1# (0.454)
Azaserone	115026	L-Serine, diazoacetate (ester).	1*	4	U015	X	1# (0.454)
Azidine	151584	Ethylenimine	1*	4	P054	X	1# (3.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RQ	Code	RCA Waste Number	Category	Pounds (kg)
Azino(2,3',3,4)pyrrolo (1,2'-imidole-4,7- dione,6-amino-6- ((aminocarbonyloxy) methyl)- 1,1a,2,6,6a,8b- hexahydro da- methoxy-5-methyl-	50077	Mitomycin C	1*	4	U010	X	1# (0.454)
Banum cyanide	542621		10	1,4	P012	A	10 (4.54)
Benz(j)acanthrylene. 1,2-dihydro-3-methyl-	56495	3-Methylcholanthrene	1*	4	U157	X	1# (0.454)
Benz(c)acridine	225514	1,4-Benzacridine	1*	4	U016	X	1# (0.454)
3,4-Benzacridine	225514	Benz(c)acridine	1*	4	U016	X	1# (0.454)
Benzal chloride	98873	Benzene, dichloromethyl-	1*	4	U017	D	5000 (2270)
Benz(a)anthracene	56553	1,2-Benzanthracene Benzo(a)anthracene	1*	2,4	U018	X	1# (0.454)
1,2-Benzanthracene	56553	Benz(a)anthracene Benzo(a)anthracene	1*	2,4	U018	X	1# (0.454)
1,2-Benzanthracene, 7,12-dimethyl-	57976	7,12-Dimethylbenz(a) anthracene	1*	4	U094	X	1# (0.454)
Benzenamine	62533	Aniline	1000	1,4	U012	D	5000 (2270)
Benzenamine, 4,4'- carbonimidoyl bis(N,N- dimethyl-	492808	Auramine	1*	4	U014	X	1# (0.454)
Benzenamine, 4-chloro-	106478	p-Chloroaniline	1*	4	P024	C	1000 (454)
Benzenamine, 4-chloro- 2-methyl- hydrochloride	3165933	4-Chloro-o-toluidine, hydrochloride	1*	4	U049	X	1# (0.454)
Benzenamine, N,N- dimethyl-4-phenylazo-	80117	Dimethylaminoazoben- zene	1*	4	U093	X	1# (0.454)
Benzenamine, 4,4'- methylenebis(2-chloro-	101144	4,4'-Methylenebis(2- chloroaniline)	1*	4	U158	X	1# (0.454)
Benzenamine, 2-methyl- hydrochloride	636215	o-Toluidine hydrochloride	1*	4	U222	X	1# (0.454)
Benzenamine, 2-methyl- 5-nitro-	99558	5-Nitro-o-toluidine	1*	4	U181	X	1# (0.454)
Benzenamine, 4-nitro	100016	p-Nitroaniline	1*	4	P077	D	5000 (2270)
Benzene	71432		1000	1,2,3,4	U019	C	1000# (454)
Benzene, 1-bromo-4- phenoxy-	101553	4-Bromophenyl phenyl ether	1*	2,4	U030	B	100 (45.4)
Benzene, chloro-	108907	Chlorobenzene	100	1,2,4	U037	B	100 (45.4)
Benzene, chloromethyl-	100447	Benzyl chloride	100	1,4	P026	B	100# (45.4)
Benzene, 1,2-dichloro-	95501	1,2-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
Benzene, 1,3-dichloro-	541731	o-Dichlorobenzene 1,3-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
Benzene, 1,4-dichloro-	106467	m-Dichlorobenzene 1,4-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
Benzene, dichloromethyl-	98873	Benzal chloride	1*		U017	D	5000 (2270)
Benzene, 2,4- diisocyanatomethyl-	584849	Toluene diisocyanate	1*	4	U223	B	100 (45.4)
Benzene, dimethyl	91087 26471625 1330207	Xylene	1000	1,4	U239	C	1000 (454)
m-	108383	m-					
o-	95476	o-					
p-	106423	p-					
Benzene, hexachloro-	118741	Hexachlorobenzene	1*	2,4	U127	X	1# (0.454)
Benzene, hexahydro-	110827	Cyclohexane	1000	1,4	U056	C	1000 (454)
Benzene, hydroxy-	108952	Phenol	1000	1,2,4	U188	C	1000 (454)
Benzene, methyl-	108883	Toluene	1000	1,2,4	U220	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RO	Code	RCRA Waste Number	Category	Pounds(Kg)
Benzene, 1-methyl-2,4-dinitro-	121142	2,4-Dinitrotoluene	1000	1,2,4	U105	C	1000# (454)
Benzene, 1-methyl-2,6-dinitro-	606202	2,6-Dinitrotoluene	1000	1,2,4	U106	C	1000# (454)
Benzene, 1,2-methylenedioxy-4-allyl-	04597	Salrole	1*	4	U203	X	1# (0.454)
Benzene, 1,2-methylenedioxy-4-propenyl-	120581	Isosalrole	1*	4	U141	X	1# (0.454)
Benzene, 1,2-methylenedioxy-4-propyl-	04586	Uhydrosalrole	1*	4	U090	X	1# (0.454)
Benzene, 1-methylethyl-	98828	Cumene	1*	4	U055	D	5000 (2270)
Benzene, nitro-	98953	Nitrobenzene	1000	1,2,4	U169	C	1000 (454)
Benzene, pentachloro-	608935	Pentachlorobenzene	1*	4	U163	A	10 (4.54)
Benzene, pentachloromtro-	62688	Pentachloronitrobenzene	1*	4	U185	X	1# (0.454)
Benzene, 1,2,4,5-tetrachloro-	95943	1,2,4,5-Tetrachlorobenzene	1*	4	U207	D	5000 (2270)
Benzene, trichloromethyl-	98077	Benzotrichloride	1*	4	U023	X	1# (0.454)
Benzene, 1,3,5-trinitro-	09354	sym-Trinitrobenzene	1*	4	U234	A	10 (4.54)
Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510156	Ethyl 4,4'-dichlorobenzilate	1*	4	U038	X	1# (0.454)
1,2-Benzenedicarboxylic acid anhydride	85449	Phthalic anhydride	1*	4	U190	D	5000 (2270)
1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester	117817	Bis(2-ethylhexyl)phthalate	1*	2,4	U028	X	1# (0.454)
1,2-Benzenedicarboxylic acid, dibutyl ester	84742	n-Butyl phthalate	100	1,2,4	U069	A	10 (4.54)
1,2-Benzenedicarboxylic acid, diethyl ester	84662	Dibutyl phthalate Di-n-butyl phthalate Diethyl phthalate	1*	2,4	U088	C	1000 (454)
1,2-Benzenedicarboxylic acid, dimethyl ester	131113	Dimethyl phthalate	1*	2,4	U102	D	5000 (2270)
1,2-Benzenedicarboxylic acid, di-n-octyl ester	117840	Di-n-octyl phthalate	1*	2,4	U107	D	5000 (2270)
1,3-Benzenediol	108463	Resorcinol	1000	1,4	U201	D	5000 (2270)
1,2-Benzenediol, 4-(1-hydroxy-2-(methylamino)ethyl)-	51434	Epinephrine	1*	4	P042	C	1000 (454)
Benzenesulfonic acid chloride	98099	Benzenesulfonyl chloride	1*	4	U020	B	100 (45.4)
Benzenesulfonyl chloride	98099	Benzenesulfonic acid chloride	1*	4	U020	B	100 (45.4)
Benzenethiol	108985	Thiophenol	1*	4	P014	B	100 (45.4)
Benzidine	92875	(1,1'-Biphenyl)-4,4'-diamine	1*	2,4	U021	X	1# (0.454)
1,2-Benzothiazolin-3-one, 1,1-dioxide, and salts	81072	Sacchann and salts	1*	4	U202	X	1# (0.454)
Benzo(a)anthracene	56553	Benzo(a)anthracene 1,2-Benzanthracene	1*	2,4	U018	X	1# (0.454)
Benzo(b)fluoranthene	205992		1*	2		X	1# (0.454)
Benzo(k)fluoranthene	207089		1*	2		X	1# (0.454)
Benzo(j,k)fluorene	206440	Fluoranthene	1*	2,4	U120	B	100 (45.4)
Benzoc acid	65850		5000	1		D	5000 (2270)
Benzonitrile	100470		1000	1		D	5000 (2270)
Benzo(g,h)perylene	191242		1*	2		D	5000 (2270)
Benzo(a)pyrene	50328	3,4-Benzopyrene	1*	2,4	U022	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RC	
			RO	Code	RCRA Waste Number	Category	Pounds/(kg)
3,4-Benzopyrene	50328	Benzo[ <i>a</i> ]pyrene	1*	2,4	U022	X	1# (0.454)
p-Benzocumene	106514	1,4-Cyclohexadienedione	1*	4	U197	A	10 (4.54)
Benzoinchloride	98077	Benzene, trichloromethyl-	1*	4	U023	X	1# (0.454)
Benzoyl chloride	98884		1000	1		C	1000 (454)
1,2-Benzophenanthrene	218019	Chrysene	1*	2,4	UC50	X	1# (0.454)
Benzyl chloride	100447	Benzene, chloromethyl-	100	1,4	P028	B	100# (45.4)
Beryllium flt	7440417	Beryllium dust	1*	2,3,4	P015	X	1# (0.454)
BERYLLIUM AND COMPOUNDS			1*	2			**
Beryllium chloride	7787475		5000	1		D	5000# (2270)
Beryllium dust	7440417	Beryllium	1*	2,3,4	P015	X	1# (0.454)
Beryllium fluoride	7787497		5000	1		D	5000# (2270)
Beryllium nitrate	13597994		5000	1		D	5000# (2270)
	7787555						
alpha - BHC	319848		1*	2		X	1# (0.454)
beta - BHC	319857		1*	2		*X	1# (0.454)
gamma - BHC	58699	Hexachlorocyclohexane (gamma isomer) Lindane	1	1,2,4	U129	X	1# (0.454)
delta - BHC	319868		1*	2		X	1 (0.454)
2,2'-Bioxirane	1464535	1,2,3,4-Dioxepbutane	1*	4	U085	X	1# (0.454)
(1,1'-Biphenyl)- 4,4'-diamine	92875	Benzidine	1*	2,4	U021	X	1# (0.454)
(1,1'-Biphenyl)-4,4'- diamine,3,3'-dichloro-	91941	3,3'-Dichlorobenzidine	1*	2,4	U073	X	1# (0.454)
(1,1'-Biphenyl)-4,4'- diamine,3,3'-dimethoxy-	119904	3,3'-Dimethoxybenzidine	1*	4	U091	X	1# (0.454)
(1,1'-Biphenyl)-4,4'- diamine,3,3'-dimethyl-	119937	3,3'-Dimethylbenzidine	1*	4	U095	X	1# (0.454)
Bis(2-chloroethoxy) methane	111911	Ethane, 1,1'- [methylenebis(oxy)] bis(2-chloro-	1*	2,4	U024	C	1000 (454)
Bis (2-chloroethyl) ether	111444	Dichloroethyl ether Ethane, 1,1'-oxybis(2- chloro-	1*	2,4	U025	X	1# (0.454)
Bis(2-chloroisopropyl) ether	108601	Propane, 2,2'-oxybis(2- chloro-	1*	2,4	U027	C	1000 (454)
Bis(chloromethyl) ether	542881	Methane, oxybis(chloro-	1*	4	P016	X	1# (0.454)
Bis (dimethylthiocarba- moyl) disulfide	137268	Thiam	1*	4	U244	A	10 (4.54)
bis-, -dihexyl)phthalate	117817	1,2-Benzenedicarboxylic acid, [bis(2- ethylhexyl)] ester	1*	2,4	U028	X	1# (0.454)
Bromine cyanide	506683	Cyanogen bromide	1*	4	U246	C	1000 (454)
Bromoacetone	598312	2-Propanone, 1-bromo-	1*	4	P017	C	1000 (454)
Bromoform	75252	Methane, tribromo-	1*	2,4	U225	B	100 (45.4)
4-Bromophenyl phenyl ether	101553	Benzene, 1-bromo-4- phenoxy-	1*	2,4	U030	B	100 (45.4)
Brucine	357373	Strychnidin-10-one, 2,3- dimethoxy-	1*	4	P018	B	100 (45.4)
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87683	Hexachlorobutadiene	1*	2,4	U128	X	1# (0.454)
1-Butanamine, N-butyl- N-nitroso-	924163	N-Nitrosod-n-butylamine	1*	4	U172	X	1# (0.454)
Butanoic acid, 4-[bis(2- chloroethyl)amino] benzene-	305033	Chlorambuc	1*	4	U035	X	1# (0.454)
1-Butanol	71363	n-Butyl alcohol	1*	4	U031	D	5000 (2270)
2-Butanone	78933	Methyl ethyl ketone	1*	4	U159	D	5000 (2270)
2-Butanone peroxide	1338234	Methyl ethyl ketone peroxide	1*	4	U160	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
2-Butenal	123739 4170303	Crotonaldehyde	100	1,4	U053	B	100 (45.4)
2-Butene, 1,4-dichloro-	764410	1,4-Dichloro-2-butene	1*	4	U074	X	1 (0.454)
Butyl acetate	123864		5000	1		D	5000 (2270)
iso-	110190						
sec-	105464						
tert-	540885						
n-Butyl alcohol	71363	1-Butanol	1*	4	U031	D	5000 (2270)
Butylamine	109739		1000	1		C	1000 (454)
iso-	78819						
sec-	513495						
tert-	13952846						
Butyl benzyl phthalate	85687		1*	2		B	100 (45.4)
n-Butyl phthalate	84742	1,2-Benzenedicarboxylic acid, dibutyl ester, Dibutyl phthalate, Di-n-butyl phthalate	100	1,2,4	U069	A	10 (4.54)
Butyric acid	107926		5000	1		D	5000 (2270)
iso-	79312						
Cacodylic acid	75605	Hydroxymethylarsine oxide	1*	4	U136	X	1# (0.454)
Cadmium ff	7440439		1*	2		X	1# (0.454)
Cadmium acetate	543908		100	1		B	100# (45.4)
CADMIUM AND COMPOUNDS			1*	2			**
Cadmium bromide	7789426		100	1		B	100# (45.4)
Cadmium chloride	10108642		100	1		B	100# (45.4)
Calcium arsenate	7778441		1000	1		C	1000# (454)
Calcium arsenite	52740166		1000	1		C	1000# (454)
Calcium carbide	75207		5000	1		A	10 (4.54)
Calcium chromate	13765190	Chromic acid, calcium salt	1000	1,4	U032	C	1000# (454)
Calcium cyanide	592018		10	1,4	P021	A	10 (4.54)
Calcium dodecylbenzene sulfonate	26264062		1000	1		C	1000 (454)
Calcium hypochlorite	7778543		100	1		A	10 (4.54)
Camphene, octachloro-	8001352	Toxaphene	1	1,2,4	P123	X	1# (0.454)
Caplan	133062		10	1		A	10# (4.54)
Carbamic acid, ethyl ester	51796	Ethyl carbamate (Urethan)	1*	4	U238	X	1# (0.454)
Carbamic acid, methylnitroso, ethyl ester	615532	N-Nitroso-N-methylurethane	1*	4	U178	X	1# (0.454)
Carbamide, N-ethyl-N-nitroso-	759739	N-Nitroso-N-ethylurea	1*	4	U176	X	1# (0.454)
Carbamide, N-methyl-N-nitroso-	684935	N-Nitroso-N-methylurea	1*	4	U177	X	1# (0.454)
Carbamide, thio-	62566	Thiourea	1*	4	U219	X	1# (0.454)
Carbamidoselenonic acid	630104	Selenourea	1*	4	P103	C	1000 (454)
Carbamoyl chloride, dimethyl-	79447	Dimethylcarbamoyl chloride	1*	4	U097	X	1# (0.454)
Carbaryl	63252		100	1		B	100 (45.4)
Carbaryl	1563662		10	1		A	10 (4.54)
Carbon bisulfide	75150	Carbon disulfide	5000	1,4	P022	B	100 (45.4)
Carbon disulfide	75150	Carbon bisulfide	5000	1,4	P022	B	100 (45.4)
Carbonic acid, di(althium) salt	6533739	Thallium(I) carbonate	1*	4	U215	B	100 (45.4)
Carbonochloride acid, methyl ester	79221	Methyl chlorocarbonate	1*	4	U156	C	1000 (454)
Carbon oxyfluoride	353504	Carbonyl fluoride	1*	4	U033	C	1000 (454)
Carbon tetrachloride	56235	Methane, tetrachloro-	5000	1,2,4	U211	D	5000# (2270)
Carbonyl chloride	75445	Phosgene	5000	1,4	P095	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code <sup>1</sup>	RCRA Waste Number	Category	Pounds(Kg)
Carbonyl fluoride.....	353504	Carbon oxyfluoride.....	1*	4	U033	C	1000 (454)
Chloral.....	75878	Acetaldehyde, trichloro-.....	1*	4	U034	X	1# (0.454)
Chlorambucil.....	305033	Butanoic acid, 4-[(bis(2-chloroethyl)amino) benzene-.....	1*	4	U035	X	1# (0.454)
CHLORDANE (TECHNICAL MIXTURE AND METABOLITES)			1*	2			**
Chlordane.....	57749	Chlordane, technical..... 4,7-Methanoindan, 1,2,4,5,6,7,8,8- octachloro- 3a,4,7,7a- tetrahydro-.....	1	1,2,4	U036	X	1# (0.454)
Chlordane, technical.....	57749	Chlordane..... 4,7-Methanoindan, 1,2,4,5,6,7,8,8- octachloro- 3a,4,7,7a- tetrahydro-.....	1	1,2,4	U036	X	1# (0.454)
CHLORINATED BENZENES.			1*	2			**
CHLORINATED ETHANES.			1*	2			**
CHLORINATED NAPHTHALENE.			1*	2			**
CHLORINATED PHENOLS.			1*	2			**
Chlorine.....	7782505		10	1		A	10 (4.54)
Chlorine cyanide.....	506774	Cyanogen chloride.....	10	1,4	P033	A	10 (4.54)
Chloromaphazine.....	494031	2-Naphthylamine, N,N- bis(2-chloroethyl)-.....	1*	4	U026	X	1# (0.454)
Chloroacetaldehyde.....	107200	Acetaldehyde, chloro-.....	1*	4	P023	C	1000 (454)
CHLOROALKYL ETHERS			1*	2			**
p-Chloroaniline.....	106478	Benzenamine, 4-chloro-.....	1*	4	P024	C	1000 (454)
Chlorobenzene.....	108907	Benzene, chloro-.....	100	1,2,4	U037	B	100 (45.4)
4-Chloro-m-cresol.....	59507	p-Chloro-m-cresol Phenol, 4-chloro-3- methyl-.....	1*	2,4	U039	D	5000 (2270)
p-Chloro-m-cresol.....	59507	4-Chloro-m-cresol Phenol, 4-chloro-3- methyl-.....	1*	2,4	U039	D	5000 (2270)
Chlorodibromomethane.....	124481		1*	2		B	100 (45.4)
1-Chloro-2,3- epoxypropane.....	106898	Epichlorohydrin.....  Oxirane, 2- (chloromethyl)-.....	1000	1,4	U041	C	1000# (454)
Chloroethane.....	75003		1*	2		B	100 (45.4)
2-Chloroethyl vinyl ether.....	110758	Ethene, 2-chloroethoxy-.....	1*	2,4	U042	C	1000 (454)
Chloroform.....	67663	Methane, trichloro-.....	5000	1,2,4	U044	D	5000# (2270)
Chloromethyl methyl ether.....	107302	Methane, chloromethoxy-.....	1*	4	U046	X	1# (0.454)
beta-Chloronaphthalene.....	91587	2-Chloronaphthalene Naphthalene, 2-chloro- beta-Chloronaphthalene.....	1*	2,4	U047	D	5000 (2270)
2-Chloronaphthalene.....	91587	beta-Chloronaphthalene Naphthalene, 2-chloro- alpha-Chlorophenol.....	1*	2,4	U047	D	5000 (2270)
2-Chlorophenol.....	95578	Phenol, 2-chloro- alpha-Chlorophenol.....	1*	2,4	U048	B	100 (45.4)
o-Chlorophenol.....	95578	2-Chlorophenol Phenol, 2-chloro-.....	1*	2,4	U048	B	100 (45.4)
4-Chlorophenyl phenyl ether.....	7005723		1*	2		D	5000 (2270)
1-(o- Chlorophenyl)thiourea.....	5344821	Thiourea, (2- chlorophenyl)-.....	1*	4	P026	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
3 Chloropropanitrile	542787	Propanenitrile, 3-chloro-	1*	4	P027	C	1000 (454)
Chlorosulfonic acid	7790945		1000	1		C	1000 (454)
4 Chloro-o-toluidine, hydrochloride	3165933	Benzenamine, 4-chloro-2-methyl-, hydrochloride	1*	4	U049	X	1# (0.454)
Chlorpyrifos	2921682		1	1		X	1 (0.454)
Chromic acetate	1066304		1000	1		C	1000 (454)
Chromic acid	11115745		1000	1		C	1000# (454)
	7738945						
Chromic acid, calcium salt	13765190	Calcium chromate	1000	1,4	U032	C	1000# (454)
Chromic sulfate	10101538		1000	1		C	1000 (454)
Chromium II	7440473		1*	2		X	1# (0.454)
CHROMIUM AND COMPOUNDS			1*	2			**
Chromium chloride	10049055		1000	1		C	1000 (454)
Chrysene	218010	1,2-Benzphenanthrene	1*	2,4	U050	X	1# (0.454)
Cobaltous bromide	7789437		1000	1		C	1000 (454)
Cobaltous formate	544183		1000	1		C	1000 (454)
Cobaltous sulfamate	14017415		1000	1		C	1000 (454)
Coke Oven Emissions	N.A.		1*	3		X	1# (0.454)
Copper II	7440508		1*	2		D	5000 (2270)
COPPER AND COMPOUNDS			1*	2			**
Copper cyanide	544923		1*	4	P029	A	10 (4.54)
Coumaphos	56724		10	1		A	10 (4.54)
Creosote	8001589		1*	4	U051	X	1# (0.454)
Cresol(s)	1319773	Cresylic acid	1000	1,4	U052	C	1000# (454)
m-	108394						
o-	95487						
p-	106445						
Cresylic acid	1319773	Cresol(s)	1000	1,4	U052	C	1000# (454)
m-	108394						
o-	95487						
p-	106445						
Crotonaldehyde	123739	2-Butenal	100	1,4	U053	B	100 (45.4)
	4170303						
Cumene	98828	Benzene, 1-methylethyl-	1*	4	U055	D	5000 (2270)
Cupric acetate	142712		100	1		B	100 (45.4)
Cupric acetoarsenite	12002038		100	1		B	100# (45.4)
Cupric chloride	7447394		10	1		A	10 (4.54)
Cupric nitrate	3251238		100	1		B	100 (45.4)
Cupric oxalate	5893663		100	1		B	100 (45.4)
Cupric sulfate	7758987		10	1		A	10 (4.54)
Cupric sulfate ammoniated	10380297		100	1		B	100 (45.4)
Cupric tartrate	815827		100	1		B	100 (45.4)
CYANIDES			1*	2			**
Cyanides (soluble cyanide salts), not elsewhere specified	57125		1*	4	P030	A	10 (4.54)
Cyanogen	460195		1*	4	P031	B	100 (45.4)
Cyanogen bromide	506683	Bromine cyanide	1*	4	U246	C	1000 (454)
Cyanogen chloride	506774	Chlorine cyanide	10	1,4	P033	A	10 (4.54)
1,4-Cyclohexanedione	106514	p-Benzoquinone	1*	4	U197	A	10 (4.54)
Cyclohexane	110827	Benzene, hexahydro-	1000	1,4	U058	C	1000(454)
Cyclohexanone	108941		1*	4	U057	D	5000 (2270)
1,3-Cyclopentadiene	77474	Hexachlorocyclopentadiene	1	1,2,4	U130	X	1# (0.454)
1,2,1,4,5,5-hexachloro-							
Cyclophosphamide	50180	2H-1,3,2-Oxazaphosphone,2-[bis(2-chloroethyl)amino] tetrahydro-2-oxide	1*	4	U058	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
2,4-D Acid	94757	2,4-D, salts and esters 2,4-Dichlorophenoxyacetic acid, salts and esters	100	1,4	U240	B	100 (45.4)
2,4-D Esters	94111 94791 94804 1320189 1929387 1928816 1929733 2971382 25168267 53487111		100	1		B	100 (45.4)
2,4-D, salts and esters	94757	2,4-D Acid 2,4-Dichlorophenoxyacetic acid, salts and esters	100	1,4	U240	B	100 (45.4)
Daunomycin	20830813	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[3-amino-2,3,6-Indeoxy- $\alpha$ -L-lyxohexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-	1*	4	U059	X	1# (0.454)
DDD	72548	4,4' DDD Dichlorodiphenyl dichloroethane	1	1,2,4	U060	X	1# (0.454)
4,4' DDD	72548	TDE DDD Dichlorodiphenyl dichloroethane	1	1,2,4	U060	X	1# (0.454)
DDE	72559	4,4' DDE	1*	2		X	1# (0.454)
4,4' DDE	72559	DDE	1*	2		X	1# (0.454)
DDT	50293	4,4' DDT Dichlorodiphenyl trichloroethane	1	1,2,4	U061	X	1# (0.454)
4,4' DDT	50293	DDT Dichlorodiphenyl trichloroethane	1	1,2,4	U061	X	1# (0.454)
DDT AND METABOLITES			1*	2			**
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one	143500	Kepon	1	1,4	U142	X	1# (0.454)
Dallate	2303164	S-(2,3-Dichloroallyl) diisopropylthiocarbamate	1*	4	U062	X	1# (0.454)
Damine	302012	Hydrazine	1*	4	U133	X	1# (0.454)
Diaminotoluene	95807 25376458 498720 823405	Toluenediamine	1*	4	U221	X	1# (0.454)
Diazinon	5333415		1	1		X	1 (0.454)
Dibenz[a,h]anthracene	53703	1,2,5,6-Dibenzanthracene Dbenzo[a,h]anthracene	1*	2,4	U063	X	1# (0.454)
1,2,5,6-Dibenzanthracene	53703	Dbenzo[a,h]anthracene Dbenzo[a,h]anthracene	1*	2,4	U063	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RC	
			RC	Code	RCRA Waste Number	Catego-ry	Pounds(Kg)
Dibenzo[a,h]anthracene	53703	Dibenzo[a,h]anthracene 1,2,5,6-Dibenzanthracene	1*	2,4	U063	X	1# (0.454)
1,2,7,8-Dibenzopyrene	189559	Dibenzo[a,i]pyrene	1*	4	U064	X	1# (0.454)
Dibenzo[a,i]pyrene	189559	1,2,7,8-Dibenzopyrene	1*	4	U064	X	1# (0.454)
1,2-Dibromo-3-chloropropane	26128	Propane, 1,2-dibromo-3-chloro-	1*	4	U066	X	1# (0.154)
Di-n-butyl phthalate	84742	1,2-Benzenedicarboxylic acid di-n-butyl ester Di-n-butyl phthalate n-Butyl phthalate	100	1,2,4	U069	A	10 (4.54)
D-n-butyl phthalate	84742	1,2-Benzenedicarboxylic acid di-n-butyl ester n-Butyl phthalate Di-n-butyl phthalate	100	1,2,4	U060	A	10 (4.54)
D-camba	1918009		1000	1		C	1000 (454)
D-chlobenl	1194656		1000	1		B	100 (45.4)
Dichloro	117806		1	1		X	1 (0.454)
S-(2,3-Dichloroallyl) isopropylthiocarbamate	2303164	Diallate	1*	4	U062	X	1# (0.454)
3,5-Dichloro-N-(1,1-dimethyl-2-propenyl)benzamide	23950585	Pronamide	1*	4	U192	D	5000 (2270)
Dichlorobenzene (mixed)	25321226		100	1		B	100 (45.4)
1,2-Dichlorobenzene	95501	Benzene, 1,2-dichloro-o-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
1,3-Dichlorobenzene	541731	Benzene, 1,3-dichloro-m-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
1,4-Dichlorobenzene	106467	Benzene, 1,4-dichloro-p-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
m-Dichlorobenzene	541731	Benzene, 1,3-dichloro-1,3-Dichlorobenzene	1*	2,4	U071	B	100 (45.4)
o-Dichlorobenzene	95501	Benzene, 1,2-dichloro-1,2-Dichlorobenzene	100	1,2,4	U070	B	100 (45.4)
p-Dichlorobenzene	106467	Benzene, 1,4-dichloro-1,4-Dichlorobenzene	100	1,2,4	U072	B	100 (45.4)
DICHLOROBENZIDINE			1*	2			**
3,3'-Dichlorobenzidine	91941	(1,1'-Biphenyl)-4,4'-diamine,3,3'-dichloro-	1*	2,4	U073	X	1# (0.454)
Dichlorobromomethane	75274		1*	2		D	5000 (2270)
1,4-Dichloro-2-butene	764410	2-Butene, 1,4-dichloro-	1*	4	U074	X	1 (0.454)
Dichlorodifluoromethane	75716	Methane, dichlorodifluoro-	1*	4	U075	D	5000 (2270)
Dichlorodiphenyl dichloroethane	72548	DDD 4,4' DDD TCE	1	1,2,4	U060	X	1# (0.454)
Dichlorodiphenyl trichloroethane	50293	DDT 4,4' DDT	1	1,2,4	U061	X	1# (0.454)
1,1-Dichloroethane	75343	Ethane, 1,1-dichloro-Ethylidene dichloride	1*	2,4	U076	C	1000 (454)
1,2-Dichloroethane	107062	Ethane, 1,2-dichloro-Ethylene dichloride	5000	1,2,4	U077	D	5000# (2270)
1,1-Dichloroethylene	75354	Ethene, 1,1-dichloro-Vinylidene chloride	5000	1,2,4	U078	D	5000# (2270)
1,2 trans-Dichloroethylene	156605	Ethene, trans-1,2-dichloro-	1*	2,4	U079	C	1000 (454)
Dichloroethyl ether	111444	Bis (2-chloroethyl) ether Ethane, 1,1'-oxybis(2-chloro-	1*	2,4	U025	X	1# (0.454)
2,4-Dichlorophenol	120832	Phenol, 2,4-dichloro-	1*	2,4	U081	B	100 (45.4)
2,6-Dichlorophenol	87650	Phenol, 2,6-dichloro-	1*	4	U082	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RC	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
2,4-Dichlorophenoxyacetic acid, salts and esters	94757	2,4-D Acid	100	1,4	U240	B	100 (45.4)
Dichlorophenylarsine	696286	2,4-D salts and esters					
Dichloropropane	26638197	Phenyl dichloroarsine	1*	4	P036	X	1# (0.454)
1,1-Dichloropropane	78999		5000	1		C	1000 (454)
1,3-Dichloropropane	142289						
1,2-Dichloropropane	78875	Propylene dichloride	5000	1,2,4	U083	C	1000 (454)
Dichloropropane - Dichloropropene (mixture)	8003198		5000	1		B	100# (45.4)
Dichloropropenols (mixture)	26952238		5000	1		B	100 (45.4)
2,3-Dichloropropene (isomer)	78886						
1,3-Dichloropropene	542758	Propene, 1,3-dichloro-	5000	1,2,4	U084	B	100# (45.4)
2,2-Dichloropropionic acid	75990		5000	1		D	5000 (2270)
Dichlorvos	82737		10	1		A	10 (4.54)
Dieldrin	60571	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4,5,8-dimethanonaphthalene	1	1,2,4	P037	X	1# (0.454)
1,2,3,4-Depoxybutane	1464535	2,2'-Bioxirane	1*	4	U085	X	1# (0.454)
Diethylamine	109897		1000	1		B	100 (45.4)
Diethylarsine	692422	Arsine diethyl-	1*	4	P038	X	1# (0.454)
1,4-Diethylene dioxide	123911	1,4-Dioxane	1*	4	U108	X	1# (0.454)
N,N'-Diethylhydrazine	1615801	Hydrazine, 1,2-diethyl-	1*	4	U086	X	1# (0.454)
O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate	298044	Disulfoton	1	1,4	P039	X	1 (0.454)
O,O-Diethyl S-methyl dithiophosphate	3288582	Phosphorodithioic acid, O,O-diethyl S-methyl ester	1*	4	U087	D	5000 (2270)
Diethyl p-nitrophenyl phosphate	311455	Phosphonic acid, diethyl p-nitrophenyl ester	1*	4	P041	B	100 (45.4)
Diethyl phthalate	84662	1,2-Benzenedicarboxylic acid, diethyl ester	1*	2,4	U088	C	1000 (454)
O,O-Diethyl O-pyrazinyl phosphorothioate	297972	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	1*	4	P040	B	100 (45.4)
Diethylstilbestrol	56531	4,4'-Stilbenediol, alpha, alpha'-diethyl-	1*	4	U089	X	1# (0.454)
1,2-Dihydro-3,6-pyridazinone	123331	Maleic hydrazide	1*	4	U148	D	5000 (2270)
Dihydrostiroic	94586	Benzene, 1,2-methylenedioxy-4-propyl-	1*	4	U090	X	1# (0.454)
Diisopropyl fluorophosphate	55914	Phosphorofluoridic acid bis(1-methylethyl) ester	1*	4	P043	B	100 (45.4)
Dimethoate	60515	Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester	1*	4	P044	A	10 (4.54)
3,3'-Dimethoxybenzidine	119904	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-	1*	4	U091	X	1# (0.454)
Dimethylamine	124403	Methanamine, N-methyl-	1000	1,4	U092	C	1000 (454)
7,12-Dimethylbenz[a]anthracene	57976	1,2-Benzanthracene, 7,12-dimethyl-	1*	4	U094	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
3,3'-Dimethylbenzidine	119937	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-	1*	4	U095	X	1# (0.454)
alpha, alpha-Dimethylbenzylhydroperoxide	80159	Hydroperoxide, 1-methyl-1-phenylethyl-	1*	4	U096	A	10 (4.54)
3,3-Dimethyl-1-(methylthio)-2-butanone, O-((methylamino) carbonyl) oxime	39196184	Thioanox	1*	4	P045	B	100 (45.4)
Dimethylcarbamoyl chloride	79447	Carbamoyl chloride, dimethyl-	1*	4	U097	X	1# (0.454)
1,1-Dimethylhydrazine	57147	Hydrazine, 1,1-dimethyl-	1*	4	U098	X	1# (0.454)
1,2-Dimethylhydrazine	540738	Hydrazine, 1,2-dimethyl-	1*	4	U099	X	1# (0.454)
O,O-Dimethyl O-p-nitrophenyl phosphorothioate	298000	Methyl parathion	100	1.4	P071	B	100 (45.4)
Dimethylnitrosamine	62759	N-Nitrosodimethylamine	1*	2.4	P082	X	1# (0.454)
alpha, alpha-Dimethylphenethylamine	122098	Ethanamine, 1,1-dimethyl-2-phenyl-	1*	4	P046	O	5000 (2270)
2,4-Dimethylphenol	105679	Phenol, 2,4-dimethyl-	1*	2.4	U101	B	100 (45.4)
Dimethyl phthalate	131113	1,2-Benzenedicarboxylic acid, dimethyl ester	1*	2.4	U102	O	5000 (2270)
Dimethyl sulfate	77781	Sulfonic acid, dimethyl ester	1*	4	U103	X	1# (0.454)
Dinitrobenzene (mixed)	25154545		1000	1		B	100 (45.4)
m-	99650						
o-	528290						
p-	100254						
4,6-Dinitro-o-cresol and salts	534521	Phenol, 2,4-dinitro-6-methyl-, and salts	1*	2.4	P047	A	10 (4.54)
4,6-Dinitro-o-cyclohexylphenol	131895	Phenol, 2-cyclohexyl-4,6-dinitro-	1*	4	P034	B	100 (45.4)
Dinitrophenol	25550587		1000	1		A	10 (4.54)
2,5-	329715						
2,6-	573568						
2,4-Dinitrophenol	51285	Phenol, 2,4-dinitro-	1000	1.2, 4	P048	A	10 (4.54)
Dinitrotoluene	25321146		1000	1.2		C	1000# (454)
3,4-Dinitrotoluene	610399						
2,4-Dinitrotoluene	121142	Benzene, 1-methyl-2,4-dinitro-	1000	1.2, 4	U105	C	1000# (454)
Dnoseb	58857	Phenol, 2,4-dinitro-6-(1-methylpropyl)-	1*	4	P020	C	1000 (454)
Di-n-octyl phthalate	117840	1,2-Benzenedicarboxylic acid, di-n-octyl ester	1*	2.4	U107	D	5000 (2270)
1,4-Dioxane	123911	1,4-Diethylene dioxide	1*	4	U108	X	1# (0.454)
DIPHENYLHYDRAZINE			1*	2			
1,2-Diphenylhydrazine	122667	Hydrazine, 1,2-diphenyl-	1*	2.4	U109	X	1# (0.454)
Diphosphoramide, octamethyl-	152169	Octamethylpyrophosphoramide	1*	4	P085	B	100 (45.4)
Dipropylamine	142847	1-Propanamine, N-propyl-	1*	4	U110	D	5000 (2270)
Di-n-propylnitrosamine	621647	N-Nitrosodipropylamine	1*	2.4	U111	X	1# (0.454)
Dquat	85007		1000	1		C	1000 (454)
	2764729						
Disulfoton	298044	O,O-Diethyl S-(2-ethylthioethyl) phosphorodithioate	1	1.4	P039	X	1 (0.454)
2,4-Dithiouret	541537	Thioimidocarbonic diamide	1*	4	P043	B	100 (45.4)
Dithiopyrophosphoric acid, tetraethyl ester	3689245	Tetraethylthiopyrophosphate	1*	6	P109	B	100 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Du on	330541		100	1		B	100 (45.4)
Dodecylbenzenesulfonic acid	27176870		1000	1		C	1000 (454)
Endosulfan	115297	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfate	1	1.2,4	P050	X	1 (0.454)
alpha - Endosulfan	959988		1*	2		X	1 (0.454)
beta - Endosulfan	33213659		1*	2		X	1 (0.454)
ENDOSULFAN AND METABOLITES			1*	2			**
Endosulfan sulfate	1031078		1*	2		X	1 (0.454)
Endosulfan	145733	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	1*	4	P088	C	1000 (454)
Endrin	72208	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4a,5,6,7,8,8a-octahydro-endo,endo-1,4,5,8-dimethanonaphthalene	1	1.2,4	P051	X	1 (0.454)
Endrin aldehyde	7421934		1*	2		X	1 (0.454)
ENDRIN AND METABOLITES			1*	2			**
Epichlorohydrin	106898	1-Chloro-2,3-epoxypropane	1000	1,4	U041	C	1000# (454)
Epinephrine	51434	Oxvane, 2-(chloromethyl)-(chloromethyl)-1,2-Benzenediol, 4-[(1-hydroxy-2-(methylamino)ethyl)-	1*	4	P042	C	1000 (454)
Ethanol	75070	Acetaldehyde	1000	1,4	U001	C	1000 (454)
Ethanamine, 1,1-dimethyl-2-phenyl-	122098	alpha alpha-Dimethylphenethylamine	1*	4	P046	D	5000 (2270)
Ethanamine, N-ethyl-N-nitroso-	55185	N-Nitrosodimethylamine	1*	4	U174	X	1# (0.454)
Ethane, 1,2-dibromo-	106934	Ethylene dibromide	1000	1,4	U067	C	1000# (454)
Ethane, 1,1-dichloro-	75343	1,1-Dichloroethane	1*	2,4	U076	C	1000 (454)
Ethane, 1,2-dichloro-	107062	Ethylidene dichloride	5000	1,2,4	U077	D	5000# (2270)
Ethane, 1,1,1,2,2,2-hexachloro-	67721	Ethylene dichloride	1*	2,4	U131	X	1# (0.454)
Ethane, 1,1'-bis(methylenebis(oxy)) bis(2-chloro-	111911	Bis(2-chloroethoxy)methane	1*	2,4	U024	C	1000 (454)
Ethane, 1,1'-oxybis-	60297	Ethyl ether	1*	4	U117	B	100 (45.4)
Ethane, 1,1'-oxybis(2-chloro-	111444	Bis (2-chloroethyl) ether	1*	2,4	U025	X	1# (0.454)
Ethane, pentachloro-	76017	Dichloroethyl ether	1*	4	U184	X	1# (0.454)
Ethane, 1,1,1,2,2-tetrachloro-	630206	Pentachloroethane	1*	4	U208	X	1# (0.454)
Ethane, 1,1,2,2-tetrachloro-	79345	1,1,1,2-Tetrachloroethane	1*	2,4	U209	X	1# (0.454)
Ethane, 1,1,2-trichloro-	79005	1,1,2,2-Tetrachloroethane	1*	2,4	U227	X	1# (0.454)
Ethane, 1,1,1-trichloro-	72435	1,1,2-Trichloroethane	1	1,4	U247	X	1 (0.454)
2,2-bis(p-methoxyphenyl)-1,2-	111546	Methoxychlor	1*	4	U114	D	5000 (2270)
Ethanedithiocarbamic acid		Ethylenebis (orthocarbamic acid)	1*	4	U114	D	5000 (2270)
Ethanolamine	75058	Acetonitrile	1*	4	U003	D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(RQ)
Ethanethioamide	62555	Thioacetamide	1*	4	U218	X	1# (0.454)
Ethanol, 2,2'-(nitrosomino)bis-	1116547	N-Nitrosobethanolamine	1*	4	U173	X	1# (0.454)
Ethanone, 1-phenyl	98862	Acetophenone	1*	4	U004	D	5000 (2270)
Ethanyl chloride	75365	Acetyl chloride	5000	1.4	U006	D	5000 (2270)
Ethanimine, N-methyl-N-nitroso-	4549400	N-Nitrosomethylmethylamine	1*	4	P084	X	1# (0.454)
Ethene, chloro-	75014	Vinyl chloride	1*	2.4	U043	X	1# (0.454)
Ethene, 1-chloroethoxy-	110758	2-Chloroethyl vinyl ether	1*	2.4	U042	C	1000 (454)
Ethene, 1,1-dichloro-	75354	1,1-Dichloroethylene	5000	1.2, 4	U078	D	5000# (2270)
Ethene, 1,1,2,2-tetrachloro-	127184	Vinylidene chloride	1*	2.4	U210	X	1# (0.454)
Ethene, trans-1,2-dichloro-	156605	Tetrachloroethylene	1*	2.4	U079	C	1000 (454)
Ethion	563122	1,2-trans-Dichloroethylene	10	1		A	10 (4.54)
2-Ethoxyethanol	110805	Ethylene glycol monoethyl ether	1*	4	U359	X	1# (0.454)
Ethyl acetate	141786	Acetic acid, ethyl ester	1*	4	U112	D	5000 (2270)
Ethyl acrylate	140865	2-Propenoic acid, ethyl ester	1*	4	U113	C	1000 (454)
Ethylbenzene	100414		1000	1.2		C	1000 (454)
Ethyl carbamate (Urethan)	51796	Carbamic acid, ethyl ester	1*	4	U238	X	1# (0.454)
Ethyl cyanide	107120	Propanenitrile	1*	4	P101	A	10 (4.54)
Ethyl 4,4'-dichlorobenzilate	510156	Benzenesulfonic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	1*	4	U038	X	1# (0.454)
Ethylene dibromide	106934	Ethane, 1,2-dibromo-	1000	1.4	U067	C	1000# (454)
Ethylene dichloride	107062	1,2-Dichloroethane	5000	1.2, 4	U077	D	5000# (2270)
Ethylene oxide	75218	Ethane, 1,2-dichloro-	1*	4	U115	X	1# (0.454)
Ethylenebis (orthocarbamic acid)	111546	Oxirane	1*	4	U114	D	5000 (2270)
Ethylenediamine	107153	Ethanedithiocarbamic acid	1000	1		D	5000 (2270)
Ethylenediamine tetraacetic acid (EDTA)	60004		5000	1		D	5000 (2270)
Ethylene glycol monoethyl ether	110805	2-Ethoxyethanol	1*	4	U359	X	1# (0.454)
Ethylenethiourea	96457	2-Imidazolidinethione	1*	4	U116	X	1# (0.454)
Ethylenimine	151564	Azidine	1*	4	P054	X	1# (0.454)
Ethyl ether	60297	Ethane, 1,1'-oxybis-	1*	4	U117	B	100 (45.4)
Ethylene dichloride	75343	1,1-Dichloroethane	1*	2.4	U076	C	1000 (454)
Ethyl methacrylate	97632	Ethane, 1,1-dichloro-	1*	4	U118	C	1000 (454)
Ethyl methanesulfonate	62500	2-Propenoic acid, 2-methyl-, ethyl ester	1*	4	U119	X	1# (0.454)
Fampur	52857	Methanesulfonic acid, ethyl ester	1*	4	P097	C	1000 (454)
Ferric ammonium citrate	1185575	Phosphorothioic acid, O,O-dimethyl-O-[p-(dimethylamino)sulfonyl]phenyl ester	1000	1		C	1000 (454)
Ferric ammonium oxalate	2944874		1000	1		C	1000 (454)
Ferric chloride	55488874		1000	1		C	1000 (454)
Ferric dextran ***	7705080		1*	4	U139	D	5000 (2270)
Ferric fluoride	9004664	Iron dextran ***	100	1		B	100 (45.4)
Ferric nitrate	7783508		1000	1		C	1000 (454)
	10421484						

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Catego-ry	Pounds(Kg)
Ferric sulfate	10028225		1000	1		C	1000 (454)
Ferrous ammonium sulfate	10045893		1000	1		C	1000 (454)
Ferrous chloride	7758943		100	1		B	100 (45.4)
Ferrous sulfate	7720787		1000	1		C	1000 (454)
	7782630						
Fluoroacetic acid, sodium salt	62748	Acetic acid, fluoro-sodium salt	1*	4	P058	A	10 (4.54)
Fluoranthene	206440	Benzofluoranthene	1*	2.4	U120	B	100 (45.4)
Fluorene	88737		1*	2		D	5000 (2270)
Fluorine	7782414		1*	4	P056	A	10 (4.54)
Fluoroacetamide	640197	Acetamide, 2-fluoro-	1*	4	P057	B	100 (45.4)
Formaldehyde	50000	Methylene oxide	1000	1.4	U122	C*	1000# (454)
Formic acid	64186	Methanoic acid	5000	1.4	U123	D	5000 (2270)
Fulmic acid, mercury(II) salt	628864	Mercury fulminate	1*	4	P065	A	10 (4.54)
Fumaric acid	110178		5000	1		D	5000 (2270)
Furan	110009	Furfuran	1*	4	U124	B	100 (45.4)
Furan, tetrahydro-	109999	Tetrahydrofuran	1*	4	U213	C	1000 (454)
2-Furancarboxaldehyde	98011	Furfural	1000	1.4	U125	D	5000 (2270)
2,5-Furandione	108316	Maleic anhydride	5000	1.4	U147	D	5000 (2270)
Furfural	98011	2-Furancarboxaldehyde	1000	1.4	U125	D	5000 (2270)
Furfuran	110009	Furan	1*	4	U124	B	100 (45.4)
D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	18883664	Streptozotocin	1*	4	U206	X	1# (0.454)
Glycidylaldehyde	785344	1-Propanal, 2,3-epoxy-	1*	4	U126	X	1# (0.454)
Guandine, N-nitroso-N-methyl-N'-nitro-	70257	N-Methyl-N'-nitro-N-nitrosoquandine	1*	4	U163	X	1# (0.454)
Guthon	66500		1	1		X	1 (0.454)
HALOETHERS			1*	2			**
HALOMETHANES			1*	2			**
Heptachlor	76448	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	1	1,2,4	P059	X	1# (0.454)
HEPTACHLOR AND METABOLITES			1*	2			**
Heptachlor epoxide	1024573		1*	2		X	1# (0.454)
Hexachlorobenzene	118741	Benzene, hexachloro-	1*	2.4	U127	X	1# (0.454)
Hexachlorobutadiene	87683	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	1*	2.4	U128	X	1# (0.454)
HEXACHLOROCYCLO-HEXANE (all isomers)	608731		1*	2			**
Hexachlorocyclohexane (gamma isomer)	58899	gamma-BHC	1	1,2,4	U129	X	1# (0.454)
		Lindane					
Hexachlorocyclopentadiene	77474	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	1	1,2,4	U130	X	1# (0.454)
1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo-endo-1,4,5,8-dimethanonaphthalene	72208	Endrin	1	1,2,4	P051	X	1 (0.454)
1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo-endo-1,4,5,8-dimethanonaphthalene	60571	Dieldrin	1	1,2,4	P037	X	1# (0.454)
Hexachloroethane	67721	Ethane, 1,1,1,2,2,2-hexachloro-	1*	2.4	U131	X	1# (0.454)

● TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds/Kg
Hexachlorohexahydro-endo,endo-dimethanonaphthalene	465736	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo,endo-dimethanonaphthalene	1*	4	P060	X	1 (0.454)
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo,endo-dimethanonaphthalene	465738	Hexachlorohexahydro-endo,endo-dimethanonaphthalene	1*	4	P060	X	1 (0.454)
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo,exo-dimethanonaphthalene	309002	Aldrin	1	1,2,4	P004	X	1# (0.454)
Hexachlorophene	70304	2,2'-Methylenebis(3,4,6-trichlorophenol)	1*	4	U132	B	100 (45.4)
Hexachloropropene	1888717	1-Propene, 1,1,2,3,3,3-hexachloro-	1*	4	U243		1000 (454)
Hexaethyl tetraphosphate	757584	Tetraphosphoric acid, hexaethyl ester	1*	4	P062	B	100 (45.4)
Hydrazine	302012	Diamine	1*	4	U133	X	1# (0.454)
Hydrazine, 1,2-diethyl-	1615801	N,N-Diethylhydrazine	1*	4	U088	X	1# (0.454)
Hydrazine, 1,1-dimethyl-	57147	1,1-Dimethylhydrazine	1*	4	U098	X	1# (0.454)
Hydrazine, 1,2-dimethyl-	540738	1,2-Dimethylhydrazine	1*	4	U099	X	1# (0.454)
Hydrazine, 1,2-diphenyl-	122667	1,2-Diphenylhydrazine	1*	2,4	U109	X	1# (0.454)
Hydrazine, methyl-	60344	Methyl hydrazine	1*	4	F068	A	10 (4.54)
Hydrazinecarbothioamide	79196	Thiosemicarbazide	1*	4	P116	B	100 (45.4)
Hydrochloric acid	7647010		5000	1		D	5000 (2270)
Hydrocyanic acid	74908	Hydrogen cyanide	10	1,4	P063	A	10 (4.54)
Hydrofluoric acid	7664393	Hydrogen fluoride	5000	1,4	U134	B	100 (45.4)
Hydrogen cyanide	74908	Hydrocyanic acid	10	1,4	P063	A	10 (4.54)
Hydrogen fluoride	7664393	Hydrofluoric acid	5000	1,4	U134	B	100 (45.4)
Hydrogen phosphide	7803512	Phosphine	1*	4	P098	B	100 (45.4)
Hydrogen sulfide	7783064	Hydrosulphuric acid Sulfur hydride	100	1,4	U135	B	100 (45.4)
Hydroperoxide, 1-methyl-1-phenylethyl-	80159	alpha, alpha-Dimethylbenzylhydroperoxide	1*	4	U098	A	10 (4.54)
Hydro-sulfuric acid	7783064	Hydrogen sulfide Sulfur hydride	100	1,4	U135	B	100 (45.4)
Hydroxydimethylarsine oxide	75605	Cacodylic acid	1*	4	U136	X	1# (0.454)
2-Imidazolidinethione	74457	Ethylenethiourea	1*	4	U116	X	1# (0.454)
Indeno[1,2,3-cd]pyrene	193395	1,10-[1,2-Phenylene]pyrene	1*	2,4	U137	X	1# (0.454)
Iron dextran ***	9004664	Ferric dextran ***	1*	4	U139	D	5000 (2270)
Isobutyl alcohol	78831	1-Propanol, 2-methyl-	1*	4	U140	D	5000 (2270)
Isocyanic acid, methyl ester	624839	Methyl isocyanate	1*	4	P064	X	1###(0.454)
Isophorone	78591		1*	2		D	5000 (2270)
Isoprene	78795		1000	1		B	100 (45.4)
Isocropanolamine	42504461		1000	1		C	1000 (454)
dodecylbenzenesulfonate							
Isosafrole	120581	Benzene, 1,2-methylenedioxy-4-propenyl-	1*	4	U141	X	1# (0.454)
3(2H)-Isosaxazolinone, 5-(aminomethyl)-	2763964	5-(Aminomethyl)-3-isoxazolinol	1*	4	P007	C	1000 (454)
methane	115322		5000	1		A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RCQ	
			RCQ	Code	RCRA Waste Number	Category	Pounds (kg)
Kepono	143500	Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one	†	1.4	U142	X	1# (0.454)
Lasiocarpine	303344		1*	4	U143	X	1# (0.454)
Lead ††	7439921		1*	2		X	1# (0.454)
Lead acetate	301042	Acetic acid, lead salt	5000	1.4	U144	D	5000# (2270)
LEAD AND COMPOUNDS			1*	2			**
Lead arsenate	7784409 7645252 10102484		5000	1		D	5000# (2270)
Lead chloride	7758954		5000	1		B	100# (45.4)
Lead fluoroborate	13814965		5000	1		B	100# (45.4)
Lead fluoride	7783462		1000	1		B	100# (45.4)
Lead iodide	10101630		5000	1		B	100# (45.4)
Lead nitrate	10099748		5000	1		B	100# (45.4)
Lead phosphate	7446277	Phosphonic acid, lead salt	1*	4	U145	X	1# (0.454)
Lead stearate	7428480 1072351		5000	1		D	5000# (2270)
Lead subacetate	52652592 56189094		1*	4	U146	X	1# (0.454)
Lead sulfate	1335328 15739807 7446142		5000	1		B	100# (45.4)
Lead sulfide	1314870		5000	1		D	5000# (2270)
Lead thiocyanate	592870		5000	1		B	100# (45.4)
Lindane	58899	gamma - BHC Hexachlorocyclohexane (gamma isomer)		1.2,4	U129	X	1# (0.454)
Lithium chromate	14307358		1000	1		C	1000# (454)
Malathion	121755		10	1		B	100 (45.4)
Maleic acid	110167		5000	1		D	5000 (2270)
Maleic anhydride	108316	2,5-Furandione	5000	1.4	U147	D	5000 (2270)
Maleic hydrazide	123331	1,2-Dihydro-3,6-pyrazinedione	1*	4	U148	D	5000 (2270)
Malononitrile	109773	Propanedinitrile	1*	4	U149	C	1000 (454)
Meiphalan	148823	Alanine, 3-(p-bis(2-chloroethyl)amino) phenyl-L-	1*	4	U150	X	1# (0.454)
Mercaptodimethyl	2032657		100	1		A	10 (4.54)
Mercure cyanide	592041		1	1		X	1 (0.454)
Mercure nitrate	10045940		10	1		A	10 (4.54)
Mercure sulfate	7783359		10	1		A	10 (4.54)
Mercure thiocyanate	592858		10	1		A	10 (4.54)
Mercurous nitrate	10415755		10	1		A	10 (4.54)
Mercury	7439976		1*	2,3,4	U151	X	1 (0.454)
MERCURY AND COMPOUNDS			1*	2			**
Mercury, (acetato-O)phenyl-	62384	Phenylmercuric acetate	1*	4	P092	B	100 (45.4)
Mercury fulminate	628364	Fulminic acid, mercury(II) salt	1*	4	P065	A	10 (4.54)
Methacrylonitrile	126987	2-Propenenitrile, 2-methyl-	1*	4	U152	C	1000 (454)
Methanamine, N-methyl-	124403	Dimethylamine	1000	1.4	U092	C	1000 (454)
Methane bromo-	74839	Methyl bromide	1*	2,4	U029	C	1000 (454)
Methane chloro-	74873	Methyl chloride	1*	2,4	U045	X	1# (0.454)
Methane chloromethoxy-	107302	Chloromethyl methyl ether	1*	4	U046	X	1# (0.454)
Methane dibromo-	74953	Methylene bromide	1*	4	U068	C	1000 (454)
Methane dichloro-	75092	Methylene chloride	1*	2,4	U080	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Methane, dichlorodifluoro	75718	Dichlorodifluoromethane	1*	4	U075	D	5000 (2270)
Methane, iodo	74884	Methyl iodide	1*	4	U138	X	1# (0 454)
Methane, oxybis(chloro	542881	Bis(chloromethyl) ether	1*	4	P016	X	1# (0 454)
Methane, tetrachloro	56235	Carbon tetrachloride	5000	1,2,4	U211	D	5000# (2270)
Methane, tetrahydro	509148	Tetrahydrofuran	1*	4	P112	A	10 (4 54)
Methane, tribromo	75252	Bromoform	1*	2,4	U225	B	100 (45 4)
Methane, trichloro	87663	Chloroform	5000	1,2,4	U044	D	5000# (2270)
Methane, trichlorofluoro	75694	Trichloromonofluoromethane	1*	4	U121	D	5000 (2270)
Methanesulfonic acid, ethyl ester	62500	Ethyl methanesulfonate	1*	4	U119	X	1# (0 454)
Methanethiol	74931	Methylmercaptan Thiomethanol	100	1,4	U153	B	100 (45 4)
Methanesulfonyl chloride, trichloro	594423	Trichloromethanesulfonyl chloride	1*	4	P118	B	100 (45 4)
4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76448	Heptachlor	1	1,2,4	P059	X	1# (0 454)
Methanoic acid	64186	Formic acid	5000	1,4	U123	D	5000 (2270)
4,7-Methanorindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-	57749	Chlordane Chlordane, technical	1	1,2,4	U036	X	1# (0 454)
Methanol	67561	Methyl alcohol	1*	4	U154	D	5000 (2270)
Methaphenene	91805	Pyridine, 2-(1,2-dimethylaminoethyl)-2-thenylamino]-	1*	4	U155	D	5000 (2270)
Methomyl	16752775	Acetimidic acid, N-[(methylcarbamoyloxy)thio-, methyl ester	1*	4	P066	B	100 (45 4)
Methoxychlor	72435	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-	1	1,4	U247	X	1 (0 454)
Methyl alcohol	67561	Methanol	1*	4	U154	D	5000 (2270)
2-Methylaziridine	75558	1,2-Propylenimine	1*	4	P067	X	1# (0 454)
Methyl bromide	74839	Methane, bromo-	1*	2,4	U029	C	1000 (454)
1-Methylbutadiene	504609	1,3-Pentadiene	1*	4	U186	B	100 (45 4)
Methyl chloride	74873	Methane, chloro-	1*	2,4	U045	X	1# (0 454)
Methyl chlorocarbonate	79221	Carbonochloridic acid, methyl ester	1*	4	U156	C	1000 (454)
Methyl chloroform	71558	1,1,1-Trichloroethane	1*	2,4	U226	C	1000 (454)
4,4'-Methylenebis(2-chloroaniline)	101144	Benzenamine, 4,4'-methylenebis(2-chloro-	1*	4	U158	X	1# (0 454)
2,2'-Methylenebis[3,4,6-trichlorophenol]	70304	Hexachlorophene	1*	4	U132	B	100 (45 4)
3-Methylcholanthrene	56495	Benz[ <i>h</i> ]aceanthrylene	1*	4	U157	X	1# (0 454)
Methylene bromide	74953	Methane, dibromo-	1*	4	U068	C	1000 (454)
Methylene chloride	75092	Methane, dichloro-	1*	2,4	U080	C	1000 (454)
Methylene oxide	50000	Formaldehyde	1000	1,4	U122	C	1000# (454)
Methyl ethyl ketone	78933	2-Butanone	1*	4	U159	D	5000 (2270)
Methyl ethyl ketone peroxide	1338234	2-Butanone peroxide	1*	4	U160	A	10 (4 54)
Methyl hydrazine	60344	Hydrazine, methyl-	1*	4	P068	A	10 (4 54)
Methyl iodide	74884	Methane, iodo-	1*	4	U138	X	1# (0 454)
Methyl isobutyl ketone	108101	4-Methyl-2-pentanone	1*	4	U161	D	5000 (2270)
Methyl isocyanate	624839	Isocyanic acid, methyl ester	1*	4	P064	X	1# (0 454)
2-Methylacetonitrile	75865	Acetone cyanohydrin Propargitrine, 2-hydroxy-2-methyl-	10	1,4	P063	A	10 (4 54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code <sup>1</sup>	RCRA Waste Number	Categor- y	Pounds(Kg)
Methylmercaptan	74931	Methanethiol Thiomethanol	100	1.4	U153	B	100 (45.4)
Methyl methacrylate	80626	2-Propenoic acid, 2-methyl-, methyl ester	5000	1.4	U162	C	1000 (454)
N-Methyl-N'-nitro-N-nitrosoguanidine	70257	Guanidine, N-nitroso-N-methyl-N'-nitro-	1*	4	U163	X	1# (0.454)
Methyl parathion	298000	O,O-Dimethyl O-p-nitrophenyl phosphorothioate	100	1.4	P071	B	100 (45.4)
4-Methyl-2-pentanone	108101	Methyl isobutyl ketone	1*	4	U161	D	5000 (2270)
Methylthiourea	56042	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thio-	1*	4	U164	X	1# (0.454)
Mevinphos	2786347		1	1		A	10 (4.54)
Mexacarbale	315184		1000	1		C	1000 (454)
Mitomycin C	50077	Azirino(2',3',3,4)pyrrolo(1,2-a)indole-4,7-dione,6-amino-8-[(aminocarbonyloxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-, 5-methyl-	1*	4	U010	X	1# (0.454)
Monoethylamine	75047		1000	1		B	100 (45.4)
Monomethylamine	74895		1000	1		B	100 (45.4)
Naled	300765		10	1		A	10 (4.54)
5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-(3-amino-2,3,6-indeoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-tetrahydroxy-, 1-methoxy-	20830813	Daunomycin	1*	4	U059	X	1# (0.454)
Naphthalene	91203		5000	1,2,4	U165	B	100 (45.4)
Naphthalene, 2-chloro-	91587	beta-Chloronaphthalene	1*	2.4	U047	D	5000 (2270)
1,4-Naphthalenedione	130154	2-Chloronaphthalene	1*	4	U166	D	5000 (2270)
2,7-Naphthalenedisulfonic acid,3,3'-[(3,3'-dimethyl-1,1'-biphenyl)-4,4'-diyl]-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt	72571	1,4-Naphthoquinone	1*	4	U236	X	1# (0.454)
Naphthol	1338245	Trypan blue	100	1		B	100 (45.4)
1,4-Naphthoquinone	130154		1*	4	U166	D	5000 (2270)
1-Naphthylamine	134327	1,4-Naphthalenedione	1*	4	U167	X	1# (0.454)
2-Naphthylamine	91598	alpha-Naphthylamine	1*	4	U168	X	1# (0.454)
alpha-Naphthylamine	134327	beta-Naphthylamine	1*	4	U167	X	1# (0.454)
beta-Naphthylamine	91598	1-Naphthylamine	1*	4	U167	X	1# (0.454)
2-Naphthylamine, N,N-bis(2-chloroethyl)-	494031	2-Naphthylamine	1*	4	U168	X	1# (0.454)
alpha-Naphthylthiourea	86884	Chlornaphazme	1*	4	U026	X	1# (0.454)
Nickel 11	7440020	Thourea, 1-naphthalenyl-	1*	4	P072	B	100 (45.4)
NICKEL AND COMPOUNDS			1*	2		X	1# (0.454)
Nickel ammonium sulfate	15699180		5000	1		D	5000# (2270)
Nickel carbonyl	13463393	Nickel tetracarbonyl	1*	4	P073	X	1# (0.454)
Nickel chloride	7718549		5000	1		D	5000# (2270)
	37211055						**

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Finn. RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds/qt
Nickel cyanide	557197	Nickel(II) cyanide	1*	4	P074	X	1# (0.454)
Nickel(II) cyanide	557197	Nickel cyanide	1*	4	P074	X	1# (0.454)
Nickel hydroxide	12054467		1000	1		C	1000# (454)
Nickel nitrate	14216752		5000	1		D	5000# (2270)
Nickel sulfate	7786814		5000	1		D	5000# (2270)
Nickel tetracarbonyl	13463393	Nickel carbonyl	1*	4	P073	X	1# (0.454)
Nicotine and salts	54115	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)- and salts	1*	4	P075	B	100 (45.4)
Nitric acid	7697372		1000	1		C	1000 (454)
Nitric oxide	10102439	Nitrogen(II) oxide	1*	4	P076	A	10 (4.54)
p-Nitroaniline	100016	Benzenamine, 4-nitro-	1*	4	P077	D	5000 (2270)
Nitrobenzene	98953	Benzene, nitro-	1000	1,2,4	U169	C	1000 (45.4)
Nitrogen dioxide	10102440	Nitrogen(IV) oxide	1000	1,4	P078	A	10 (4.54)
	10544726						
Nitrogen(II) oxide	10102439	Nitric oxide	1*	4	P076	A	10 (4.54)
Nitrogen(IV) oxide	10102440	Nitrogen dioxide	1000	1,4	P078	A	10 (4.54)
	10544726						
Nitroglycerine	55630	1,2,3-Propanetriol trinitrate-	1*	4	P181	A	10 (4.54)
Nitrophenol (mixed)	25154556		1000	1		B	100 (45.4)
m-	554847						
o-	88755	2-Nitrophenol					
p-	100027	4-Nitrophenol					
p-Nitrophenol	100027	Phenol, 4-nitro-	1000	1,2,4	U170	B	100 (45.4)
2-Nitrophenol	88755	Phenol, 4-nitro-	1000	1,2		B	100 (45.4)
4-Nitrophenol	100027	Phenol, 4-nitro-	1000	1,2,4	U170	B	100 (45.4)
		Phenol, 4-nitro-					
NITROPHENOLS			1*	2			**
2-Nitropropane	79469	Propane, 2-nitro-	1*	4	U171	X	1# (0.454)
NITROSAMINES			1*	2			**
N-Nitrosod-n-butylamine	924163	1-Butanamine, N-butyl-N-nitroso-	1*	4	U172	X	1# (0.454)
N-Nitrosodethanolamine	1116547	Ethanol, 2,2'-(nitrosomino)bis-	1*	4	U173	X	1# (0.454)
N-Nitrosodethylamine	55185	Ethanamine, N-ethyl-N-nitroso-	1*	4	U174	X	1# (0.454)
N-Nitrosodimethylamine	62759	Dimethylnitrosamine	1*	2,4	P082	X	1# (0.454)
N-Nitrosodiphenylamine	86306		1*	2		B	100 (45.4)
N-Nitrosod-n-propylamine	621647	Di-n-propylnitrosamine	1*	2,4	U111	X	1# (0.454)
N-Nitroso-N-ethylurea	759739	Carbamide, N-ethyl-N-nitroso-	1*	4	U176	X	1# (0.454)
N-Nitroso-N-methylurea	684935	Carbamide, N-methyl-N-nitroso-	1*	4	U177	X	1# (0.454)
N-Nitroso-N-methylurethane	615532	Carbamic acid, methylnitroso-ethyl ester	1*	4	U178	X	1# (0.454)
N-Nitrosomethylvinylamine	4549400	Ethanamine, N-methyl-N-nitroso-	1*	4	P084	X	1# (0.454)
N-Nitrosopiperidine	100754	Pyridine, hexahydro-N-nitroso-	1*	4	U179	X	1# (0.454)
N-Nitrosopyrrolidine	930552	Pyrrole, tetrahydro-N-nitroso-	1*	4	U180	X	1# (0.454)
Nitrotoluene	1321126		1000	1		C	1000 (454)
m-	99081						
o-	88722						
p-	99990						
5-Nitro-o-toluidine	99558	Benzenamine, 2-methyl-5-nitro-	1*	4	U181	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite	115297	Endosulfan	1	1,2,4	P050	X	1 (0.454)
Octamethylphosphoramide	152169	Diphosphoramide, octamethyl	1	4	P085	B	100 (45.4)
Osmium oxide	20818120	Osmium tetroxide	1*	4	P087	C	1000 (454)
Osmium tetroxide	20818120	Osmium oxide	1*	4	P087	C	1000 (454)
7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145733	Endothal	1*	4	P088	C	1000 (454)
1,2-Oxathiolane, 2,2-dioxide	1120714	1,3-Propane sulfone	1*	4	U193	X	1# (0.454)
2H-1,3,2-Oxazaphosphorine 2-[bis(2-chloroethyl)amino] tetrahydro-2-oxide	50180	Cyclophosphamide	1*	4	U058	X	1# (0.454)
Oxirane	75218	Ethyleneoxide	1*	4	U115	X	1# (0.454)
Oxirane, 2-(chloromethyl)-	106898	1-Chloro-2,3-epoxypropane, Epichlorohydrin	1000	1,4	U041	C	1000# (454)
Paraldehyde	30525894		1000	1		C	1000 (454)
Paraldehyde	123637	1,3,5-Trioxane, 2,4,6-trimethyl	1*	4	U182	C	1000 (454)
Parathion	56382	Phosphorothioic acid, O,O-dethyl O-(p-nitrophenyl) ester	1	1,4	P089	X	1# (0.454)
Pentachlorobenzene	508935	Benzene, pentachloro-	1*	4	U183	A	10 (4.54)
Pentachloroethane	76017	Ethane, pentachloro-	1*	4	U184	X	1# (0.454)
Pentachloronitrobenzene	82688	Benzene, pentachloronitro-	1*	4	U185	X	1# (0.454)
Pentachlorophenol	87865	Phenol, pentachloro-	10	1,2,4	U242	A	10# (4.54)
1,3-Pentadiene	504609	1-Methylbutadiene	1*	4	U186	B	100 (45.4)
Phenacetin	62442	Acetamide, N-(4-ethoxyphenyl)-	1*	4	U187	X	1# (0.454)
Phenanthrene	85018		1*	2		D	5000 (2270)
Phenol	108952	Benzene, hydroxy-	1000	1,2,4	U188	C	1000 (454)
Phenol, 2-chloro-	95578	2-Chlorophenol	1*	2,4	U048	B	100 (45.4)
Phenol, 4-chloro-3-methyl-	59507	4-Chloro-m-cresol	1*	2,4	U039	D	5000 (2270)
Phenol, 2-cyclohexyl-4,6-dinitro-	131895	4,6-Dinitro-o-cyclohexylphenol	1*	4	P034	B	100 (45.4)
Phenol, 2,4-dichloro-	120832	2,4-Dichlorophenol	1*	2,4	U081	B	100 (45.4)
Phenol, 2,6-dichloro-	87650	2,6-Dichlorophenol	1*	4	U082	B	100 (45.4)
Phenol, 2,4-dimethyl-	105679	2,4-Dimethylphenol	1*	2,4	U101	B	100 (45.4)
Phenol, 2,4-dinitro-	51285	2,4-Dinitrophenol	1000	1,2,4	P048	A	10 (4.54)
Phenol, 2,4-dinitro-6-(1-methylpropyl)-	88857	Dinoseb	1*	4	P020	C	1000 (454)
Phenol, 2,4-dinitro-6-methyl-, and salts	534521	4,6-Dinitro-o-cresol and salts	1*	2,4	P047	A	10 (4.54)
Phenol, 4-nitro-	100027	p-Nitrophenol	1000	1,2,4	U170	B	100 (45.4)
Phenol, pentachloro-	87865	Pentachlorophenol	10	1,2,4	U242	A	10# (4.54)
Phenol, 2,3,4,6-tetrachloro-	58902	2,3,4,6-Tetrachlorophenol	1*	4	U212	A	10 (4.54)
Phenol, 2,4,5-trichloro-	95954	2,4,5-Trichlorophenol	10	1,4	U230	A	10# (4.54)
Phenol, 2,4,6-trichloro-	86062	2,4,6-Trichlorophenol	10	1,2,4	U231	A	10# (4.54)
Phenol, 2,4,6-trinitro-ammonium salt	131748	Ammonium picrate	1*	4	P009	A	10 (4.54)
Phenyl chlorarsine	696286	Dichlorophenylarsine	1*	4	P038	X	1# (0.454)
1,10-(1,2-Phenylene)pyrene	193395	Indeno[1,2,3-cd]pyrene	1*	2,4	U137	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RO	Code	RCRA Waste Number	Category	Pounds(Kg)
Phenylmercuric acetate	62384	Mercury, (acetato-O)phenyl-	1*	4	P092	B	100 (45.4)
Phenylthiourea	103855	Thiourea, phenyl-	1*	4	P033	B	100 (45.4)
Phorate	298022	Phosphorodithioic acid, O,O-diethyl S-(ethylthio) methyl ester	1*	4	P094	A	10 (4.54)
Phosgene	75445	Carbonyl chloride	5000	1,4	P095	A	10 (4.54)
Phosphine	7803512	Hydrogen phosphide	1*	4	P096	B	100 (45.4)
Phosphoric acid	7864382		5000	1		D	5000 (2270)
Phosphonic acid, diethyl p-nitrophenyl ester	311455	Diethyl p-nitrophenyl phosphate	1*	4	P041	B	100 (45.4)
Phosphoric acid, lead salt	7446277	Lead phosphate	1*	4	U145	X	1# (0.454)
Phosphorodithioic acid, O,O-diethyl S-methyl ester	3298582	O,O-Diethyl S-methyl dithiophosphate	1*	4	U087	D	5000 (2270)
Phosphorodithioic acid, O,O-diethyl S-(ethylthio) methyl ester	298022	Phorate	1*	4	P094	A	10 (4.54)
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester	60515	Dimethoate	1*	4	P044	A	10 (4.54)
Phosphorothioic acid, bis(1-methylethyl) ester	55914	Disobopropyl fluorophosphate	1*	4	P043	B	100 (45.4)
Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester	56382	Parathion	1	1,4	P089	X	1# (0.454)
Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297972	O,O-Diethyl O-pyrazinyl phosphorothioate	1*	4	P040	B	100 (45.4)
Phosphorothioic acid, O,O-dimethyl O-(p-[dimethylamino]-sulfonyl)phenyl ester	52857	Famphur	1*	4	P097	C	1000 (454)
Phosphorus	7723140		1	1		X	1 (0.454)
Phosphorus trichloride	10025873		5000	1		C	1000 (454)
Phosphorus pentasulfide	1314803	Phosphorus sulfide	100	1,4	U189	B	100 (45.4)
Phosphorus sulfide	1314803	Sulfur phosphide	100	1,4	U189	B	100 (45.4)
Phosphorus pentasulfide	1314803	Phosphorus pentasulfide	100	1,4	U189	B	100 (45.4)
Phosphorus sulfide	1314803	Sulfur phosphide	100	1,4	U189	B	100 (45.4)
Phosphorus trichloride	7719122		5000	1		C	1000 (454)
PHTHALATE ESTERS			1*	2			**
Phthalic anhydride	85449	1,2-Benzenedicarboxylic acid anhydride	1*	4	U190	D	5000 (2270)
Pycoline	109068	Pyridine, 2-methyl-	1*	4	U191	D	5000 (2270)
Pumbane, tetraethyl-	78002	Tetraethyl lead	100	1,4	P110	A	10# (4.54)
POLYCHLORINATED BIPHENYLS (PCBs)	1036363	Aroclor	10	1,2		A	10# (4.54)
	12674112	Aroclor 1016					
	11104282	Aroclor 1221					
	11141165	Aroclor 1232					
	53469219	Aroclor 1242					
	12672296	Aroclor 1248					
	11097891	Aroclor 1254					
	11096625	Aroclor 1260					
POLYNUCLEAR AROMATIC HYDROCARBONS			1*	2			**
Potassium arsenate	7784410		1000	1		C	1000# (454)
Potassium arsenite	10124502		1000	1		C	1000# (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Potassium bichromate.....	7778509		1000	1		C	1000# (454)
Potassium chromate.....	7789006		1000	1		C	1000# (454)
Potassium cyanide.....	151508		10	1,4	P098	A	10 (4.54)
Potassium hydroxide.....	1310583		1000	1		C	1000 (454)
Potassium permanganate.....	7722647		100	1		B	100 (45.4)
Potassium silver cyanide.....	506616		1*	4	P099	X	1 (0.454)
Pronamide.....	23950585	3,5-Dichloro-N-(1,1-dimethyl-2-propenyl)benzamide.	1*	4	U192	D	5000 (2270)
1-Propanal, 2,3-epoxy.....	785344	Glycidylaldehyde.....	1*	4	U128	X	1# (0.454)
Propanal, 2-methyl-2-(methylthio)-O-[(methylamino)carbonyl]oxime.....	116063	Aldicarb.....	1*	4	P070	X <sub>2</sub>	1 (0.454)
1-Propanamine.....	107108	n-Propylamine.....	1*	4	U194	D	5000 (2270)
1-Propanamine, N-propyl.....	142847	Dipropylamine.....	1*	4	U110	D	5000 (2270)
Propane, 1,2-dibromo-3-chloro.....	96128	1,2-Dibromo-3-chloropropane.....	1*	4	U066	X	1# (0.454)
Propane, 2-nitro.....	79469	2-Nitropropane.....	1*	4	U171	X	1# (0.454)
Propane, 2,2'-oxybis(2-chloro.....	108601	Bis(2-chloroisopropyl) ether.....	1*	2,4	U027	C	1000 (454)
1,3-Propane sulfone.....	1120714	1,2-Oxatholane, 2,2-dioxide.....	1*	4	U193	X	1# (0.454)
Propanedinitrile.....	109773	Malononitrile.....	1*	4	U149	C	1000 (4.54)
Propanenitrile.....	107120	Ethyl cyanide.....	1*	4	P101	A	10 (4.54)
Propanenitrile, 3-chloro.....	542767	3-Chloropropanitrile.....	1*	4	P027	C	1000 (45.4)
Propanenitrile, 2-hydroxy-2-methyl.....	75865	Acetone cyanhydrin.....	10	1,4	P069	A	10 (4.54)
1,2,3-Propanetriol, Innitrate.....	55630	2-Methylactonitrile.....	1*	4	P081	A	10 (4.54)
1-Propanol, 2,3-dibromophosphate (3:1).....	126727	Tns(2,3-dibromopropyl) phosphate.....	1*	4	U235	X	1# (0.454)
1-Propanol, 2-methyl.....	78831	Isobutyl alcohol.....	1*	4	U140	D	5000 (2270)
2-Propanone.....	67641	Acetone.....	1*	4	U002	D	5000 (2270)
2-Propanone, 1-bromo.....	598312	Bromoacetone.....	1*	4	P017	C	1000 (45.4)
Propargite.....	2312358		10	1		A	10 (4.54)
Propargyl alcohol.....	107197	2-Propyn-1-ol.....	1*	4	P102	C	1000 (45.4)
2-Propenal.....	107028	Acrolein.....	1	1,2,4	P003	X	1 (0.454)
2-Propanamide.....	79061	Acrylamide.....	1*	4	U007	D	5000 (2270)
Propene, 1,3-dichloro.....	542756	1,3-Dichloropropene.....	5000	1,2,4	U064	B	100# (45.4)
1-Propene, 1,1,2,3,3,3-hexachloro.....	1888717	Hexachloropropene.....	1*	4	U243	C	1000 (45.4)
2-Propanenitrile.....	107131	Acrylonitrile.....	100	1,2,4	U009	B	100# (45.4)
2-Propanenitrile, 2-methyl.....	126987	Methacrylonitrile.....	1*	4	U152	C	1000 (45.4)
2-Propanoic acid.....	79107	Acrylic acid.....	1*	4	U008	D	5000 (2270)
2-Propanoic acid, ethyl ester.....	140885	Ethyl acrylate.....	1*	4	U113	C	1000 (45.4)
2-Propanoic acid, 2-methyl, ethyl ester.....	97632	Ethyl methacrylate.....	1*	4	U118	C	1000 (45.4)
2-Propanoic acid, 2-methyl, methyl ester.....	80626	Methyl methacrylate.....	5000	1,4	U162	C	1000 (45.4)
2-Propan-1-ol.....	107166	Allyl alcohol.....	100	1,4	P005	B	100 (45.4)
Propionic acid.....	79094		5000	1		D	5000 (2270)
Propionic acid, 2-(2,4,5-trichlorophenoxy).....	93721	Silvex.....	100	1,4	U233	B	100 (45.4)
Propionic anhydride.....	121626	2,4,5-TP acid.....	5000	1		D	5000 (2270)
n-Propylamine.....	107108	1-Propanamine.....	1*	4	U194	D	5000 (2270)
Propylene dichloride.....	78875	1,2-Dichloropropane.....	5000	1,2,4	U083	C	1000 (45.4)
Propylene oxide.....	75569		5000	1		B	100 (45.4)
1,2-Propylenimine.....	75558	2-Methylaziridine.....	1*	4	P067	X	1# (0.454)
2-Propyn-1-ol.....	107197	Propargyl alcohol.....	1*	4	P102	C	1000 (45.4)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Pyrene	129000		1*	2		D	5000 (2270)
Pyrethrans	121299 121211 8003347		1000	1		X	1 (0.454)
4-Pyridinamine	504245	4-Aminopyridine	1*	4	P008	C	1000 (454)
Pyridine	110861		1*	4	U196	C	1000 (454)
Pyridine, 2-[(2-methylaminoethyl)-2-thenylamino]-	91805	Methapyriene	1*	4	U155	D	5000 (2270)
Pyridine, hexahydro-N-nitroso-	100754	N-Nitrosopiperidine	1*	4	U179	X	1# (0.454)
Pyridine, 2-methyl-	109068	2-Picoline	1*	4	U191	D	5000 (2270)
Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts	54115	Nicotine and salts	1*	4	P075	B	100 (45.4)
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thio-	56042	Methylthouracil	1*	4	U164	X	1# (0.454)
Pyrophosphoric acid, tetraethyl ester	107493	Tetraethyl pyrophosphate	100	1,4	P111	A	10 (4.54)
Pyrore, tetrahydro-N-nitroso-	930552	N-Nitrosopyrrolidine	1*	4	U180	X	1 (0.454)
Quinoline	91225		1000	1		D	5000 (2270)
RADIONUCLIDES			1*	3		X	1# (0.454)
Reserpine	50555	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyloxy)-methyl ester]	1*	4	U200	D	5000 (2270)
Resorcinol	108463	1,3-Benzenediol	1000	1,4	U201	D	5000 (2270)
Saccharin and salts	81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide, and salts	1*	4	U202	X	1# (0.454)
Safrole	94597	Benzene, 1,2-methylenedioxy-4-allyl-	1*	4	U203	X	1# (0.454)
Selenous acid	7783008		1*	4	U204	A	10 (4.54)
Selenium **	7782492		1*	2		B	100 (45.4)
SELENIUM AND COMPOUNDS			1*	2			**
Selenium dioxide	7446084	Selenium oxide	1000	1,4	P04	A	10 (4.54)
Selenium disulfide	7488564	Sulfur selenide	1*	4	15	X	1# (0.454)
Selenium oxide	7446084	Selenium dioxide	1000	1,4		A	10 (4.54)
Selenourea	630104	Carbamidoselenonic acid	1*	4	P103	C	1000 (454)
L-Serine, diazoacetate (ester)	115026	Azaserine	1*	4	U015	X	1# (0.454)
Silver **	7440224		1*	2		C	1000 (454)
SILVER AND COMPOUNDS			1*	2			**
Silver cyanide	506649		1*	4	P104	X	1 (0.454)
Silver nitrate	7761888		1	1		X	1 (0.454)
Silver	93721	Propionic acid, 2-(2,4,5-trichlorophenoxy)-2,4,5-TP acid	100	1,4	U233	B	100 (45.4)
Sodium	7440235		1000	1		A	10 (4.54)
Sodium arsenate	7631892		1000	1		C	1000# (454)
Sodium arsenite	7784465		1000	1		C	1000# (454)
Sodium azide	26628228		1*	4	P105	C	1000 (454)
Sodium bichromate	10588019		1000	1		C	1000# (454)
Sodium bifluoride	1333831		5000	1		B	100 (45.4)
Sodium bisulfite	7631905		5000	1		D	5000 (2270)
Sodium chromate	7775113		1000	1		C	1000# (454)
Sodium cyanide	143339		10	1,4	P106	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(lb)g
Sodium dodecylbenzene sulfonate	25155303		1000	1		C	1000 (454)
Sodium fluoride	7681494		5000	1		C	1000 (454)
Sodium hydrosulfide	16721805		5000	1		D	5000 (2270)
Sodium hydroxide	1310732		1000	1		C	1000 (454)
Sodium hypochlorite	7681529		100	1		B	100 (45.4)
	10022705						
Sodium methylate	124414		1000	1		C	1000 (454)
Sodium nitrite	7632000		100	1		B	100 (45.4)
Sodium phosphate, dibasic	7558794		5000	1		D	5000 (2270)
	10039324						
	10140655						
Sodium phosphate, inbasic	7601549		5000	1		D	5000 (2270)
	7785844						
	10101890						
	10361894						
	7758294						
	10124568						
Sodium selenite	10102188		1000	1		B	100 (45.4)
	7782823						
4,4'-Stilbenediol, alpha, alpha'-diethyl-	56531	Diethylstilbestrol	1*	4	U089	X	1# (0.454)
Streptozotocin	18883664	O-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	1*	4	U206	X	1# (0.454)
Strontium chromate	7789082		1000	1		C	1000# (454)
Strontium sulfide	1314961		1*	4	P107	B	100 (45.4)
Strychnidin-10-one, and salts	57249	Strychnine and salts	10	1,4	P108	A	10 (4.54)
Strychnidin-10-one, 2,3-dimethoxy-	357573	Brucine	1*	4	P018	B	100 (4.54)
Strychnine and salts	57249	Strychnidin-10-one, and salts	10	1,4	P108	A	10 (4.54)
Styrene	100425		1000	1		C	1000 (454)
Sulfur hydride	7783064	Hydrogen sulfide Hydrogensulfuric acid	100	1,4	U135	B	100 (45.4)
Sulfur monochloride	12771083		1000	1		C	1000 (454)
Sulfur phosphide	1314803	Phosphorus pentasulfide Phosphorus sulfide	100	1,4	U189	B	100 (45.4)
Sulfur selenide	7488564	Selenium disulfide	1*	4	U205	X	1# (0.454)
Sulfuric acid	7664939		1000	1		C	1000 (454)
	8014957						
Sulfuric acid, dimethyl ester	77781	Dimethyl sulfate	1*	4	U103	X	1# (0.454)
Sulfuric acid, thallium(I) salt	7446186	Thallium(I) sulfate	1000	1,4	P115	B	100 (45.4)
	10031591						
2,4,5-T	93765	2,4,5-T acid 2,4,5-Trichlorophenoxyacetic acid	100	1,4	U232	C	1000 (454)
2,4,5-T acid	93765	2,4,5-T 2,4,5-Trichlorophenoxyacetic acid	100	1,4	U232	C	1000 (454)
2,4,5-T amines	2008460		100	1		D	5000 (2270)
	6369966						
	6369977						
	1319728						
	3813147						
2,4,5-T esters	93798		100	1		C	1000 (454)
	2545597						
	61792072						
	1928478						
	25168154						
2,4,5-T salts	17560991		100	1		C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
TDE	72548	DDD 4,4'-DDD Dichlorodiphenyl dichloroethane	1	1,2,4	U060	X	1# (0.454)
1,2,4,5-Tetrachlorobenzene	95943	Benzene, 1,2,4,5-tetrachloro-	1*	4	U207	D	5000 (2270)
2,3,7,8-Tetrachlorodibenzo-p-dioxin(TCDD)	1746016		1*	2		X	1# (0.454)
1,1,1,2-Tetrachloroethane	630206	Ethane, 1,1,1,2-tetrachloro-	1*	4	U208	X	1# (0.454)
1,1,2,2-Tetrachloroethane	79345	Ethane, 1,1,2,2-tetrachloro-	1*	2,4	U209	X	1# (0.454)
Tetrachloroethylene	127184	Ethene, 1,1,2,2-tetrachloro-	1*	2,4	U210	X	1# (0.454)
2,3,4,6-Tetrachlorophenol	58902	Phenol, 2,3,4,6-tetrachloro-	1*	4	U212	A	10 (4.54)
Tetraethylthiopyrophosphate	3689245	Dithiopyrophosphoric acid,tetraethyl ester	1*	4	P109	B	100 (45.4)
Tetraethyl lead	78002	Plumbane, tetraethyl-	100	1,4	P110	A	10# (4.54)
Tetraethyl pyrophosphate	107493	Pyrophosphoric acid,tetraethyl ester	100	1,4	P111	A	10 (4.54)
Tetrahydrofuran	109999	Furan, tetrahydro-	1*	4	U213	C	1000 (454)
Tetrahydroethane	509148	Methane, tetrahydro-	1*	4	P112	A	10 (4.54)
Tetraphosphoric acid, hexaethyl ester	757584	Hexaethyl tetraphosphate	1*	4	P062	B	100 (45.4)
Thallic oxide	1314325	Thallium(III) oxide	1*	4	P113	B	100 (45.4)
Thallium ??	7440280		1*	2		C	1000 (454)
THALLIUM AND COMPOUNDS.			1*	2			**
Thallium(I) acetate	563688	Acetic acid, thallium(I) salt	1*	4	U214	B	100 (45.4)
Thallium(I) carbonate	6533739	Carbonic acid, dithallium(I) salt	1*	4	U215	B	100 (45.4)
Thallium(I) chloride	7791120		1*	4	U216	B	100 (45.4)
Thallium(I) nitrate	10102451		1*	4	U217	B	100 (45.4)
Thallium(III) oxide	1314325	Thallic oxide	1*	4	P113	B	100 (45.4)
Thallium(I) selenide	12039520		1*	4	P114	C	1000 (454)
Thallium(I) sulfate	7446186	Sulfuric acid, thallium(I) salt	1000	1,4	P115	B	100 (45.4)
Thioacetamide	82555	Ethanethioamide	1*	4	U218	X	1# (0.454)
Thioanis	39196184	3,3-Dimethyl-1-(methylthio)-2-butanone O-[(methylamino) carbonyl] oxime	1*	4	P045	B	100 (45.4)
Thioimidocarbonic diamide	541537	2,4-Dithiourea	1*	4	P049	B	100 (45.4)
Thiomethanol	74931	Methanethiol	100	1,4	U153	B	100 (45.4)
Thioether	108985	Methylmercaptan	1*	4	P014	B	100 (45.4)
Thioethercarbazide	79196	Benzeneethiol	1*	4	P116	B	100 (45.4)
Thiourea	62566	Hydrazinecarbothioamide	1*	4	U219	X	1# (0.454)
Thiourea, 1,2-dichlorophenyl-	5344821	Carbamide, thio-1-(o-chlorophenyl)-	1*	4	P028	B	100 (45.4)
Thiourea, 1-naphthyl-	86884	Chlorophenylthiourea	1*	4	P072	B	100 (45.4)
Thiourea, phenyl-	103855	alpha-Naphthylthiourea	1*	4	P093	B	100 (45.4)
Thiram	137268	N-Phenylthiourea	1*	4	U244	A	10 (4.54)
		Bis (dimethylthiocarbonyl) disulfide	1*	4			
Toluene	108883	Benzene, methyl-	1000	1,2,4	U220	C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Toluenediamine.....	95807 25376458 496720 823405	Diaminotoluene.....	1*	4	U221	X	1# (0.454)
Toluene diisocyanate.....	584849	Benzene, 2,4-diisocyanatomethyl.....	1*	4	U223	B	100 (45.4)
o-Toluidine.....	91087 26471825						
o-Toluidine.....	95534	2-Amino-1-methyl benzene.....	1*	4	U328	X	1# (0.454)
p-Toluidine.....	106490	4-Amino-1-methyl benzene.....	1*	4	U353	X	1# (0.454)
o-Toluidine hydrochloride.....	636215	Benzeneamine, 2-methyl-hydrochloride.....	1*	4	U222	X	1# (0.454)
Toxaphene.....	8001352	Camphene, octachloro.....	1	1,2,4	P123	X	1# (0.454)
2,4,5-TP acid.....	93721	Propionic acid, 2-(2,4,5-trichlorophenoxy)-Silvex.....	100	1,4	U233	B	100 (45.4)
2,4,5-TP acid esters.....	32534955		100	1		B	100 (45.4)
1H-1,2,4-Triazol-3-amine.....	61825	Amtriole.....	1*	4	U011	X	1# (0.454)
Tnchloron.....	52688		1000	1		B	100 (45.4)
1,2,4-Tnchlorobenzene.....	120821		1*	2		B	100 (45.4)
1,1,1-Tnchloroethane.....	71556	Methyl chloroform.....	1*	2,4	U226	C	1000 (454)
1,1,2-Tnchloroethane.....	79005	Ethane, 1,1,2-trichloro.....	1*	2,4	U227	X	1# (0.454)
Tnchloroethene.....	79016	Tnchloroethylene.....	1000	1,2,4	U228	C	1000# (454)
Tnchloroethylene.....	79016	Tnchloroethane.....	1000	1,2,4	U228	C	1000# (454)
Tnchloromethanesulfonyl chloride.....	594423	Methanesulfonyl chloride, tnchloro.....	1*	4	P118	B	100 (45.4)
Tnchloromonofluoromethane.....	75694	Methane, tnchlorofluoro.....	1*	4	U121	D	5000 (2270)
Tnchlorophenol.....	25167822		10	1		A	10# (4.54)
2,3,4-Tnchlorophenol.....	15950660						
2,3,5-Tnchlorophenol.....	933788						
2,3,6-Tnchlorophenol.....	933755						
2,4,5-Tnchlorophenol.....	95954	Phenol, 2,4,5-trichloro.....					
2,4,6-Tnchlorophenol.....	88062	Phenol, 2,4,6-trichloro.....					
3,4,5-Tnchlorophenol.....	609198						
2,4,5-Tnchlorophenol.....	95954	Phenol, 2,4,5-trichloro.....	10	1,4	U230	A	10# (4.54)
2,4,6-Tnchlorophenol.....	88062	Phenol, 2,4,6-trichloro.....	10	1,2,4	U231	A	10# (4.54)
2,4,5-Tnchlorophenoxyacetic acid.....	93785	2,4,5-T.....	100	1,4	U232	C	1000 (454)
Tnethanolamine dodecylbenzenesulfonate.....	27323417		1000	1		C	1000 (454)
Tnethylamine.....	121448		5000	1		D	5000 (2270)
Tnethylamine.....	75503		1000	1		B	100 (45.4)
sym-Tnntrobenzene.....	99354	Benzene, 1,3,5-trinitro.....	1*	4	U234	A	10 (4.54)
1,3,5-Tnroazane, 2,4,6-trimethyl.....	123637	Paraldehyde.....	1*	4	U182	C	1000 (454)
Tris(2,3-dibromopropyl) phosphate.....	126727	1-Propanol, 2,3-dibromophosphate (3:1).....	1*	4	U235	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Trypan blue	72571	2,7-Naphthalenedisulfonic acid 3,3'-(3,3'-dimethyl-1,1'-biphenyl)-4,4'-diyl-bis(azo)bis(5-amino-4-hydroxy)-tetrasodium salt.	1*	4	U236	X	1# (0.454)
Unlisted Hazardous Wastes Characteristic of EP Toxicity.	N.A.						
Characteristic of Toxicity.			1*	4	D001	B	100 (45.4)
Characteristic of Corrosivity.			1*	4	D002	B	100 (45.4)
Characteristic of Reactivity.			1*	4	D003	B	100 (45.4)
Characteristic of EP Toxicity.			1*	4			
Arsenic			1*	4	D004	X	1# (0.454)
Barium			1*	4	D005	C	1000 (454)
Cadmium			1*	4	D006	X	1# (0.454)
Chromium			1*	4	D007	X	1# (0.454)
Lead			1*	4	D008	X	1# # (0.454)
Mercury			1*	4	D009	X	1 (0.454)
Selenium D010	N.A.		1*	4	D010	A	10 (4.54)
Silver			1*	4	D011	X	1 (0.454)
Endrin			1	1,4	D012	X	1 (0.454)
Lindane			1	1,4	D013	X	1# (0.454)
Methoxychlor			1	1,4	D014	X	1 (0.454)
Toxaphene			1	1,4	D015	X	1# (0.454)
2,4-D			100	1,4	D016	B	100 (45.4)
2,4,5-TP			100	1,4	D017	B	100 (45.4)
Uracil, 5-[bis(2-chloroethyl)amino]-	66751	Uracil mustard	1*	4	U237	X	1# (0.454)
Uracil mustard	66751	Uracil, 5-[bis(2-chloroethyl)amino]-	1*	4	U237	X	1# (0.454)
Uranyl acetate ****	541093		5000	1		B	100 (45.4)
Uranyl nitrate ****	10102064		5000	1		B	100 (45.4)
Vanadic acid, ammonium salt.	7803556	Ammonium vanadate	1*	4	P119	C	1000 (454)
Vanadium(V) oxide	1314621	Vanadium pentoxide	1000	1,4	P120	C	1000 (454)
Vanadium pentoxide	1314621	Vanadium(V) oxide	1000	1,4	P120	C	1000 (454)
Vanadyl sulfate	27774136		1000	1		C	1000 (454)
Vinyl acetate	109054		1000	1		D	5000 (2270)
Vinyl chloride	75014	Ethene, chloro-	1*	2,3,4	U043	X	1# (0.454)
Vinylidene chloride	75354	1,1-Dichloroethylene	5000	1,2,4	U078	D	5000# (2270)
Warfarin	81612	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts	1*	4	P001	B	100 (45.4)
Xylene (mixed)	1330207	Benzene, dimethyl	1000	1,4	U239	C	1000 (454)
m-	108383	m-					
o-	95476	o-					
p-	106423	p-					
Xylenol	1300716		1000	1		C	1000 (454)
Yohimban-16-carboxylic acid, 11,17-dimethoxy-16-[(3,4,5-trimethoxybenzoyloxy)-methyl]ester	50555	Reserpine	1*	4	U200	D	5000 (2270)
Zinc	7440666		1*	2		C	1000 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds (Kg)
ZINC AND COMPOUNDS			1*	2			** 1
Zinc acetate	557348		1000	1		C	1000 (454)
Zinc ammonium chloride	52628258		5000	1		C	1000 (454)
Zinc borate	1332076		1000	1		C	1000 (454)
Zinc bromide	7699458		5000	1		C	1000 (454)
Zinc carbonate	3486359		1000	1		C	1000 (454)
Zinc chloride	7646857		5000	1		C	1000 (454)
Zinc cyanide	557211		10	1.4	P121	A	10 (454)
Zinc fluoride	7783495		1000	1		C	1000 (454)
Zinc formate	557415		1000	1		C	1000 (454)
Zinc hydrosulfite	777*864		1000	1		C	1000 (454)
Zinc nitrate	7779886		5000	1		C	1000 (454)
Zinc phenolsulfonate	127822		5000	1		D	5000 (2270)
Zinc phosphide	1314847		1000	1.4	P122	B	100 (454)
Zinc silicofluoride	16871719		5000	1		D	5000 (2270)
Zinc sulfate	7733020		1000	1		C	1000 (454)
Zirconium nitrate	13746899		5000	1		D	5000 (2270)
Zirconium potassium fluoride	16923958		5000	1		C	1000 (454)
Zirconium sulfate	14644612		5000	1		D	5000 (2270)
Zirconium tetrachloride	10026116		5000	1		D	5000 (2270)
F001			1*	4	F001	X	1# (0.454)
The following spent halogenated solvents used in degreasing and sludges from the recovery of these solvents in degreasing operations:							
(a) Tetrachloroethylene	127184					X	1# (0.454)
(b) Trichloroethylene	79016					C	1000# (454)
(c) Methylene chloride	75092					C	1000 (454)
(d) 1,1,1-Trichloroethane	71556					C	1000 (454)
(e) Carbon tetrachloride	58235					D	5000# (2270)
(f) Chlorinated fluorocarbons	(N.A.)					D	5000 (2270)
F002			1*	4	F002	X	1# (0.454)
The following spent halogenated solvents and the still bottoms from the recovery of these solvents:							
(a) Tetrachloroethylene	127184					X	1# (0.454)
(b) Methylene chloride	75092					C	1000 (454)
(c) Trichloroethylene	79016					C	1000# (454)
(d) 1,1,1-Trichloroethane	71556					C	1000 (454)
(a) Chlorobenzene	108907					B	100 (454)
(f) 1,1,2-Trichloro-1,2,2-trifluoroethane	78131					D	5000 (2270)
(g) o-Dichlorobenzene	106467					B	100 (454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CAS#-N	Regulatory Synonyms	Statutory			Final RQ	
			RO	Code	RCRA Waste Number	Catego-ry	Pounds(Kg)
(h) Trichlorofluoromethane.	75694					D	5000 (2270)
F003 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F003	B	100 (45.4)
(a) Xylene	1330207					C	1000 (454)
(b) Acetone	67641					D	5000 (2270)
(c) Ethyl acetate	141786					D	5000 (2270)
(d) Ethylbenzene	100414					C	1000 (454)
(e) Ethyl ether	60297					B	100 (45.4)
(f) Methyl isobutyl ketone	108101					D	5000 (2270)
(g) n-Butyl alcohol	71363					D	5000 (2270)
(h) Cyclohexanone	108941					D	5000 (2270)
(i) Methanol	67561					D	5000 (2270)
F004 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F004	C	1000# (454)
(a) Cresols/Cresylic acid							
(b) Nitrobenzene							
F005 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:			1*	4	F005	B	100 (45.4)
(a) Toluene							
(b) Methyl ethyl ketone							
(c) Carbon disulfide							
(d) Isobutanol							
(e) Pyridine							
F006 Wastewater treatment sludges from electroplating operations except from the following processes:			1*	4	F006	X	1# (0.454)
(1) Sulfuric acid anodizing of aluminum.							
(2) Tin plating on carbon steel.							
(3) Zinc plating (segregated basis) on carbon steel.							
(4) Aluminum or zinc-aluminum plating on carbon steel.							

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory		Final RQ		
			RQ	Code	RCRA Waste Number	Category	Pounds/RQ
(5) cleaning/ stripping associated with tin, zinc and aluminum plating on carbon steel and (6) chemical etching and milling of aluminum							

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			HQ	Code	RCRA Waste Number	Category	Pounds (Kg)
F007 Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions)			1*	4	F007	A	10 (4.54)
F008 Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges)			1*	4	F008	A	10 (4.54)
F009 Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions)			1*	4	F009	A	10 (4.54)
F010 Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching bath sludges)			1*	4	F010	A	10 (4.54)
F011 Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning)			1*	4	F011	A	10 (4.54)
F012			1*	4	F012	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RO	Code	RCRA Waste Number	Category	Pounds(Kg)
Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges)							
F019			1*	4	F019	X	1# (0.454)
Wastewater treatment sludges from the chemical conversion coating of aluminum							
F020			1*	4	F020	X	1# (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol)							
F021			1*	4	F021	X	1# (0.454)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives							
F022			1*	4	F022	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.			1*	4	F023	X	1# (0.454)
F023 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)			1*	4	F024	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4.]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Wastes, including but not limited to distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent desiccants(sic), wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in § 261.22.)							
F026			1*	4	F026	X	1# (0.45#)
Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.							
F027			1*	4	F027	X	1# (0.45#)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RO	Code	RCRA Waste Number	Category	Pounds(Kg)
Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)							
F028			1*	4	F028	X	1# (0.454)
Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027							
K001			1*	4	K001	X	1# (0.454)
Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol							
K002			1*	4	K002	X	1# (0.454)
Wastewater treatment sludge from the production of chrome yellow and orange pigments							
K003			1*	4	K003	X	1# (0.454)
Wastewater treatment sludge from the production of molybdate orange pigments							
K004			1*	4	K004	X	1# (0.454)
Wastewater treatment sludge from the production of zinc yellow pigments							
K005			1*	4	K005	X	1# (0.454)
Wastewater treatment sludge from the production of chrome green pigments							
K006			1*	4	K006	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds/kg
Wastewater treatment sludges from the production of chrome oxide green pigments (anhydrous and hydrated)							
K007			1*	4	K007	X	1# (0.454)
Wastewater treatment sludge from the production of iron blue pigments							
K008			1*	4	K008	X	1# (0.454)
Oven residue from the production of chrome oxide green pigments							
K009			1*	4	K009	X	1# (0.454)
Distillation bottoms from the production of acetaldehyde from ethylene							
K010			1*	4	K010	X	1# (0.454)
Distillation side cuts from the production of acetaldehyde from ethylene							
K011			1*	4	K011	X	1# (0.454)
Bottom stream from the wastewater stripper in the production of acrylonitrile							
K013			1*	4	K013	X	1# (0.454)
Bottom stream from the acetonitrile column in the production of acrylonitrile							
K014			1*	4	K014	D	5000 (2270)
Bottoms from the acetonitrile purification column in the production of acrylonitrile							
K015			1*	4	K015	X	1# (0.454)
Still bottoms from the distillation of benzyl chloride							
K016			1*	4	K016	X	1# (0.454)
Heavy ends or distillation residues from the production of carbon tetrachloride							
K017			1*	4	K017	X	1# (0.454)
Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin							
K018			1*	4	K018	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code1	RCRA Waste Number	Category	Pounds(Kg)
Heavy ends from the fractionation column in ethyl chloride production			1*	4	K019	X	1# (0.454)
Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production			1*	4	K020	X	1# (0.454)
Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production			1*	4	K021	X	1# (0.454)
Aqueous spent antimony catalyst waste from fluoromethanes production			1*	4	K022	X	1# (0.454)
Distillation bottom tars from the production of phenol/acetone from cumene			1*	4	K023	D	5000 (2270)
Distillation light ends from the production of phthalic anhydride from naphthalene			1*	4	K024	D	5000 (2270)
Distillation bottoms from the production of phthalic anhydride from naphthalene			1*	4	K025	X	1# (0.454)
Distillation bottoms from the production of nitrobenzene by the nitration of benzene			1*	4	K026	C	1000 (454)
Stripping still tails from the production of methyl ethyl pyridines			1*	4	K027	X	1# (0.454)
Centrifuge and distillation residues from toluene diisocyanate production			1*	4	K028	X	1# (0.454)
Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane			1*	4	K029	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code <sup>†</sup>	RCRA Waste Number	Category	Pounds(Kg)
Waste from the product steam stripper in the production of 1,1,1-trichloroethane							
K030			1*	4	K030	X	1# (0.454)
Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene							
K031			1*	4	K031	X	1# (0.454)
By-product salts generated in the production of MSMA and cacodylic acid							
K032			1*	4	K032	X	1# (0.454)
Wastewater treatment sludge from the production of chlordane							
K033			1*	4	K033	X	1# (0.454)
Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane							
K034			1*	4	K034	X	1# (0.454)
Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane							
K035			1*	4	K025	X	1# (0.454)
Wastewater treatment sludges generated in the production of creosote							
K036			1*	4	K036	X	1 (0.454)
Still bottoms from toluene reclamation distillation in the production of disulfoton							
K037			1*	4	K037	X	1 (0.454)
Wastewater treatment sludges from the production of disulfoton							
K038			1*	4	K038	X	1# (0.454)
Wastewater from the washing and stripping of phosphate production							
K039			1*	4	K039	A	10 (4.54)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RO	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate							
K040.....			1*	4	K040	X	1# (0.454)
Wastewater treatment sludge from the production of phorate							
K041.....			1*	4	K041	X	1# (0.454)
Wastewater treatment sludge from the production of toxaphene							
K042.....			1*	4	K042	X	1# (0.454)
Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T							
K043.....			1*	4	K043	X	1# (0.454)
2,6-Dichlorophenol waste from the production of 2,4-D							
K044.....			1*	4	K044	A	10 (4.54)
Wastewater treatment sludges from the manufacturing and processing of explosives							
K045.....			1*	4	K045	A	10 (4.54)
Spent carbon from the treatment of wastewater containing explosives							
K046.....			1*	4	K046	B	100 (45.4)
Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds							
K047.....			1*	4	K047	A	10 (4.54)
Pink/red water from TNT operations							
K048.....			1*	4	K048	X	1# (0.454)
Dissolved air flotation (DAF) float from the petroleum refining industry							
K049.....			1*	4	K049	X	1# (0.454)
Slop oil emulsion solids from the petroleum refining industry							
K050.....			1*	4	K050	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code <sup>1</sup>	RCHA Waste Number	Catego-ry	Pounds(Kg)
Heat exchanger brine cleaning sludge from the petroleum refining industry			1*	4	K051	X	1# (0.454)
K051 API separator sludge from the petroleum refining industry			1*	4	K052	A	10# (4.54)
K052 Tank bottoms (loaded) from the petroleum refining industry			1*	4	K060	X	1# (0.454)
K060 Ammonia still lime sludge from coking operations			1*	4	K061	X	1# (0.454)
K061 Emission control dust/ sludge from the primary production of steel in electric furnaces			1*	4	K062	X	1# (0.454)
K062 Spent pickle liquor from steel finishing operations			1*	4	K069	X	1# (0.454)
K069 Emission control dust/ sludge from secondary lead smelting			1*	4	K071	X	1 (0.454)
K071 Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used			1*	4	K073	X	1# (0.454)
K073 Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production			1*	4	K083	B	100 (45.4)
K083 Distillation bottoms from aniline extraction			1*	4	K084	X	1# (0.454)
K084			1*	4	K084	X	1# (0.454)

● TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds							
K085			1*	4	K085	X	1# (0.454)
Distillation or fractional column bottoms from the production of chlorobenzenes							
K086			1*	4	K086	X	1# (0.454)
Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, dyes, soaps, and stabilizers containing chromium and lead							
K087			1*	4	K087	B	100 (45.4)
Decanter tank tar sludge from coking operations							
K093			1*	4	K093	D	5000 (2270)
Distillation light ends from the production of phthalic anhydride from ortho-xylene							
K094			1*	4	K094	D	5000 (2270)
Distillation bottoms from the production of phthalic anhydride from ortho-xylene							
K095			1*	4	K095	X	1# (0.454)
Distillation bottoms from the production of 1,1,1-trichloroethane							
K096			1*	4	K096	X	1# (0.454)
Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane							
K097			1*	4	K097	X	1# (0.454)
Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane							
K098			1*	4	K098	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Untreated process wastewater from the production of toxachene K099			1*	4	K099	X	1# (0.454)
Untreated wastewater from the production of 2,4-D K100			1*	4	K100	X	1# (0.454)
Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting (Components of this waste are identical with those of K099). K101			1*	4	K101	X	1# (0.454)
Distillation tar residues from the distillation of aniline-based compounds in the production of valenary pharmaceuticals from arsenic or organo-arsenic compounds K102			1*	4	K102	X	1# (0.454)
Residue from the use of activated carbon for decolorization in the production of valenary pharmaceuticals from arsenic or organo-arsenic compounds K103			1*	4	K103	B	100 (45.4)
Process residues from aniline extraction from the production of aniline K104			1*	4	K104	X	1# (0.454)
Combined wastewater streams generated from nitrobenzene/aniline chlorobenzenes K105			1*	4	K105	X	1# (0.454)
Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes K106			1*	4	K106	X	1 (0.454)
Wastewater treatment sludge from the mercury cell process in chlorine production K111			1*	4	K111	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Product wastewaters from the production of dinitrotoluene via nitration of toluene.							
K112 Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K112	X	1# (0.454)
K113 Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K113	X	1# (0.454)
K114 Vapors from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K114	X	1# (0.454)
K115 Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.			1*	4	K115	X	1# (0.454)
K116 Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.			1*	4	K116	X	1# (0.454)
K117 Wastewater from the reaction vent gas scrubber in the production of ethylene bromide via bromination of ethene.			1*	4	K117	X	1# (0.454)
K118 Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide.			1*	4	K118	X	1# (0.454)
K136			1*	4	K136	X	1# (0.454)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RO	
			RQ	Code†	RCRA Waste Number	Catego-ry	Pounds(Kg)
Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.							• indicates the statutory source as defined by 1, 2, 3, or 4 below

- no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 100 micrometers (0.004 inches)
- the RQ for asbestos is limited to friable forms only
- ## - The Agency may adjust the RQ for methyl isocyanate in a future rulemaking; until then the statutory RQ applies.
- 1 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 311(b)(4)
- 2 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CWA Section 307(a)
- 3 - indicates that the statutory source for designation of this hazardous substance under CERCLA is CAA Section 112
- 4 - indicates that the statutory source for designation of this hazardous substance under CERCLA is RCRA Section 3001
- 1\* - indicates that the 1-pound RQ is a CERCLA statutory RQ
- \*\* - indicates that no RQ is being assigned to the generic or broad class.
- \*\*\* - Iron dextran was designated as a hazardous substance under CERCLA solely because of its listing as a hazardous waste under Section 3001 of RCRA. The Agency recently proposed to delist iron dextran under RCRA (50 FR 46468-46470, November 8, 1985). The Agency has also proposed to delist iron dextran from Table 302.4 of 40 CFR 302.4 and thereby remove its designation as a CERCLA hazardous substance.
- \*\*\*\* - Uranyl acetate and uranyl nitrate currently are being evaluated for their radioactive properties. Their RQs may be further adjusted in a future rulemaking adjusting the RQ of radionuclides.
- # - indicates that the RQ is subject to change when the assessment of potential carcinogenicity and/or chronic toxicity is completed
- § - The Agency may adjust the RQ for radionuclides in a future rulemaking; until then the statutory RQ applies.

APPENDIX A—SEQUENTIAL CAS REGISTRY  
NUMBER LIST OF CERCLA HAZARDOUS SUB-  
STANCES

CASRN	Hazardous Substance
50000	Formaldehyde
	Methylene oxide
50077	Azino(2',3',3,4)pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-(((aminocarbonyloxy)methyl)-1,1a,2,9,8a,8b-hexahydro-8a-methoxy-5-methyl-
	Mitomycin C
50180	Cyclophosphamide
	2H-1,3,2-Oxazaphosphorine,2-(bis(2-chloroethyl)amino)tetrahydro-2-oxide
50293	DDT
	4,4' DDT
	Dichlorodiphenyl trichloroethane
50328	Benzo[e]pyrene
	3,4-Benzopyrene
50555	Reserpine
	Yohimban-16-carboxylic acid,11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyloxy)-methyl ester
51285	2,4-Dinitrophenol
	Phenol, 2,4-dinitro-
51434	1,2-Benzenediol 4-(1-hydroxy-2-(methylamino)ethyl)-
	Epinephrine
51798	Carbamic acid, ethyl ester
	Ethyl carbamate (Urethan)

CASRN	Hazardous Substance
52888	Trichloron
52857	Famphur
	Phosphorothioic acid, O,O-dimethyl-O-[p-((d-methylamino)sulfonyl)phenyl] ester
53703	Dbenz[a,h]anthracene
	1,2,5,6-Dibenzanthracene
	Dibenz[a,h]anthracene
53963	Acetamide, N-9H-fluorene-2-yl-
	2-Acetylaminofluorene
54115	Nicotine and salts
	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts
55185	Ethanamine, N-ethyl-N-nitroso-
	N-Nitrosodethylamine
55630	Nitroglycenne
	1,2,3-Propanetriol, trinitrate-
55914	Diisopropyl fluorophosphate
	Phosphorofluoric acid,bis(1-methylethyl) ester
56042	Methylthiouaci
	4-(1H)-Pyrimethone, 2,3-dihydro-6-methyl-2-thio-
56235	Carbon tetrachloride
	Methane, tetrachloro-
56382	Parathion
	Phosphorothioic acid,O,O-diethyl O-(p-nitrophenyl)ester
56495	Benzo[1]aceanthrylene, 1,2-dihydro-3-methyl-
	3-Methylcholanthrene
56531	Diethylstilbestrol
	4,4'-Stilbenediol, alpha, alpha'-diethyl-
56553	Benzo[a]anthracene
	1,2-Benzanthracene
	Benzo[a]anthracene

ASRN	Hazardous Substance	CASRN	Hazardous Substance
56724	Coumaphos	71363	1-Butanol
57125	Cyanides (soluble cyanide salts), not elsewhere specified	71432	n-Butyl alcohol
57147	1,1-Dimethylhydrazine	71556	Benzene
57249	Hydrazine, 1,1-dimethyl-		Methyl chloroform
	Strychnidin-10-one, and salts	72208	1,1,1-Trichloroethane
	Strychnine and salts		Endrin
57749	Chlordane		1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4,5,8-dimethanonaphthalene
	Chlordane, technical	72435	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-
	4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-		Methoxychlor
57976	1,2-Benzanthracene, 7,12-dimethyl-	72548	DDD
	7,12-Dimethylbenz[ <i>a</i> ]anthracene		4,4' DDD
58899	gamma - BHC		Dichlorodiphenyl dichloroethane
	Hexachlorocyclohexane (gamma isomer)		TDE
	Lindane	72559	DDE
58902	Phenol, 2,3,4,6-tetrachloro-		4,4' DDE
	2,3,4,6-Tetrachlorophenol	72571	2,7-Naphthalenedisulfonic acid,3,3'-[[3,3'-dimethyl-(1,1'-biphenyl)-4,4'-diyl]-bis(azo)]bis(5-amino-4-hydroxy)-tetrasodium salt
59507	4-Chloro-m-cresol		Trypan blue
	p-Chloro-m-cresol	74839	Methane, bromo-
	Phenol, 4-chloro-3-methyl-		Methyl bromide
60004	Ethylenediamine tetraacetic acid (EDTA)	74873	Methane, chloro-
60117	Benzenamine, N,N-dimethyl-4-phenylazo-		Methyl chloride
	Dimethylaminoazobenzene	74884	Methane, iodo-
60297	Ethane, 1,1'-oxybis-		Methyl iodide
	Ethyl ether	74895	Monomethylamine
60344	Hydrazine, methyl-	74908	Hydrocyanic acid
	Methyl hydrazine		Hydrogen cyanide
60515	Dimethoate	74931	Methanethiol
	Phosphorodithioic acid,O,O-dimethyl S-[2(methylamino)-2-oxoethyl] ester		Methylmercaptan
60571	Dieldrin		Thiomethanol
	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4,5,8-dimethanonaphthalene	74953	Methane, dibromo-
61825	Amitrole		Methylene bromide
	1H-1,2,4-Triazol-3-amine	75003	Chloroethane
62384	Mercury, (acetato-O)phenyl-	75014	Ethene, chloro-
	Phenylmercuric acetate		Vinyl chloride
62442	Acetamide, N-(4-ethoxyphenyl)-	75047	Monomethylamine
	Phenacetin	75058	Acetonitrile
62500	Ethyl methanesulfonate		Ethanenitrile
	Methanesulfonic acid, ethyl ester	75070	Acetaldehyde
62533	Aniline		Ethanal
	Benzenamine	75092	Methane, dichloro-
62555	Ethanethioamide		Methylene chloride
	Thioacetamide	75150	Carbon bisulfide
62566	Carbamide, thio-		Carbon disulfide
	Thiourea	75207	Calcium carbide
62737	Dichlorvos	75218	Ethylene oxide
62748	Acetic acid, fluoro-, sodium salt		Oxirane
	Fluoroacetic acid, sodium salt	75252	Bromoform
62759	Dimethylnitrosamine		Methane, tribromo-
	N-Nitrosodimethylamine	75274	Dichlorobromomethane
63252	Carbaryl	75343	1,1-Dichloroethane
64186	Formic acid		Ethane, 1,1-dichloro-
	Methanoic acid		Ethylidene dichloride
64197	Acetic acid	75354	1,1-Dichloroethylene
65850	Benzoic acid		Ethene, 1,1-dichloro-
66751	Uracil, 5-[bis(2-chloroethyl)amino]-		Vinylidene chloride
	Uracil mustard	75385	Acetyl chloride
67561	Methanol		Ethanoyl chloride
	Methyl alcohol	75445	Carbonyl chloride
67641	Acetone		Phosgene
	2-Propanone	75503	Trimethylamine
67663	Chloroform	75558	2-Methylaziridine
	Methane, trichloro-		1,2-Propylenimine
67721	Ethane, 1,1,1,2,2,2-hexachloro-	75569	Propylene oxide
	Hexachloroethane	75605	Cacodylic acid
70257	Guanidine, N-nitroso-N-methyl-N'-nitro-		Hydroxydimethylarsine oxide
	N-Methyl-N'-nitro-N-nitrosoguanidine	75649	tert-Butylamine
70304	Hexachlorophene	75694	Methane, trichlorofluoro-
	2,2'-Methylenebis[3,4,6-trichlorophenol]		Trichloromonofluoromethane

CASRN	Hazardous Substance	CASRN	Hazardous Substance
75710	Dichlorodifluoromethane	85687	Butyl benzyl phthalate
	Methane, dichlorodifluoro-	86308	N-Nitrosodiphenylamine
75865	Acetone cyanohydrin	86500	Guthion
	2-Methylacetonitrile	86737	Fluorene
75976	Propanenitrile, 2-hydroxy-2-methyl-	86884	alpha Naphthylthiourea
	Acetaldehyde, trichloro-		Thiourea, 1-naphthalenyl-
75990	2,2-Dichloropropionic acid	87650	2,6-Dichlorophenol
76017	Ethane, pentachloro-		Phenol, 2,6-dichloro-
	Pentachloroethane	87683	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
76448	Heptachlor		Hexachlorobutadiene
	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-	87865	Pentachlorophenol
	heptachloro-3a,4,7,7a-tetrahydro-		Phenol, pentachloro-
77474	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	88062	Phenol, 2,4,6-trichloro
	Hexachlorocyclopentadiene		2,4,6-Trichlorophenol
77781	Dimethyl sulfate	88722	o-Nitrotoluene
	Sulfuric acid, dimethyl ester	88755	o-Nitrophenol
78002	Plumbane, tetraethyl-		2-Nitrophenol
	Tetraethyl lead	88857	Dinoseb
78591	Isophorone		Phenol, 2,4-dinitro-6-(1-methylpropyl)-
78795	Isoprene	91087	Benzene, 2,4-disocyanatomethyl-
78819	iso-Butylamine		Toluene diisocyanate
78831	Isobutyl alcohol	91203	Naphthalene
	1-Propanol, 2-methyl-	91225	Quinoline
78875	1,2-Dichloropropane	91587	beta-Chloronaphthalene
	Propylene dichloride		2-Chloronaphthalene
78886	2,3-Dichloropropene (isomer)		Naphthalene, 2-chloro-
78933	2-Butanone	91598	2-Naphthylamine
	Methyl ethyl ketone		beta-Naphthylamine
78999	1,1-Dichloropropane	91805	Methapyliene
76005	Ethane, 1,1,2-trichloro-		Pyridine, 2-[(2(dimethylamino)ethyl)-2-thienylamino]-
	1,1,2-Trichloroethane	91941	(1,1'-Biphenyl)-4,4'-diamine,3,3'-dichloro-
79016	Trichloroethene		3,3'-Dichlorobenzidine
	Trichloroethylene	92875	Benzidine
79081	Acrylamide		(1,1'-Biphenyl)-4,4'-diamine
	2-Propenamide	93721	Propionic acid, 2-(2,4,5-trichlorophenoxy)-
79094	Propionic acid		Silvex
79107	Acrylic acid		2,4,5-TP acid
	2-Propenoic acid	93765	2,4,5-T
79196	Hydrazinecarbothioamide		2,4,5-T acid
	Thiosemicarbazide		2,4,5-Trichlorophenoxyacetic acid
79221	Carbonochloridic acid, methyl ester	93798	2,4,5-T esters
	Methyl chlorocarbonate	94111	2,4-D Esters
79312	iso-Butyric acid	94586	Benzene, 1,2-methylenedioxy-4-propyl-
79345	Ethane, 1,1,2,2-tetrachloro-		Dihydrosalrole
	1,1,2,2-Tetrachloroethane	94597	Benzene, 1,2-methylenedioxy-4-allyl-
79447	Carbamoyl chloride, dimethyl-		Salrole
	Dimethylcarbamoyl chloride	94757	2,4-D Acid
79489	2-Nitropropane		2,4-D, salts and esters
	Propane, 2-nitro-		2,4-Dichlorophenoxyacetic acid, salts and esters
80159	alpha, alpha-Dimethylbenzylhydroperoxide	94791	2,4-D Esters
	Hydroperoxide, 1-methyl-1-phenylethyl-	94804	2,4-D Esters
80626	Methyl methacrylate	95476	Benzene, o-dimethyl-
	2-Propenoic acid, 2-methyl-, methyl ester		o-Xylene
81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide, and salts	95487	o-Cresol
	Saccharin and salts		o-Cresylic acid
81812	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts	95501	Benzene, 1,2-dichloro-
	Warfarin		1,2-Dichlorobenzene
82688	Benzene, pentachloronitro-	95534	o-Dichlorobenzene
	Pentachloronitrobenzene		o-Toluidine
83329	Acenaphthene	95578	2-Amino-1-methyl benzene
84682	1,2-Benzenedicarboxylic acid, diethyl ester		2-Chlorophenol
	Diethyl phthalate		o-Chlorophenol
84742	1,2-Benzenedicarboxylic acid, dibutyl ester	95807	Phenol, 2-chloro-
	n-Butyl phthalate		Diaminotoluene
	Dibutyl phthalate		Toluenediamine
	Di-n-butyl phthalate	95943	Benzene, 1,2,4,5-tetrachloro-
85007	Diquat		1,2,4,5-Tetrachlorobenzene
85018	Phenanthrene	95954	Phenol, 2,4,5-trichloro-
85449	1,2-Benzenedicarboxylic acid anhydride		2,4,5-Trichlorophenol
	Phthalic anhydride	96128	1,2-Dibromo-3-chloropropane
			Propane, 1,2-dibromo-3-chloro-

ASRN	Hazardous Substance	CASRN	Hazardous Substance
98457	Ethylalothiourea	1071011	1-Propanamine
97832	2-Imidazolinethione		n-Propylamine
	Ethyl methacrylate	107120	Ethyl cyanide
	2-Propanoic acid, 2-methyl-, ethyl ester		Propionitrile
98011	2-Furancarboxaldehyde	107131	Acrylonitrile
	Furfural		2-Propenenitrile
98077	Benzene, trichloromethyl-	107153	Ethylenediamine
	Benzotrichloride	107188	Allyl alcohol
98099	Benzenesulfonic acid chloride		2-Propen-1-ol
	Benzenesulfonyl chloride	107197	Propargyl alcohol
98028	Benzene, 1-methylallyl-		2-Propyn-1-ol
	Cumene	107200	Acetaldehyde, chloro-
98862	Acetophenone		Chloroacetaldehyde
	Elthanone, 1-phenyl-	107302	Chloromethyl methyl ether
98873	Benzal chloride		Methane, chloromethoxy-
	Benzene, dichloromethyl-	107493	Pyrophosphoric acid, tetraethyl ester
98884	Benzoyl chloride		Tetraethyl pyrophosphate
98953	Benzene, nitro-	107926	Butyric acid
	Nitrobenzene	108054	Vinyl acetate
99081	m-Nitrotoluene	108101	Methyl isobutyl ketone
99354	Benzene, 1,3,5-trimethyl-		4-Methyl-2-pentanone
	sym-Trinitrobenzene	108247	Acetic anhydride
99558	Benzenamine, 2-methyl-5-nitro-	108316	2,5-Furandione
	5-Nitro-o-toluidine		Maleic anhydride
99650	m-Dinitrobenzene	108383	Benzene, m-dimethyl-
99990	p-Nitrotoluene		m-Xylene
100016	Benzenamine, 4-nitro-	108394	m-Cresol
	p-Nitroaniline		m-Cresylic acid
100027	p-Nitrophenol	108463	1,3-Benzenediol
	4-Nitrophenol		Resorcinol
	Phenol, 4-nitro-	108601	Bis(2-chloroisopropyl) ether
100254	p-Dinitrobenzene		Propane, 2,2'-oxybis(2-chloro-
100314	Ethylbenzene	108883	Benzene, methyl-
100425	Styrene		Toluene
100447	Benzene, chloromethyl-	108907	Benzene, chloro-
	Benzyl chloride		Chlorobenzene
100470	Benzonitrile	108941	Cyclohexanone
100754	N-Nitrosopiperidine	109952	Benzene, hydroxy-
	Pyridine, hexahydro-N-nitroso-		Phenol
101144	Benzenamine, 4,4'-methylonebis(2-chloro-	108985	Benzenethiol
	4,4'-Methylenebis(2-chloroaniline)		Thiophenol
101553	Benzene, 1-bromo-4-phenoxy-	109068	2-Picoline
	4-Bromophenyl phenyl ether		Pyridine, 2-methyl-
103855	N-Phenylthiourea	109739	Butylamine
	Thiourea, phenyl-	109773	Malononitrile
105464	sec-Butyl acetate		Propanedinitrile
105679	2,4-Dimethylphenol	109897	Dialkylamine
	Phenol, 2,4-dimethyl-	109999	Furan, tetrahydro-
106423	Benzene, p-dimethyl-		Tetrahydrofuran
	p-Xylene	110009	Furan
106445	p-Cresol		Furfuran
	p-Cresylic acid	110167	Maleic acid
106467	Benzene, 1,4-dichloro-	110178	Fumamic acid
	1,4-Dichlorobenzene	110190	iso-Butyl acetate
	p-Dichlorobenzene	110758	2-Chloroethyl vinyl ether
106478	Benzenamine, 4-chloro-		Ethene, 2-chloroethoxy-
	p-Chloroaniline	110805	Ethylene glycol monoethyl ether
106490	p-Toluidine		2-Ethoxyethanol
	4-Amino-1-methyl benzene	110827	Benzene, hexahydro-
106514	p-Benzoquinone		Cyclohexane
	1,4-Cyclohexadienedione	110861	Pyridine
106898	1-Chloro-2,3-epoxypropane	111444	Bis (2-chloroethyl) ether
	Epichlorohydrin		Dichloroethyl ether
	Oxirane, 2-(chloromethyl)-	111546	Ethane, 1,1'-oxybis(2-chloro-
106934	Ethane, 1,2-dibromo-		1,2-Ethanediybiscarbamodithioic acid
	Ethylene dibromide		Ethylenebis(dithiocarbamic acid)
107028	Acrolain	111911	Bis(2-chloroethoxy) methane
	2-Propenal		Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-
107051	Allyl chloride	115026	Azaserone
107062	1,2-Dichloroethane		L-Serine, diazoacetate (ester)
	Ethane, 1,2-dichloro-	115297	Endosulfan
	Ethylene dichloride		5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro,cyclic sulfite

CASRN	Hazardous Substance
115322	Ketthane
116063	Aldicarb Propanal, 2-methyl-2-(methylthio)-O- [(methylamino)carbonyl]oxime
117806	Dichlone
117817	1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester Bis[2-ethylhexyl]phthalate
117840	1,2-Benzenedicarboxylic acid, di-n-octyl ester Di-n-octyl phthalate
118741	Benzene, hexachloro- Hexachlorobenzene
119904	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy- 3,3'-Dimethoxybenzidine
119937	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl- 3,3'-Dimethylbenzidine
120127	Anthracene
120581	Benzene, 1,2-methyleneedioxy-4-propenyl- Isosafrole
120821	1,2,4-Trichlorobenzene
120832	2,4-Dichlorophenol Phenol, 2,4-dichloro-
121142	Benzene, 1-methyl-2,4-dinitro- 2,4-Dinitrotoluene
121211	Pyrethrins
121299	Pyrethrins
121446	Triethylamine
121755	Malathion
122098	alpha, alpha-Dimethylphenethylamine Ethanamine, 1,1-dimethyl-2-phenyl-
122667	1,2-Diphenylhydrazine H, triazine, 1,2-diphenyl-
123331	1,2-Dihydro-3,6-pyridazinedione Maleic hydrazide
123626	Propionic anhydride
123637	Paraldehyde 1,3,5-Trioxane, 2,4,6-trimethyl-
123739	2-Butenal Crotonaldehyde
123864	Butyl acetate
123911	1,4-Dithylene dioxide 1,4-Dioxane
123922	iso-Amyl acetate
124049	Adipic acid
124403	Dimethylamine Methanamine, N-methyl-
124414	Sodium methylate
124481	Chlorodibromomethane
126727	1-Propanol, 2,3-dibromo-, phosphate (3:1) Tris(2,3-dibromopropyl) phosphate
126987	Methacrylonitrile 2-Propenenitrile, 2-methyl-
127184	Ethene, 1,1,2,2-tetrachloro- Tetrachloroethylene
127822	Zinc phenolsulfonate
129000	Pyrene
130154	1,4-Naphthalenedione 1,4-Naphthoquinone
131113	1,2-Benzenedicarboxylic acid, dimethyl ester Dimethyl phthalate
131748	Ammonium picrate Phenol, 3,4,6-trinitro-, ammonium salt
131895	4,6-Dinitro-o-cyclohexylphenol Phenol, 2-cyclohexyl-4,6-dinitro-
133062	Captan
134327	1-Naphthylamine alpha-Naphthylamine
137268	Bis(dimethylthiocarbamoyl) disulfide Thiram
140885	Ethyl acrylate 2-Propenoic acid, ethyl ester
141786	Acetic acid, ethyl ester Ethyl acetate

CASRN	Hazardous Substance
142289	1,3-Dichloropropane
142712	Cupric acetate
142847	Dipropylamine 1-Propanamine, N-propyl-
143339	Sodium cyanide
143500	Decachlorooctahydro-1,3,4-metheno-2H- cyclobuta(c,d)-pentalen-2-one Kepone
145733	Endothal 7-Orabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
148823	Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-L- Mephalan
151508	Potassium cyanide
151564	Azindone Ethyleneimine
152169	Diphosphoramidate, octamethyl- Octamethylpyrophosphoramidate
156605	1,2-trans-Dichloroethylene Ethene, trans-1,2-dichloro-
189559	1,2,7,8-Dibenzopyrene Dibenz(a,i)pyrene
191242	Benzo(ghi)perylene
193395	Indeno(1,2,3-cd)pyrene 1,10-(1,2-Phenylene)pyrene
205992	Benzo(b)fluoranthene
206440	Benzo(k)fluorene Fluoranthene
207089	Benzo(k)fluoranthene
208968	Acenaphthylene
218019	1,2-Benzophenanthrene Chrysene
225514	Benz(c)acridine 3,4-Benzacridene
297972	O,O-Diethyl O-pyrazinyl phosphorothioate Phosphorothioic acid, O,O-diethyl, O-pyrazinyl ester
298000	Methyl parathion O,O-Dimethyl O-p-nitrophenyl phosphorothioate
298022	Phorate Phosphorodithioic acid, O,O-diethyl S- (ethylthio)methyl ester
298044	O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate Disulfoton
300765	Naled
301042	Acetic acid, lead salt Lead acetate
302012	Diamine Hydrazine
303344	Lasicarpine
305033	Butanoic acid, 4-[[bis(2-chloroethyl)amino] ben- zene- Chlorambucil
309002	Aldrin 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a- hexahydro-1,4:5,8-endo,exo- dimethanonaphthalene
311455	Diethyl-p-nitrophenyl phosphate Phosphonic acid, diethyl, p-nitrophenyl ester
315184	Mexacarbate
319846	alpha - BHC
319857	beta - BHC
319868	delta - BHC
329715	2,5-Dinitrophenol
330541	Duron
333415	Diazinon
353504	Carbon oxyfluoride Carbonyl fluoride
37573	Bromo Strychnidin-10-one, 2,3-dimethoxy-

CASRN	Hazardous Substance
460195	Cyanogen
465738	Hexachloroheptahydro-endo,endo-dimethanonaphthalene 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo,endo-dimethanonaphthalene
492809	Auramine Benzeneamine, 4,4'-carbonimidoylbis (N,N-dimethyl-
494031	Chloronaphazine 2-Naphthylamine, N,N-bis(2-chloroethyl)-
496720	Diaminotoluene Toluenediamine
504245	4-Aminopyridine 4-Pyridinamine
504609	1,1'-ethylbutadiene 1,3-Pentadiene
506616	Potassium silver cyanide
506649	Silver cyanide
506683	Bromine cyanide Cyanogen bromide
506774	Chlorine cyanide Cyanogen chloride
506876	Ammonium carbonate
506967	Acetyl bromide
509148	Methane, tetranitro- Tetranitromethane
510156	Benzeneacetic acid, 4-chloro-alpha-(4-chloro-phenyl)-alpha-hydroxy-ethyl ester Ethyl 4,4'-dichlorobenzilate
513495	sec-Butylamine
528290	o-Dinitrobenzene
534521	4,6-Dinitro-o-cresol and salts Phenol,2,4-dinitro-6-methyl-, and salts
540738	1,2-Dimethylhydrazine Hydrazine, 1,2-dimethyl- tert-Butyl acetate
541093	Uranyl acetate
541537	2,4-Dithiourea Thiomidocarbonic diamide
541731	Benzene, 1,3-dichloro- 1,3-Dichlorobenzene m-Dichlorobenzene
542621	Barium cyanide
542756	Propene, 1,3-dichloro- 1,3-Dichloropropene
542767	3-Chloropropionitrile Propanenitrile, 3-chloro- Bis(chloromethyl) ether
542881	Methane, oxybis(chloro- Cadmium acetate
543908	Cobaltous formate
544183	Copper cyanide
544923	m-Nitrophenol
554847	Nickel cyanide
557197	Nickel(II) cyanide
557211	Zinc cyanide
557346	Zinc acetate
557415	Zinc formate
563122	Ethion
563588	Acetic acid, thallium(I) salt Thallium(I) acetate
573568	2,6-Dinitrophenol
584849	Benzene, 2,4-disocyanatomethyl- Toluene diisocyanate
591082	Acetamide, N-(aminothioxomethyl)- 1-Acetyl-2-thiourea
592018	Calcium cyanide
592041	Mercuric cyanide
592258	Mercuric thiocyanate
592870	Lead thiocyanate
594423	Methanesulfanyl chloride, trichloro- Trichloromethanesulfanyl chloride

CASRN	Hazardous Substance
598312	Bromoacetone 2-Propanone, 1-bromo-
606202	Benzene, 1-methyl-2,6-dinitro- 2,6-Dinitrotoluene
608935	Benzene, pentachloro- Pentachlorobenzene
609198	3,4,5-Trichlorophenol
610399	3,4-Dinitrotoluene
615532	Carbamic acid, methylnitroso, ethyl ester N-Nitroso-N-methylurethane
621647	Di-n-propylnitrosamine N-Nitrosodi-n-propylamine
624839	Isocyanic acid, methyl ester Methyl isocyanate
625161	tert-Amyl acetate
626380	sec-Amyl acetate
628637	Amyl acetate
628864	Fulminic acid, mercury(II)salt Mercury fulminate
630104	Carbamimidoseleonic acid Selenourea
630206	Ethane, 1,1,1,2-tetrachloro- 1,1,1,2-Tetrachloroethane
631618	Ammonium acetate
638215	Benzeneamine, 2-methyl-, hydrochloride o-Toluidine hydrochloride
640197	Acetamide, 2-fluoro- Fluoroacetamide
684935	Carbamide, N-methyl-N-nitroso- N-Nitroso-N-methylurea
692422	Arsine, diethyl- Diethylarsine
696285	Dichlorophenylarsine Phenyl dichloroarsine
757584	Hexaethyl tetraphosphale Tetraphosphoric acid, hexaethyl ester
759739	Carbamide, N-ethyl-N-nitroso- N-Nitroso-N-ethylurea
764410	2-Butene, 1,4-dichloro- 1,4-Dichloro-2-butene
765344	Glycidylaldehyde 1-Propanal, 2,3-epoxy-
815827	Cupnc tartrate
823405	Diaminotoluene Toluenediamine
924163	1-Butanamine, N-butyl-N-nitroso- N-Nitrosodi-n-butylamine
930552	N-Nitrosopyrrolidine Pyrrole, tetrahydro-N-nitroso-
933755	2,3,6-Trichlorophenol
933788	2,3,5-Trichlorophenol
959988	alpha - Endosulfan
1024573	Heptachlor epoxide
1031078	Endosulfan sulfate
1066304	Chromic acetate
1066337	Ammonium bicarbonate
1072351	Lead stearate
1111780	Ammonium carbamate
1116547	Ethanol, 2,2'-(nitrosamino)bis- N-Nitrosodithanolamine
1120714	1,2-Oxathiolane, 2,2-dioxide 1,3-Propane sulfone
1185575	Ferric ammonium citrate
1194656	Dichlobenil
1300716	Xylenol
1303282	Arsenic(V) oxide Arsenic pentoxide

CASRN	Hazardous Substance	CASRN	Hazardous Substance
1303328	Arsenic disulfide	3486359	Zinc carbonate
1303339	Arsenic trisulfide	3689245	Dithiopyrophosphoric acid,tetraethyl ester
1305644	Antimony trioxide		Tetraethyl(dithiopyrophosphate
1310583	Potassium hydroxide	3813147	2,4,5-T amines
1310732	Sodium hydroxide	4170303	2-Butanol
1314325	Thallic oxide		Crotonaldehyde
	Thallium(III) oxide	4549400	Ethenamine, N-methyl-N-nitroso-
1314621	Vanadium pentoxide		N-Nitrosomethylvinylamine
	Vanadium(V) oxide	5344821	1-(o-Chlorophenyl)thiourea
1314803	Phosphorus pentasulfide		Thiourea, (2-chlorophenyl)-
	Phosphorus sulfide	5893663	Cupric oxalate
	Sulfur phosphide	5972736	Ammonium oxalate
1314847	Zinc phosphide	6009707	Ammonium oxalate
1314870	Lead sulfide	6369966	2,4,5-T amines
1314961	Strontium sulfide	6369977	2,4,5-T amines
1319728	2,4,5-T amines	6533739	Carbonic acid, dithallium (I) salt
1319773	Cresol(s)		Thallium(I) carbonate
	Cresylic acid	7005723	4-Chlorophenyl phenyl ether
1320189	2,4-D Esters	7421934	Endrin aldehyde
1321128	Nitrotoluene	7428480	Lead stearate
1327522	Arsenic acid	7439921	Lead
1327533	Arsenic(III) oxide	7439976	Mercury
	Arsenic trioxide	7440020	Nickel
1330207	Benzene, dimethyl-	7440224	Silver
	Xylene	7440235	Sodium
1332076	Zinc borate	7440280	Thallium
1332214	Asbestos	7440360	Antimony
1333831	Sodium bifluoride	7440382	Arsenic
1335328	Lead subacetate	7440417	Beryllium
1336216	Ammonium hydroxide		Beryllium dust
1336363	POLYCHLORINATED BIPHENYLS (PCBs)	7440439	Cadmium
	Aroclors	7440473	Chromium
1338234	2-Butanone peroxide	7440508	Copper
	Methyl ethyl ketone peroxide	7440666	Zinc
1338245	Naphtheneic acid	7446084	Selenium dioxide
1341497	Ammonium bifluoride		Selenium oxide
1464535	2,2'-Bioxane	7446142	Lead sulfate
	1,2:3,4-Diepoxybutane	7446186	Sulfonic acid, thallium(I) salt
1563662	Carboluran		Thallium(I) sulfate
1615801	N,N'-Diethylhydrazine	7446277	Lead phosphate
	Hydrazine, 1,2-diethyl-		Phosphonic acid, lead salt
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin(TCDD)	7447394	Cupric chloride
1762954	Ammonium thiocyanate	7488564	Selenium disulfide
1863634	Ammonium benzoate		Sulfur selenide
1888717	Hexachloropropene	7558794	Sodium phosphate, dibasic
	1-Propene, 1,1,2,3,3,3-hexachloro-	7601549	Sodium phosphate, tribasic
1918009	Dicamba	7631892	Sodium arsenate
1928387	2,4-D Esters	7631905	Sodium bisulfite
1928478	2,4,5-T esters	7632000	Sodium nitrite
1928616	2,4-D Esters	7645252	Lead arsenate
1929733	2,4-D Esters	7646857	Zinc chloride
2008460	2,4,5-T amines	7647010	Hydrochloric acid
2032657	Mercaptodimethur	7647189	Antimony pentachloride
2303164	Dallate	7664382	Phosphonic acid
	S-(2,3-Dichloroallyl) diisopropylthiocarbamate	7664393	Hydrofluoric acid
2312358	Propargite		Hydrogen fluoride
2545597	2,4,5-T esters		
2763964	5-(Amnomethyl)-3-isoxazolol		
	3(2H)-isoxazalone, 5-(amnomethyl)-		
2764729	Dquat		
2921882	Chlorpyrifos		
2944674	Fernc ammonium oxalate		
2971382	2,4-D Esters		
3012655	Ammonium citrate, dibasic		
3164292	Ammonium tartrate		
3165933	Benzanamine, 4-chloro-2-methyl-,hydrochloride		
	4-Chloro-o-toluidine, hydrochloride		
3251238	Cupric nitrate		
3288582	O,O-Diethyl S-methyl dithiophosphate		
	Phosphorodithioic acid, O,O-dimethyl S-methyls-		
	ter		

CASRN	Hazardous Substance	CASRN	Hazardous Substance
7684417	Ammonia	8001589	Creosote
7684939	Sulfuric acid	8003198	Dichloropropane - Dichloropropene (mixture)
7681494	Sodium fluoride	8003347	Pyrethrins
7681529	Sodium hypochlorite	8014957	Sulfuric acid
7697372	Nitric acid	9004664	Femic dextran
7699458	Zinc bromide		Iron dextran
7705080	Ferric chloride	10022705	Sodium hypochlorite
7718549	Nickel chloride	10025873	Phosphorus oxychloride
7719122	Phosphorus trichloride	10025919	Antimony trichloride
7720787	Ferrous sulfate	10026116	Zirconium tetrachloride
7722647	Potassium permanganate	10028225	Ferric sulfate
7723140	Phosphorus	10031591	Sulfuric acid, thallium(I) salt
7733020	Zinc sulfate		Thallium(I) sulfate
7738945	Chromic acid	10039324	Sodium phosphate, dibasic
7758294	Sodium phosphate, inbasic	10043013	Aluminum sulfate
7758943	Ferrous chloride	10045893	Ferrous ammonium sulfate
7758954	Lead chloride	10045940	Mercuric nitrate
7758987	Cupric sulfate	10049055	Chromous chloride
7761888	Silver nitrate	10099748	Lead nitrate
7773060	Ammonium sulfamate	10101538	Chromic sulfate
7775113	Sodium chromate	10101630	Lead iodide
7778394	Arsenic acid	10101890	Sodium phosphate, inbasic
7778441	Calcium arsenate	10102064	Uranyl nitrate
7778509	Potassium bichromate	10102188	Sodium selenite
7778543	Calcium hypochlorite	10102439	Nitric oxide
7779864	Zinc hydrosulfite		Nitrogen(II) oxide
7779886	Zinc nitrate	10102440	Nitrogen dioxide
7782414	Fluorine		Nitrogen(IV) oxide
7782492	Selenium	10102451	Thallium(I) nitrate
7782505	Chlorine	10102484	Lead arsenate
7782630	Ferrous sulfate	10108642	Cadmium chloride
7782823	Sodium selenite	10124502	Potassium arsenite
7782867	Mercurous nitrate	10124568	Sodium phosphate, inbasic
7783008	Selenious acid	10140655	Sodium phosphate, dibasic
7783064	Hydrogen sulfide	10192300	Ammonium bisulfite
	Hydro-sulfuric acid	10196040	Ammonium sulfate
	Sulfur hydride	10361894	Sodium phosphate, inbasic
7783188	Ammonium thiosulfate	10380297	Cupric sulfate ammoniated
7783359	Mercuric sulfate	10415755	Mercurous nitrate
7783462	Lead fluoride	10421484	Femic nitrate
7783495	Zinc fluoride	10544726	Nitrogen dioxide
7783508	Femic fluoride		Nitrogen(IV) oxide
7783564	Antimony trifluoride	10588019	Sodium bichromate
7784341	Arsenic trichloride	11096825	Aroclor 1260
7784409	Lead arsenate		Polychlorinated Biphenyls (PCBs)
7784410	Potassium arsenate	11097691	Aroclor 1254
7784465	Sodium arsenite		Polychlorinated Biphenyls (PCBs)
7785844	Sodium phosphate, inbasic	11104282	Aroclor 1221
7786347	Mevinphos		Polychlorinated Biphenyls (PCBs)
7786814	Nickel sulfate	11115745	Chromic acid
7787475	Beryllium chloride	11141165	Aroclor 1232
7787497	Beryllium fluoride		Polychlorinated Biphenyls (PCBs)
7767555	Beryllium nitrate	12002038	Cupric acetoarsenite
7788989	Ammonium chromate	12039520	Thallium(I) selenide
7789006	Potassium chromate	12054487	Nickel hydroxide
7789062	Strontium chromate	12125018	Ammonium fluoride
7789095	Ammonium bichromate	12125029	Ammonium chloride
7789426	Cadmium bromide	12135761	Ammonium sulfide
7789437	Cobaltous bromide	12672296	Aroclor 1248
7789619	Antimony tribromide		Polychlorinated Biphenyls (PCBs)
7790945	Chlorosulfonic acid	12674112	Aroclor 1016
7791120	Thallium(I) chloride		Polychlorinated Biphenyls (PCBs)
7803512	Hydrogen phosphide	12771093	Sulfur monochloride
	Phosphine	13403393	Nickel carbonyl
7803556	Ammonium vanadate		Nickel tetracarbonyl
	Vanadic acid, ammonium salt	13560991	2,4,5-T salts
8001352	Camphene, octachloro-	13597994	Beryllium nitrate
	Toraphene	13746899	Zirconium nitrate
		13765190	Calcium chromate
			Chromic acid, calcium salt

CASRN	Hazardous Substance
13814985	Lead fluoborate
13828830	Ammonium fluoborate
13952846	sec-Butylamine
14017415	Cobaltous sulfamate
14218752	Nickel nitrate
14258492	Ammonium oxalate
14307358	Lithium chlorate
14307438	Ammonium tartrate
14639975	Zinc ammonium chloride
14639986	Zinc ammonium chloride
14644612	Zirconium sulfate
15699180	Nickel ammonium sulfate
15739807	Lead sulfate
15950660	2,3,4-Trichlorophenol
16721805	Sodium hydrosulfide
16752775	Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester
	Methylthiomyl
16871719	Zinc silicofluoride
16919190	Ammonium silicofluoride
16923958	Zirconium potassium fluoride
18863664	D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-
	Streptozotocin
20816120	Osmium oxide
	Osmium tetroxide
20830813	Daunomycin
	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[3-amino-2,3,6-Indeoxy-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-inhydroxy-1-methoxy-
20859738	Aluminum phosphide
23950585	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide
	Pronamide
25154545	Dinitrobenzene (mixed)
25154556	Nitrophenol (mixed)
25155300	Sodium dodecylbenzene sulfonate
25167822	Trichlorophenol
25168154	2,4,5-T esters
25168267	2,4-D Esters
25321146	Dinitrotoluene
25321226	Dichlorobenzene (mixed)
25376458	Diaminotoluene
	Toluenediamine
25550587	Dinitrophenol
26264062	Calcium dodecylbenzene sulfonate
26471625	Benzene, 2,4-diisocyanatomethyl-
	Toluene diisocyanate
26828228	Sodium azide
26838197	Dichloropropane
26952238	Dichloropropane(s)
27176870	Dodecylbenzenesulfonic acid
27323417	Triethanolamine dodecylbenzene sulfonate
27774136	Vanadyl sulfate
28300745	Antimony potassium tartrate
30525894	Paraformaldehyde
32534955	2,4,5-TP acid esters
33213659	beta - Endosulfan
36478769	Uranyl nitrate
37211055	Nickel chloride
39196184	3,3-Dimethyl-1-(methylthio)-2-butanone,O-[(methylamino)carbonyl] oxime
	Thiofanox
42504461	Isopropanolamine dodecylbenzene sulfonate
52628258	Zinc ammonium chloride
52652592	Lead stearate
52740166	Calcium arsenite
53487111	2,4-D Esters
53469219	Aroclor 1242
	Polychlorinated Biphenyls (PCBs)

CASRN	Hazardous Substance
55488874	Ferric ammonium oxalate
56189094	Lead stearate
61792072	2,4,5-T esters

[50 FR 13474, Apr. 4, 1985, as amended at 51 FR 34541, Sept. 29, 1986; 52 FR 45767, Dec. 22, 1986]

#### § 302.5 Determination of reportable quantities.

(a) *Listed hazardous substances.* The quantity listed in the column "Final RQ" for each substance in Table 302.4 is the reportable quantity for that substance.

(b) *Unlisted hazardous substances.* Unlisted hazardous substances designated by 40 CFR 302.4(b) have the reportable quantity of 100 pounds, except for those unlisted hazardous wastes which exhibit extraction procedure (EP) toxicity identified in 40 CFR 261.24. Unlisted hazardous wastes which exhibit EP toxicity have the reportable quantities listed in Table 302.4 for the contaminant on which the characteristic of EP toxicity is based. The reportable quantity applies to the waste itself, not merely to the toxic contaminant. If an unlisted hazardous waste exhibits EP toxicity on the basis of more than one contaminant, the reportable quantity for that waste shall be the lowest of the reportable quantities listed in Table 302.4 for those contaminants. If an unlisted hazardous waste exhibits the characteristic of EP toxicity and one or more of the other characteristics referenced in 40 CFR 302.4(b), the reportable quantity for that waste shall be the lowest of the applicable reportable quantities.

[51 FR 34547, Sept. 29, 1987]

#### § 302.6 Notification requirements.

(a) Any person in charge of a vessel or an offshore or an onshore facility shall, as soon as he has knowledge of any release (other than a federally permitted release or application of a pesticide) of a hazardous substance from such vessel or facility in a quantity equal to or exceeding the reportable quantity determined by this part in any 24-hour period, immediately

notify the National Response Center ((800) 424-8802; in Washington, D.C. (202) 426-2675).

(b) Releases of mixtures and solutions are subject to these notification requirements only where a component hazardous substance of the mixture or solution is released in a quantity equal to or greater than its reportable quantity.

(c) Notification of the release of an RQ of solid particles of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, or zinc is not required if the mean diameter of the particles released is larger than 100 micrometers (0.004 inches).

(Approved by the Office of Management and Budget under control number 2115-0137)

**§ 302.7 Penalties.**

(a) Any person—

(1) In charge of a vessel from which a hazardous substance is released, other than a federally permitted release, into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone,

(2) In charge of a vessel from which a hazardous substance is released, other than a federally permitted release, which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976), and who is otherwise subject to the jurisdiction of the United States at the time of the release, or

(3) In charge of a facility from which a hazardous substance is released, other than a federally permitted release, in a quantity equal to or greater than that reportable quantity determined under this part who fails to notify immediately the National Response Center as soon as he has knowledge of such release shall be subject to all of the sanctions, including criminal penalties, set forth in section 103 of the Act with respect to such failure to notify.

(b) Notification received pursuant to this section or information obtained by the exploitation of such notifica-

tion shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement.

(c) This section shall not apply to the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act or to the handling and storage of such a pesticide product by an agricultural producer.

**PART 303—CITIZEN AWARDS FOR INFORMATION ON CRIMINAL VIOLATIONS UNDER SUPERFUND**

**Subpart A—General**

Sec.

303.10 Purpose.

303.11 Definitions.

303.12 Criminal violations covered by this award authority.

**Subpart B—Eligibility to File a Claim for Award and Determination of Eligibility and Amount of Award**

303.20 Eligibility to file a claim for award.

303.21 Determination of eligibility and amount of award.

**Subpart C—Criteria for Payment of Award**

303.30 Criteria for payment of award.

303.31 Assurance of claimant confidentiality.

303.32 Pre-payment offers.

303.33 Filing a claim.

**AUTHORITY:** 42 U.S.C. 9609(d), Executive Order No. 12580.

**SOURCE:** 53 FR 16088, May 5, 1988, unless otherwise noted.

**Subpart A—General**

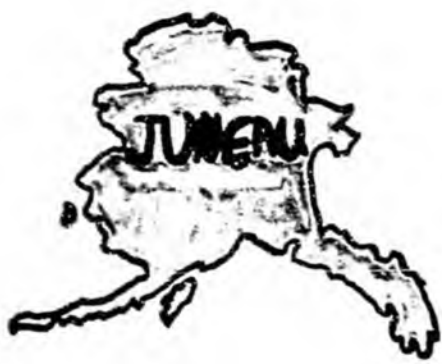
**§ 303.10 Purpose.**

This regulation implements the "citizen award" authority granted by Congress to the President in the 1986 Amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), section 109(d). As authorized in the Superfund Amendments and Reauthorization Act of 1986 (SARA) section 109(c) and Executive Order No. 12580 (issued by the President on January 23, 1987), the Environmental Protec-

# TOURS OF THE LAST FRONTIER Enin

Forget me not  
●

Forget me not  
●



"Reportable quantity" means that quantity, as set forth in this part, the release of which requires notification pursuant to this part;

"United States" include the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction; and

"Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

§ 302.4 Designation of hazardous substances.

(a) *Listed hazardous substances.* The elements and compounds and hazardous wastes appearing in Table 302.4 are designated as hazardous substances under section 102(a) of the Act.

(b) *Unlisted hazardous substances.* A solid waste, as defined in 40 CFR 261.2, which is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b), is a hazardous substance

under section 101(14) of the Act if it exhibits any of the characteristics identified in 40 CFR 261.20 through 261.24.

NOTE: The numbers under the column headed "CASRN" are the Chemical Abstracts Service Registry Numbers for each hazardous substance. Other names by which each hazardous substance is identified in other statutes and their implementing regulations are provided in the "Regulatory Synonyms" column. The "Statutory RQ" column lists the RQs for hazardous substances established by section 102 of CERCLA. The "Statutory Code" column indicates the statutory source for designating each substance as a CERCLA hazardous substance: "1" indicates that the statutory source is section 311(b)(4) of the Clean Water Act, "2" indicates that the source is section 307(a) of the Clean Water Act, "3" indicates that the source is section 112 of the Clean Air Act, and "4" indicates that the source is RCRA section 3001. The "RCRA Waste Number" column provides the waste identification numbers assigned to various substances by RCRA regulations. The column headed "Category" lists the code letters "X," "A," "B," "C," and "D," which are associated with reportable quantities of 1, 10, 100, 1000, and 5000 pounds, respectively. The "Pounds (kg)" column provides the reportable quantity for each hazardous substance in pounds and kilograms.

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES

(See footnotes at end of Table 302.4)

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Acenaphthene.....	83329		1*	2		B	100 (45.4)
Acenaphthylene.....	208968		1*	2		D	5000 (2270)
Acetaldehyde.....	75070	Ethanal.....	1000	1,4	U001	C	1000 (454)
Acetaldehyde, chloro.....	107200	Chloroacetaldehyde.....	1*	4	P023	C	1000 (454)
Acetaldehyde, trichloro.....	75876	Chloral.....	1*	4	U034	X	1#(0.454)
Acetamide, N-(aminothiosomethyl)-.....	591082	1-Acetyl-2-thiourea.....	1*	4	P002	C	1000 (454)
Acetamide, N-(4-ethoxyphenyl)-.....	62442	Phenacetin.....	1*	4	U187	X	1# (0.454)
Acetamide, N-9H-fluoren-2-yl-.....	53963	2-Acetylaminofluorene.....	1*	4	U005	X	1# (0.454)
Acetamide, 2-fluoro.....	640197	Fluoroacetamide.....	1*	4	P057	B	100(45.4)
Acetic acid.....	64197		1000	1		D	5000 (2270)
Acetic acid, ethyl ester.....	141785	Ethyl acetate.....	1*	4	U112	D	5000 (2270)
Acetic acid, fluoro, sodium salt.....	62748	Fluoroacetic acid, sodium salt.....	1*	4	P058	A	10 (4.54)
Acetic acid, lead salt.....	301042	Lead acetate.....	5000	1,4	U144	D	5000# (2270)
Acetic acid, thallium(I) salt.....	563688	Thallium(I) acetate.....	1*	4	U214	B	100 (45.4)
Acetic anhydride.....	108247		1000	1		D	5000 (2270)
Acetimidic acid, N-(methylcarbamoyl)oxylthio-, methyl ester.....	16752775	Methomyl.....	1*	4	P066	B	100 (45.4)
Acetone.....	67641	2-Propanone.....	1*	4	U002	D	5000 (2270)

TABLE 302.4—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES—  
Continued

[See footnotes at end of Table 302.4]

Hazardous Substance	CASRN	Regulatory Synonyms	Statutory			Final RQ	
			RQ	Code	RCRA Waste Number	Category	Pounds(Kg)
Acetone cyanohydrin	75865	2-Methylactonitrile Propanenitrile, 2-hydroxy-2-methyl-	10	1,4	P069	A	10 (4.54)
Acetonitrile	75058	Ethanenitrile	1*	4	U003	D	5000 (2270)
3-(alpha-Acetyloxybenzyl)-4-hydroxycoumarin and salts	81812	Warfarin	1*	4	F001	B	100 (45.4)
Acetophenone	98862	Ethanone, 1-phenyl-	1*	4	U004	D	5000 (2270)
2-Acetylaminofluorene	53963	Acetamide, N-9H-fluoren-2-yl-	1*	4	U005	X	1# (0.454)
Acetyl bromide	506967		5000	1		D	5000 (2270)
Acetyl chloride	75365	Ethanoyl chloride	5000	1,4	U006	D	5000 (2270)
1-Acetyl-2-thiourea	591082	Acetamide, N-(aminothioxomethyl)-	1*	4	P002	C	1000 (454)
Acridin	107028	2-Propenal	1	1,2,4	P003	X	1 (0.454)
Acrylamide	79061	2-Propenamde	1*	4	U007	D	5000 (2270)
Acrylic acid	79107	2-Propenoic acid	1*	4	U008	D	5000 (2270)
Acrylonitrile	107131	2-Propenenitrile	101	1,2,4	U009	B	100# (45.4)
Adipic acid	124049		5000	1		D	5000 (2270)
Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-L-	146823	Melphalan	1*	4	U150	X	1# (0.454)
Aldicarb	116063	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	1*	4	P070	X	1 (0.454)
Aldrin	309002	1,2,3,4,10-10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, exo-dimethanonaphthalene	1	1,2,4	P004	X	1# (0.454)
Allyl alcohol	107186	2-Propen-1-ol	100	1,4	P005	B	100 (45.4)
Allyl chloride	107051		1000	1		C	1000 (454)
Aluminum phosphide	20859738		1*	4	P006	B	100 (45.4)
Aluminum sulfate	10043013		5000	1		D	5000 (2270)
2-Amino-1-methylbenzene	95534	o-Toluidine	1*	4	U328	X	1# (0.454)
4-Amino-1-methylbenzene	106490	p-Toluidine	1*	4	U353	X	1# (0.454)
5-(Aminomethyl)-3-isoxazolol	2763964	3(2H)-isoxazolone, 5-(aminomethyl)-	1*	4	P007	C	1000 (454)
4-Aminopyridine	504245	4-Pyridinamine	1*	4	P008	C	1000 (454)
Amitrole	61825	1H-1,2,4-Triazol-3-amine	1*	4	U011	X	1# (0.454)
Ammonia	7664417		100	1		B	100 (45.4)
Ammonium acetate	631618		5000	1		D	5000 (2270)
Ammonium benzoate	1863634		5000	1		D	5000 (2270)
Ammonium bicarbonate	1066337		5000	1		D	5000 (2270)
Ammonium bichromate	7789095		1000	1		C	1000# (454)
Ammonium bifluoride	1341497		5000	1		B	100 (45.4)
Ammonium bisulfite	10192300		5000	1		D	5000 (2270)
Ammonium carbamate	1111780		5000	1		D	5000 (2270)
Ammonium carbonate	506876		5000	1		D	5000 (2270)
Ammonium chloride	12125029		5000	1		D	5000 (2270)
Ammonium chromate	7788989		1000	1		C	1000# (454)
Ammonium citric dibasic	3012655		5000	1		D	5000 (2270)
Ammonium fluoborate	13826830		5000	1		D	5000 (2270)
Ammonium fluoride	12125018		5000	1		B	100 (45.4)
Ammonium hydroxide	1336216		1000	1		C	1000 (454)
Ammonium oxalate	6009707		5000	1		D	5000 (2270)
	5972736						
	14258492						

METHOD OF ANALYSIS FOR  
DIBENZO-P-DIOXINS AND -DI-  
NS

42 U.S.C. 6905, 6912(a), 6921,

FR 33119, May 19, 1980, unless  
d.

### part A—General

use and scope.

part identifies those solid  
wastes are subject to regulation  
under Parts 262  
268, and Parts 270, 271,  
this chapter and which are  
the notification require-  
ment 3010 of RCRA. In

part A defines the terms  
"solid waste" and "hazardous waste".  
Those wastes which are ex-  
empt from regulation under Parts  
266, 268 and 270 and es-  
pecially management require-  
ments for hazardous waste produced  
in small quantities exempt small quanti-  
ties and hazardous waste  
recycled.

part B sets forth the criteria  
used to identify characteris-  
tic hazardous waste and to list haz-  
ardous wastes.

part C identifies characteris-  
tic hazardous waste.

part D lists particular haz-  
ardous wastes.

part E: definition of solid waste  
and this part applies only to  
wastes which are hazardous for pur-  
poses of regulations implementing  
RCRA. For example, it  
applies to materials (such as  
metal scrap, paper, textiles,  
etc.) that are not otherwise haz-  
ardous and that are recycled.

part F identifies only some of  
the wastes which are solid wastes  
under sections  
and 7003 of RCRA. A mate-  
rial is not defined as a solid  
waste, or is not a hazard-  
ous waste, or is listed in this  
part as a solid waste and a hazard-  
ous waste for purposes of these sec-

in the case of sections 3007 and  
3008 has reason to believe that

the material may be a solid waste  
within the meaning of section 1004(27)  
of RCRA and a hazardous waste  
within the meaning of section 1004(5)  
of RCRA; or

(ii) In the case of section 7003, the  
statutory elements are established.

(c) For the purposes of §§ 261.2 and  
261.6:

(1) A "spent material" is any materi-  
al that has been used and as a result  
of contamination can no longer serve  
the purpose for which it was produced  
without processing;

(2) "Sludge" has the same meaning  
used in § 260.10 of this chapter;

(3) A "by-product" is a material that  
is not one of the primary products of a  
production process and is not solely or  
separately produced by the production  
process. Examples are process residues  
such as slags or distillation column  
bottoms. The term does not include a  
co-product that is produced for the  
general public's use and is ordinarily  
used in the form it is produced by the  
process.

(4) A material is "reclaimed" if it is  
processed to recover a usable product,  
or if it is regenerated. Examples are  
recovery of lead values from spent bat-  
teries and regeneration of spent sol-  
vents.

(5) A material is "used or reused" if  
it is either:

(i) Employed as an ingredient (in-  
cluding use as an intermediate) in an  
industrial process to make a product  
(for example, distillation bottoms  
from one process used as feedstock in  
another process). However, a material  
will not satisfy this condition if dis-  
tinct components of the material are  
recovered as separate end products (as  
when metals are recovered from  
metal-containing secondary materials);  
or

(ii) Employed in a particular func-  
tion or application as an effective sub-  
stitute for a commercial product (for  
example, spent pickle liquor used as  
phosphorous precipitant and sludge  
conditioner in wastewater treatment).

(6) "Scrap metal" is bits and pieces  
of metal parts (e.g.,) bars, turnings,  
rods, sheets, wire) or metal pieces that  
may be combined together with bolts  
or soldering (e.g., radiators, scrap au-  
tomobiles, railroad box cars), which

when worn or superfluous can be recy-  
cled.

(7) A material is "recycled" if it is  
used, reused, or reclaimed.

(8) A material is "accumulated spec-  
ulatively" if it is accumulated before  
being recycled. A material is not accu-  
mulated speculatively, however, if the  
person accumulating it can show that  
the material is potentially recyclable  
and has a feasible means of being recy-  
cled; and that—during the calendar  
year (commencing on January 1)—the  
amount of material that is recycled, or  
transferred to a different site for recy-  
cling, equals at least 75 percent by  
weight or volume of the amount of  
that material accumulated at the be-  
ginning of the period. In calculating  
the percentage of turnover, the 75 per-  
cent requirement is to be applied to  
each material of the same type (e.g.,  
slags from a single smelting process)  
that is recycled in the same way (i.e.,  
from which the same material is recov-  
ered or that is used in the same way).  
Materials accumulating in units that  
would be exempt from regulation  
under § 261.4(c) are not to be included  
in making the calculation. (Materials  
that are already defined as solid  
wastes also are not to be included in  
making the calculation.) Materials are  
no longer in this category once they  
are removed from accumulation for re-  
cycling, however.

[45 FR 33119, May 19, 1980, as amended at  
48 FR 14293, Apr. 1, 1983; 50 FR 663, Jan. 4,  
1985; 51 FR 10174, Mar. 24, 1986; 51 FR  
40636, Nov. 7, 1986]

### § 261.2 Definition of solid waste.

(a)(1) A *solid waste* is any discarded  
material that is not excluded by  
§ 261.4(a) or that is not excluded by  
variance granted under §§ 260.30 and  
260.31.

(2) A *discarded material* is any mate-  
rial which is:

(i) *Abandoned*, as explained in para-  
graph (b) of this section; or

(ii) *Recycled*, as explained in para-  
graph (c) of this section; or

(iii) Considered *inherently waste-  
like*, as explained in paragraph (d) of  
this section.

(b) Materials are solid waste if they  
are *abandoned* by being:

- (1) Disposed of; or
- (2) Burned or incinerated; or
- (3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

(c) Materials are solid wastes if they are recycled—or accumulated, stored, or treated before recycling—as specified in paragraphs (c)(1) through (4) of this section.

(1) *Used in a manner constituting disposal.* (i) Materials noted with a "\*" in Column 1 of Table 1 are solid wastes when they are:

(A) Applied to or placed on the land in a manner that constitutes disposal, or

(B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).

(ii) However, commercial chemical products listed in § 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.

(2) *Burning for energy recovery.* Materials noted with a "\*" in column 2 of Table 1 are solid wastes when they are:

- (A) Burned to recover energy;
- (B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste).

(i) However, commercial chemical products listed in § 261.33 are not solid wastes if they are themselves fuels.

(3) *Reclaimed.* Materials noted with a "\*" in column 3 of Table 1 are solid wastes when reclaimed.

(4) *Accumulated speculatively.* Materials noted with a "\*" in column 4 of Table 1 are solid wastes when accumulated speculatively.

TABLE 1

	Use constituting disposal (§ 261.2(c)(1))	Energy recovery/fuel (§ 261.2(c)(2))	Reclamation (§ 261.2(c)(3))	Speculative accumulation (§ 261.2(c)(4))
	(1)	(2)	(3)	(4)
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	(*)	(*)
By-products (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	(*)	(*)
Commercial chemical products listed in 40 CFR 261.33	(*)	(*)	(*)	(*)
Scrap metal	(*)	(*)	(*)	(*)

Note: The terms "spent materials", "sludges", "by-products" and "scrap metal" are defined in § 261.1

(d) *Inherently waste-like materials.* The following materials are solid wastes when they are recycled in any manner:

(1) Hazardous Waste Nos. F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028.

(2) The Administrator will use the following criteria to add wastes to that list:

(i)(A) The materials are ordinarily disposed of, burned, or incinerated; or

(B) The materials contain toxic constituents listed in Appendix VIII of Part 261 and these constituents are not ordinarily found in raw materials or products for which the materials

substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(ii) The material may pose a substantial hazard to human health and the environment when recycled.

(e) *Materials that are not solid waste when recycled.* (1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or

(ii) Used or reused as effective substitutes for commercial products; or

Environment

(iii) Returned from which out first be raw materials must use feedstocks.

(2) The wastes, even use, reuse, process (des through

(i) Materials constituting products th or

(ii) Materials recovery, used in fu

(iii) Materials tively; or

(iv) Materials (d)(1) of thi

(f) *Documentation*

materials a

Respondent

ulations im

RCRA who

material is

ditionally

must demo

known mar

material, a

terms of th

In doing so,

private docu

tracts show

uses the ma

production

that the m

exempt fro

owners or o

ing that th

materials n

the necessa

(50 FR 684, 1 FR 33542, Au.

§ 261.3 Defir

(a) A so § 261.2, is a

(1) It is : tion as a

§ 261.4(b); a

(2) It mee

teria:

However, commercial chemical products listed in § 261.33 are not solid if they are applied to the land in their ordinary manner of

burning for energy recovery. (1) is noted with a "\*" in column 2 and (2) are solid wastes when they

are burned to recover energy; (3) are used to produce a fuel or are contained in fuels (in which the fuel itself remains a solid

product). However, commercial chemical products listed in § 261.33 are not solid if they are themselves fuels,

reclaimed. Materials noted with a "\*" in column 3 of Table 1 are solid when reclaimed.

Materials accumulated speculatively. Materials noted with a "\*" in column 4 of Table 1 are solid wastes when accumulated speculatively.

Energy recovery/fuel (§ 261.2(c)(2))	Reclamation (§ 261.2(c)(3))	Speculative accumulation (§ 261.2(c)(4))
(2)	(3)	(4)
(*)	(*)	(*)
(*)	(*)	(*)
(*)	(*)	(*)
(*)	(*)	(*)
(*)	(*)	(*)
(*)	(*)	(*)
(*)	(*)	(*)

"\*" as defined in § 261.1

Materials (or are found in raw materials or products in smaller concentrations) and are not used or reused in the recycling process; and (3) the material may pose a substantial hazard to human health and the environment when recycled.

Materials that are not solid waste when recycled. (1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) used or reused as ingredients in an industrial process to make a product, provided the materials are not reclaimed; or

(ii) used or reused as effective substitutes for commercial products; or

(iii) Returned to the original process from which they are generated, without first being reclaimed. The material must be returned as a substitute for raw material feedstock, and the process must use raw materials as principal feedstocks.

(2) The following materials are solid wastes, even if the recycling involves reuse, or return to the original process (described in paragraphs (c)(1) through (iii) of this section):

(i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

(ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or

(iii) Materials accumulated speculatively; or

(iv) Materials listed in paragraph (d)(1) of this section.

(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing Subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

[50 FR 864, Jan. 4, 1985, as amended at 50 FR 33542, Aug. 20, 1985]

### § 261.3 Definition of hazardous waste.

(a) A solid waste, as defined in § 261.2, is a hazardous waste if:

(1) It is not excluded from regulation as a hazardous waste under § 261.4(b); and

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in Subpart C.

(ii) It is listed in Subpart D and has not been excluded from the lists in Subpart D under §§ 260.20 and 260.22 of this chapter.

(iii) It is a mixture of a solid waste and a hazardous waste that is listed in Subpart D solely because it exhibits one or more of the characteristics of hazardous waste identified in Subpart C, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C.

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in Subpart D and has not been excluded from this paragraph under §§ 260.20 and 260.22 of this chapter; however, the following mixtures of solid wastes and hazardous wastes listed in Subpart D are not hazardous wastes (except by application of paragraph (a)(2) (i) or (ii) of this section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and:

(A) One or more of the following spent solvents listed in § 261.31—carbon tetrachloride, tetrachloroethylene, trichloroethylene—*Provided, That the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pre-treatment system does not exceed 1 part per million; or*

(B) One or more of the following spent solvents listed in § 261.31—methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, creosols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents—*provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided*

ed by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pre-treatment system does not exceed 25 parts per million; or

(C) One of the following wastes listed in § 261.32—heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050); or

(D) A discarded commercial chemical product, or chemical intermediate listed in § 261.33, arising from *de minimis* losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this subparagraph, "*de minimis*" losses include those from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in Subpart D. *Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pre-treatment system, or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation.*

(b) A solid waste which is not excluded from regulation under paragraph (a)(1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in Subpart D, when the waste first meets

the listing description set forth in Subpart D.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in Subpart D is first added to the solid waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in Subpart C.

(c) Unless and until it meets the criteria of paragraph (d):

(1) A hazardous waste will remain a hazardous waste.

(2)(i) Except as otherwise provided in paragraph (c)(2)(ii) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste: (A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Waste from burning any of the materials exempted from regulation by § 261.6(a)(3)(v) through (ix).

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste it does not exhibit any of the characteristics of hazardous waste identified in Subpart C.

(2) In the case of a waste which is a listed waste under Subpart D, contains a waste listed under Subpart D or is derived from a waste listed in Subpart D, it also has been excluded from paragraph (c) under §§ 260.20 and 260.22 of this chapter.

Env  
(45  
46 )  
Apr  
FR  
§ 261  
(a  
was  
not  
part  
(1  
(11  
and  
a 54  
tres  
mes  
tary  
syat  
(2  
that  
ject  
the  
[Cor  
the  
not  
they  
befo  
that  
treat  
(3  
(4  
pro:  
Atol  
ed,  
(5  
min  
mov  
extr  
(6  
that  
reco  
the  
mul  
§ 26  
(7  
pro:  
is  
fine  
(8  
clab  
pro:  
wer  
in th  
(1:  
the  
of r  
tire  
com  
anc

ing description set forth in part D.

In the case of a mixture of solid and one or more listed hazardous wastes, when a hazardous waste in Subpart D is first added to solid waste.

In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in Subpart C.

Unless and until it meets the criteria in paragraph (d):

A hazardous waste will remain a hazardous waste.

Except as otherwise provided in paragraph (c)(2)(ii) of this section, solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, residue, ash, emission control material, or leachate (but not including stormwater run-off) is a hazardous waste. However, materials that are reclaimed from solid wastes and that are beneficially are not solid wastes unless they are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.

The following solid wastes are hazardous even though they are reclaimed from the treatment, storage, or disposal of a hazardous waste, they exhibit one or more of the characteristics of hazardous waste: (A) Pickle liquor sludge generated from the stabilization of spent pickle brines from the iron and steel industry under §§ 331 and 332.

Waste from burning any of the materials exempted from regulation under §§ 1.6(a)(3)(v) through (ix).

Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in Subpart C.

(2) In the case of a waste which is a hazardous waste listed under Subpart D, it contains only a waste listed under Subpart D or is reclaimed from a waste listed in Subpart D and has been excluded from regulation under §§ 260.20 and 260.22 of this chapter.

Environmental Protection Agency  
45 FR 33119, May 19, 1980, as amended at  
46 FR 56588, Nov. 17, 1981; 50 FR 14219,  
Apr. 11, 1985; 50 FR 49202, Nov. 29, 1985; 52  
FR 11821, Apr. 13, 1987

#### § 261.4 Exclusions.

(a) *Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this part:

(1) Domestic sewage; and  
(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under section 402 of the Clean Water Act, as amended.

(Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.)

(3) Irrigation return flows.

(4) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 *et seq.*

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in § 261.1(c) of this chapter.

(7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in § 261.1(c) of this chapter.

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

(ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);

(iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(b) *Solid wastes which are not hazardous wastes.* The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. "Household waste" means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this subtitle, if such facility:

(i) Receives and burns only

(A) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources) and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

(2) Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site.

(4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6)(i) Wastes which fail the test for the characteristic of EP toxicity because chromium is present or are listed in Subpart D due to the presence of chromium, which do not fail the test for the characteristic of EP toxicity for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

(A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in paragraphs (b)(6)(i)(A), (B) and (C) (so long as they do not fail the test for the characteristic of EP toxicity, and do not fail the test for any other characteristic) are:

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish;

hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO<sub>2</sub> pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore.

(8) Cement kiln dust waste.

(9) Solid waste which consists of discarded wood or wood products which fails the test for the characteristic of EP toxicity and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit.

Environment  
is not sub  
Parts 262 t  
and 124 of  
fication re  
of RCRA  
which it w  
unit is a  
unless the  
the unit m  
unit ceases  
facturing, o  
tion of prod  
(d) Sampl  
in paraprag  
sample of s  
water, soil,  
for the sole  
termine its  
tion, is no  
ments of  
through 26  
this chapte  
quirements  
when:  
(i) The s  
to a laborat  
ing; or  
(ii) The s  
back to the  
ing; or  
(iii) The  
the sample  
to a laborat  
(iv) The  
laboratory  
(v) The  
laboratory  
returned to  
(vi) The  
porarily in  
for a spec  
until concl  
forcement  
ing of the  
(2) In o  
emption l  
(ii) of thi  
shipping s  
laboratory  
sample co.  
(1) Com  
Transport  
Service (U  
ble shippl  
(ii) Con  
quiremen  
termines  
shipping  
the ship

save/chrome tan/retan/wet finish; no beamhouse; through-the-blue.

Sewer screenings generated by following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; no beamhouse; through-the-blue; and shear-

Wastewater treatment sludges generated by the following subcategory: the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; no beamhouse; through-the-blue and shearing.

Wastewater treatment sludges generated by the following subcategory: the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other product manufacturing industries.

Wastewater treatment sludges from the production of TiO<sub>2</sub> pigment chromium-bearing ores by the extraction process.

Solid waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore. Cement kiln dust waste.

Solid waste which consists of discarded wood or wood products which the test for the characteristic of toxicity and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

Hazardous wastes which are excluded from certain regulations. A hazardous waste which is generated in a product or raw material storage area, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-treatment-manufacturing unit.

is not subject to regulation under Parts 262 through 265, 268, 270, 271 and 124 of this chapter or to the notification requirements of section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

(d) *Samples.* (1) Except as provided in paragraph (d)(2) of this section, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this part or Parts 262 through 268 or Part 270 or Part 124 of this chapter or to the notification requirements of section 3010 of RCRA, when:

(i) The sample is being transported to a laboratory for the purpose of testing; or

(ii) The sample is being transported back to the sample collector after testing; or

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing; or

(iv) The sample is being stored in a laboratory before testing; or

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in paragraphs (d)(1) (i) and (ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

(1) The sample collector's name, mailing address, and telephone number;

(2) The laboratory's name, mailing address, and telephone number;

(3) The quantity of the sample;

(4) The date of shipment; and

(5) A description of the sample.

(B) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in paragraph (d)(1) of this section.

[45 FR 33119, May 19, 1980]

EDITORIAL NOTE: FOR FEDERAL REGISTER citations affecting § 261.4, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 261.5 Special requirements for hazardous waste generated by conditionally exempt small quantity generators.

(a) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 160 kilograms of hazardous waste in that month.

(b) Except for those wastes identified in paragraphs (e), (f), (g), and (j) of this section, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Parts 262 through 266, 268, and Parts 270 and 124 of this chapter, and the notification requirements of section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g), and (j) of this section.

(c) Hazardous waste that is not subject to regulation or that is subject only to § 262.11, § 262.12, § 262.40(c), and § 262.41 is not included in the quantity determinations of this part and Parts 262 through 266, 268, and 270 and is not subject to any of the requirements of those parts. Hazardous waste that is subject to the requirements of § 261.6 (b) and (c) and Subparts C, D, and F of Part 266 is included in the quantity determination of this part and is subject to the require-

**PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE**

**Subpart A—General**

- Sec.
- 261.1 Purpose and scope.
- 261.2 Definition of solid waste.
- 261.3 Definition of hazardous waste.
- 261.4 Exclusions.
- 261.5 Special requirements for hazardous waste generated by conditionally exempt small quantity generators.
- 261.6 Requirements for recyclable materials.
- 261.7 Residues of hazardous waste in empty containers.

**Subpart B—Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Wastes**

- 261.10 Criteria for identifying the characteristics of hazardous waste.
- 261.11 Criteria for listing hazardous waste.

**Subpart C—Characteristics of Hazardous Waste**

- 261.20 General.
- 261.21 Characteristic of ignitability.
- 261.22 Characteristic of corrosivity.
- 261.23 Characteristic of reactivity.
- 261.24 Characteristic of EP toxicity.

**Subpart D—Lists of Hazardous Wastes**

- 261.30 General.
- 261.31 Hazardous wastes from non-specific sources.
- 261.32 Hazardous wastes from specific sources.
- 261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

**APPENDICES**

- APPENDIX I—REPRESENTATIVE SAMPLING METHODS
- APPENDIX II—EP TOXICITY TEST PROCEDURES
- APPENDIX III—CHEMICAL ANALYSIS TEST METHODS
- APPENDIX IV—(RESERVED FOR RADIOACTIVE WASTE TEST METHODS)
- APPENDIX V—(RESERVED FOR INFECTIOUS WASTE TREATMENT SPECIFICATIONS)
- APPENDIX VI—(RESERVED FOR ETIOLOGIC AGENTS)
- APPENDIX VII—BASIS FOR LISTING HAZARDOUS WASTE
- APPENDIX VIII—HAZARDOUS CONSTITUENTS
- APPENDIX IX—WASTES EXCLUDED UNDER §§ 260.20 AND 266.22

**APPENDIX X—METHOD OF ANALYSIS FOR CHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS**

AUTHORITY: 42 U.S.C. 6905, 6912(a), 6921 and 6922.

SOURCE: 45 FR 33119, May 19, 1980, unless otherwise noted.

**Subpart A—General**

**§ 261.1 Purpose and scope.**

(a) This part identifies those solid wastes which are subject to regulation as hazardous wastes under Parts 262 through 265, 268, and Parts 270, 271, and 124 of this chapter and which are subject to the notification requirements of section 3010 of RCRA. In this part:

(1) Subpart A defines the terms "solid waste" and "hazardous waste" identifies those wastes which are excluded from regulation under Parts 262 through 266, 268 and 270 and establishes special management requirements for hazardous waste produced by conditionally exempt small quantity generators and hazardous waste which is recycled.

(2) Subpart B sets forth the criteria used by EPA to identify characteristics of hazardous waste and to list particular hazardous wastes.

(3) Subpart C identifies characteristics of hazardous waste.

(4) Subpart D lists particular hazardous wastes.

(b)(1) The definition of solid waste contained in this part applies only to wastes that also are hazardous for purposes of the regulations implementing Subtitle C of RCRA. For example, it does not apply to materials (such as non-hazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled.

(2) This part identifies only some of the materials which are solid wastes and hazardous wastes under sections 3007, 3013, and 7003 of RCRA. A material which is not defined as a solid waste in this part, or is not a hazardous waste identified or listed in this part, is still a solid waste and a hazardous waste for purposes of these sections if:

(1) In the case of sections 3007 and 3013, EPA has reason to believe that

Environ  
the i  
with  
of R  
with  
of RC  
(1)  
statut  
(c) 1  
261.6:  
(1)  
al tha  
of for  
the pu  
witho  
(2)  
used li  
(3) A  
is not  
produc  
separa  
proces  
such  
bottom  
co-prod  
genera  
used in  
process  
(4) A  
process  
or if it  
recover  
teries  
vents.  
(5) A  
it is eit  
(1) E  
cluding  
industr  
(for e  
from o  
another  
will no  
tinct co  
recover  
when  
metal-c  
or  
(1) E  
tion or  
stitute  
examp  
phosph  
condit  
(8) "E  
of met  
rods, st  
may be  
or sold  
mobile:

formed. In the event the matter cannot be resolved by settlement the person charged with the violation shall be informed in writing, of the decision of the Presiding Officer and shall be advised of his right to appeal.

§ 114.10 Decision.

Within thirty (30) days after the conclusion of the hearings, the Presiding Officer shall issue findings with respect to the matter, including, where appropriate to the amount of the civil penalty. In assessing the civil penalty the Presiding Officer shall consider the factors set forth in § 114.3. A copy of the Presiding Officer's decision shall be sent to the person charged in the Notice of Violation. The decision of the Presiding Officer shall become the final decision of the Environmental Protection Agency unless within fifteen (15) days from the date of receipt of such decision, the person assessed the penalty appeals the decision to the Administrator, or unless the Administrator shall have stayed the effectiveness of the decision pending review.

§ 114.11 Appeal to Administrator.

(a) The person assessed a penalty in the Presiding Officer's determination shall have the right to appeal an adverse decision to the Administrator upon filing a written Notice of Appeal in the form required by paragraph (b) of this section within fifteen (15) days of the date the receipt of the Presiding Officer's decision.

(b) The Notice of Appeal shall:

(1) State the name and address of the person filing the Notice of Appeal;

(2) Contain a concise statement of the facts on which the person relies;

(3) Contain a concise statement of the legal basis on which the person relies; and

(4) Contain a concise statement setting forth the action which the person proposed that the Administrator take.

(c) The Administrator may delegate this authority to act in a given case.

(d) The Administrator, after a Notice of Appeal in proper form has been filed, shall render a decision with respect to the appeal promptly. In rendering his decision, the Administrator may adopt, modify, or set aside the de-

cision of the Presiding Officer in any respect and shall include in his decision a concise statement of the basis therefore. The decision of the Administrator on appeal shall be effective when rendered.

**PART 116—DESIGNATION OF HAZARDOUS SUBSTANCES**

Sec.

116.1 Applicability.

116.2 Abbreviations.

116.3 Definitions.

116.4 Designation of hazardous substances.

Authority: Secs. 311(b)(2)(A) and 501(a), Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

§ 116.1 Applicability.

This regulation designates hazardous substances under section 311(b)(2)(A) of the Federal Water Pollution Control Act (the Act). The regulation applies to discharges of substances designated in Table 116.4.

[43 FR 10474, Mar. 13, 1978]

§ 116.2 Abbreviations.

ppm = parts per million

mg = milligram(s)

kg = kilogram(s)

mg/l = milligrams(s) per liter = (approx.) ppm

mg/kg = milligram(s) per kilogram = (approx.) ppm

[43 FR 10474, Mar. 13, 1978]

§ 116.3 Definitions.

As used in this part, all terms shall have the meaning defined in the Act and as given below:

"The Act" means the Federal Water Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500), and as further amended by the Clean Water Act of 1977 (Pub. L. 95-217), 33 U.S.C. 1251 et seq.; and as further amended by the Clean Water Act Amendments of 1978 (Pub. L. 95-676);

"Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping, but excludes (A) discharges in compliance with a permit under section 402 of this Act, (B) discharges re-

Environ  
sulting  
and rev  
public  
issued  
this Ac  
such pe  
participate  
a point  
or per  
402 of  
events  
relevant  
tems;  
"Othe  
tion of  
ject to  
States t  
zanship.  
mentati  
ed for  
which t  
"Vesse  
watercr  
ance use  
a mean  
other th  
"Publ  
or bareb  
the Unl  
cal subd  
nation,  
gaged in  
"Onsh  
ty (inclu  
vehicles  
located  
within  
submerg  
"Offsh  
ty of an  
any of  
United  
kind wt  
tion of  
ed in, o  
other th  
"Navi  
tion 502  
of the U  
ritorial  
limited  
presentl  
past, or  
means t  
eign co  
which s  
of the  
wetland  
in this

cision of the Presiding Officer in any respect and shall include in his decision a concise statement of the basis therefore. The decision of the Administrator on appeal shall be effective when rendered.

## PART 116—DESIGNATION OF HAZARDOUS SUBSTANCES

Sec.

- 116.1 Applicability.
- 116.2 Abbreviations.
- 116.3 Definitions.
- 116.4 Designation of hazardous substances.

**AUTHORITY:** Secs. 311(b)(2)(A) and 501(a), Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

### § 116.1 Applicability.

This regulation designates hazardous substances under section 311(b)(2)(A) of the Federal Water Pollution Control Act (the Act). The regulation applies to discharges of substances designated in Table 116.4.

(43 FR 10474, Mar. 13, 1978)

### § 116.2 Abbreviations.

ppm = parts per million  
 mg = milligram(s)  
 kg = kilogram(s)  
 mg/l = milligrams(s) per liter = (approx.) ppm  
 mg/kg = milligram(s) per kilogram = (approx.) ppm

(43 FR 10474, Mar. 13, 1978)

### § 116.3 Definitions.

As used in this part, all terms shall have the meaning defined in the Act and as given below:

"The Act" means the Federal Water Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500), and as further amended by the Clean Water Act of 1977 (Pub. L. 95-217), 33 U.S.C. 1251 et seq.; and as further amended by the Clean Water Act Amendments of 1978 (Pub. L. 95-876);

"Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping, but excludes (A) discharges in compliance with a permit under section 402 of this Act, (B) discharges re-

sulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit, and (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of this Act, which are caused by events occurring within the scope of relevant operating or treatment systems;

"Otherwise subject to the jurisdiction of the United States" means subject to the jurisdiction of the United States by virtue of United States citizenship, United States vessel documentation or numbering, or as provided for by international agreement to which the United States is a party.

"Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel;

"Public vessel" means a vessel owned or bareboat-chartered and operated by the United States, or a State or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

"Onshore facility" means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land;

"Offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel;

"Navigable waters" is defined in section 502(7) of the Act to mean "waters of the United States, including the territorial seas," and includes, but is not limited to: (1) All waters which are presently used, or were used in the past, or may be susceptible to use as a means to transport interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, and including adjacent wetlands; the term "wetlands" as used in this regulation shall include those

areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevelance of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas; the term "adjacent" means bordering, contiguous or neighboring; (2) tributaries of navigable waters of the United States, including adjacent wetlands; (3) interstate waters, including wetlands; and (4) all other waters of the United States such as intrastate lakes, rivers, streams, mudflats, sandflats and wetlands, the use, degradation or destruction of which affect interstate commerce including, but not limited to:

(i) Intrastate lakes, rivers, streams, and wetlands which are utilized by interstate travelers for recreational or other purposes; and

(ii) Intrastate lakes, rivers, streams, and wetlands from which fish or shellfish are or could be taken and sold in interstate commerce; and

(iii) Intrastate lakes, rivers, streams, and wetlands which are utilized for industrial purposes by industries in interstate commerce.

"Contiguous zone" means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone;

"Territorial seas" means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 miles.

A discharge "in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976)," means: (1) A discharge into any waters beyond the contiguous zone from any vessel or onshore or offshore facility, which vessel or facility is subject to or is engaged in

activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, and (2) any discharge into any waters beyond the contiguous zone which contain, cover, or support any natural resource belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976).

"Aquatic animals" means appropriately sensitive wholly aquatic animals which carry out respiration by means of a gill structure permitting gaseous exchange between the water and the circulatory system;

"Animals" means appropriately sensitive animals which carry out respiration by means of a lung structure permitting gaseous exchange between air and the circulatory system;

"Aquatic flora" means plant life associated with the aquatic eco-system including, but not limited to, algae and higher plants;

"Mixture" means any combination of two or more elements and/or compounds in solid, liquid, or gaseous

form except where such substances have undergone a chemical reaction so as to become inseparable by physical means.

"LC50" means that concentration of material which is lethal to one-half of the test population of aquatic animals upon continuous exposure for 96 hours or less.

[43 FR 10474, Mar. 13, 1978; 43 FR 27533, June 26, 1978, as amended at 44 FR 10266, Feb. 16, 1979]

§ 116.4 Designation of hazardous substances.

The elements and compounds appearing in Tables 116.4 A and B are designated as hazardous substances in accordance with section 311(b)(2)(A) of the Act. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing these substances. Synonyms and Chemical Abstract System (CAS) numbers have been added for convenience of the user only. In case of any disparity the common names shall be considered the designated substance.

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES

Common name	CAS No.	Synonyms	Isomers	CAS No.
Acetaldehyde.....	75070	Ethanal, ethyl aldehyde, acetic aldehyde.....		
Acetic acid.....	64197	Glacial acetic acid, vinegar acid.....		
Acetic anhydride.....	108247	Acetic oxide, acetyl oxide.....		
Acetone cyanohydrin.....	75865	2-methylactonitrile, alpha-hydroxyisobutyronitrile.....		
Acetyl bromide.....	506967			
Acetyl chloride.....	79387			
Acrolein.....	107028	2-propenal, acrylic aldehyde, acrylaldehyde, acraldehyde.....		
Acrylonitrile.....	107131	Cyanoethylene, Fumgran, Ventox, propenitrile, vinyl cyanide.....		
Adipic acid.....	124049	Hexanedioic acid.....		
Aldren.....	309002	Octalene, HHDN.....		
Allyl alcohol.....	107186	2-propen-1-ol, 1-propenol-3, vinyl carbinol.....		
Allyl chloride.....	107051	3-chloropropene, 3-chloropropylene, Chlorallylene.....		
Aluminum sulfate.....	10043013	Alum.....		
Ammonia.....	7664417			
Ammonium acetate.....	631618	Acetic acid ammonium salt.....		
Ammonium benzoate.....	1883634			
Ammonium bicarbonate.....	1066337	Acid ammonium carbonate, ammonium hydrogen carbonate.....		
Ammonium bichromate.....	7788095			
Ammonium bifluoride.....	1341497	Acid ammonium fluoride, ammonium hydrogen fluoride.....		
Ammonium bisulfite.....	10192300			
Ammonium carbonate.....	1111780	Ammonium aminofornate.....		
Ammonium carbonate.....	506876			
Ammonium chloride.....	12125029	Ammonium muriate, sal ammoniac, salmac, Amchlor.....		
Ammonium chromate.....	7788089			

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

form except where such substances have undergone a chemical reaction so as to become inseparable by physical means.

"LC50" means that concentration of material which is lethal to one-half of the test population of aquatic animals upon continuous exposure for 96 hours or less.

[43 FR 10474, Mar. 13, 1978; 43 FR 27533, June 28, 1978, as amended at 44 FR 10266, Feb. 16, 1979]

§ 116.4 Designation of hazardous substances.

The elements and compounds appearing in Tables 116.4 A and B are designated as hazardous substances in accordance with section 311(b)(2)(A) of the Act. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing these substances. Synonyms and Chemical Abstract System (CAS) numbers have been added for convenience of the user only. In case of any disparity the common names shall be considered the designated substance.

Common name	CAS No	Synonyms	Isomers	CAS No
Ammonium citrate dibasic	3012655	Diammonium citrate, citric acid diammonium salt		
Ammonium fluoroborate	13826830	Ammonium fluoroborate, ammonium borofluoride		
Ammonium fluoride	12125018	Neutral ammonium fluoride		
Ammonium hydroxide	1336216			
Ammonium oxalate	6009707			
	5972738			
	14258492			
Ammonium silicofluoride	16919190	Ammonium fluosilicate		
Ammonium sulfamate	7773060	Ammate, AMS, ammonium amidosulfate		
Ammonium sulfide	12135761			
Ammonium sulfate	5196040			
Ammonium tartrate	1192300			
	3164292	Tartaric acid ammonium salt		
	14307438			
Ammonium thiocyanate	1762954	Ammonium rhodanide, ammonium sulfocyanate, ammonium sulfocyanide		
Ammonium thiosulfate	7783188	Ammonium hyposulfite		
Amyl acetate	628637	Amyl acetate ester	iso-	123922
		Pear oil	sec-	626380
		Banana oil	tert-	625161
Aniline	62533	Aniline oil, phenylamine, aminobenzene, aminophen, kyandl		
Antimony pentachloride	7647189			
Antimony potassium tartrate	28300745	Tartar emetic, tartarated antimony, tartarized antimony, potassium antimonytartrate		
Antimony tribromide	7789619			
Antimony trichloride	10025919	Butter of antimony		
Antimony trifluoride	7783564	Antimony fluoride		
Antimony trioxide	1309644	Diantimony trioxide, flowers of antimony		
Arsenic disulfide	1303328	Red arsenic sulfide		
Arsenic pentoxide	1303282	Arsenic acid anhydride, arsenic oxide		
Arsenic trichloride	7784341	Arsenic chloride, arsenious chloride, arsenous chloride, butter of arsenic		
Arsenic trioxide	1327533	Arsenous acid, arsenous oxide, white arsenic		
Arsenic trisulfide	1303339	Arsenous sulfide, yellow arsenic sulfide		
Barium cyanide	542621			
Benzene	71432	Cyclohexane, benzol		
Benzoic acid	65850	Benzenecarboxylic acid, phenylacetic acid, dracrylic acid		
Benzonitrile	100470	Phenyl cyanide, cyanobenzene		
Benzoyl chloride	98884	Benzenecarbonyl chloride		
Benzyl chloride	100447			
Beryllium chloride	7787475			
Beryllium fluoride	7787497			
Beryllium nitrate	7787555			
	13597994			
Butyl acetate	123864	Acetic acid butyl ester	iso- sec- tert-	110190 105464 540885
Butylamine	109739	1-aminobutane	iso- sec- tert-	78819 513495 3952846 75649
n-butyl phthalate	84742	1,2-benzenedicarboxylic acid, dibutyl ester, dibutyl phthalate		
Butyric acid	107926	Butanoic acid, ethylacetic acid	iso-	79312
Cadmium acetate	543908			
Cadmium bromide	7789426			
Cadmium chloride	10108642			
Calcium arsenate	7778441	Tricalcium orthoarsenate		
Calcium arsenite	52740166			
Calcium carbide	75207	Carbide, acetylenogen		
Calcium chromate	13765190	Calcium chrome yellow, goblin, yellow ultramarine		
Calcium cyanide	592018			
Calcium dodecylbenzenesulfonate	26264062			
Calcium hypochlorite	7778543			

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Caplan	133082	Orthocid-403, SR-406, Vancide-88		
Carbaryl	63252	Sevin		
Carbofuran	1583662	Furadan		
Carbon disulfide	75150	Carbon bisulfide, dithiocarbonic anhydride		
Carbon tetrachloride	56235	Tetrachloromethane Perchloromethane		
Chlordane	57749	Touchlor, chlordan		
Chlorine	75003			
Chlorobenzene	108907	Monochlorobenzene, benzene chloride		
Chloroform	67663	Trichloromethane		
Chloroxynil	2921862	Dursban		
Chlorosulfonic acid	7790945	Sulfonic chlorohydrin		
Chromic acetate	1066304			
Chromic acid	11115745	Chromic anhydride, chromium trioxide		
Chromic sulfate	10101538			
Chromous chloride	10049055			
Cobaltous bromide	7789437	Cobalt bromide		
Cobaltous formate	544183	Cobalt formate		
Cobaltous sulfamate	14017415	Cobalt sulfamate		
Coumaphos	56724	Co-Ral		
Cresol	1319773	Cresylic acid	m-	108394
		Hj roxytoluene	o-	95487
			p-	106445
Crotonaldehyde	4170303	2-butenal propylene aldehyde		
Cupric acetate	142712	Copper acetate, crystalized verdigris		
Cupric acetoarsenite	12002038	Copper acetoarsenite, copper acetate arsenite, Paris green		
Cupric chloride	7447394	Copper chloride		
Cupric nitrate	3251238	Copper nitrate		
Cupric oxalate	5893663	Copper oxalate		
Cupric sulfate	7758987	Copper sulfate		
Cupric sulfate, ammoniated	10380297	Ammoniated copper sulfate		
Cupric tartrate	815827	Copper tartrate		
Cyanogen chloride	506774			
Cyclohexane	110827	Hexahydrobenzene, hexamethylene, hexanaphthene		
2,4-D acid	94757	2,4-dichlorophenoxyacetic acid		
2,4-D ester	94111	2,4-dichlorophenoxyacetic acid ester		
	94791			
	94804			
	1320189			
	1928387			
	1928616			
	1929733			
	2871382			
	25168287			
	53487111			
DDT	50293	p,p'-DDT		
Diazinon	333415	Dipofene, Diazitol, Basudin, Spectracide		
Dicamba	1918009	2-methoxy-3,6-dichlorobenzoic acid		
Dichlobenil	1194656	2,6-dichlorobenzonitrile, 2,6-DBN		
Dichlone	117806	Phygon, dichloronaphthoquinone		
Dichlorobenzene	25321226	Di-chlorocid	Ortho	95501
		Paramoth (Para)	Para	106487
Dichloropropane	26638197	Propylene dichloride	1,1	78999
			1,2	78875
			1,3	142289
Dichloropropene	26952238		1,3	542756
			2,3	78886
Dichloropropene-dichloropropane (mixture)	8003198	D-D mixture Vidden D		
2,2-Dichloropropionic acid	75990	Dalapon		
Dichlorvos	82737	2,2-dichlorovinyl dimethyl phosphite, Vapona		
Dieldrin	60571	Alvt		
Diethylamine	109697			
Dimethylamine	124403			
Dinitrobenzene (mixed)	25154545	Dinitrobenzol	m-	99650
			o-	528290
			p-	100254
Dinitrophenol	51285	Aldifen	(2,5-)	329715

Environment  
 Comr  
 Dinitrotoluene  
 Duquel  
 Disulfoton  
 Druron  
 Dodecylbenzene  
 Endosulfan  
 Endrin  
 Epichlorohydrin  
 Ethion  
 Ethylbenzene  
 Ethylenediamine  
 Ethylenediamine (EDTA)  
 Ethylene dibromide  
 Ethylene dichloride  
 Femic ammonium  
 Femic ammonium  
 Femic chloride  
 Femic fluoride  
 Femic nitrate  
 Femic sulfate  
 Ferrous ammonium  
 Ferrous chloride  
 Ferrous sulfate  
 Formaldehyde  
 Formic acid  
 Fumic acid  
 Furfural  
 Guthion  
 Heptachlor  
 Hexachlorocycl  
 Hydrochloric ac  
 Hydrofluoric ac  
 Hydrogen cyan  
 Hydrogen sulfid  
 Isoprene  
 Isopropanolami  
 esulfonate  
 Kelthane  
 Kepone  
 Lead acetate  
 Lead arsenate  
 Lead chloride  
 Lead fluoroborate  
 Lead fluoride  
 Lead iodide  
 Lead nitrate  
 Lead stearate  
 Lead sulfate  
 Lead sulfide

## HAZARDOUS SUBSTANCES—Continued

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Synonyms	Isomers	CAS No.	Common name	CAS No.	Synonyms	Isomers	CAS No.
SR-408, Venode-89			Dinitrotoluene	25321146	DNT	(2,4) (2,6)	573568 121142
Dimethylenediphosphoric anhydride and perchloromethane			Diquat	85007	Aquacide	2,4	606202
1,1-dimethyl-2,2-dichloroethane			Diquat	2784729	Dextrone, Regione, Diquat dibromide	2,6	610399
1,1-dimethyl-2,2-dibromoethane			Diquat	298044	Di-syston		
1,1-dimethyl-2,2-dichloroethane			Diquat	330541	DCMU, DMU		
1,1-dimethyl-2,2-dibromoethane			Diquat	27176870			
1,1-dimethyl-2,2-dichloroethane			Diquat	115297	Thodon		
1,1-dimethyl-2,2-dibromoethane			Diquat	72208	Mendon, Compound 269		
1,1-dimethyl-2,2-dichloroethane			Diquat	106898	chloropropylene oxide		
1,1-dimethyl-2,2-dibromoethane			Diquat	563122	Nialate, ethyl methylene phosphorothioate		
1,1-dimethyl-2,2-dichloroethane			Diquat	100414	Phenylthane		
1,1-dimethyl-2,2-dibromoethane			Diquat	107153	1,2-diaminoethane		
1,1-dimethyl-2,2-dichloroethane			Diquat	60004	Edetic acid, Havidole (ethylenedinitriole), "acetic acid"		
1,1-dimethyl-2,2-dibromoethane			Diquat	106934	1,2-dibromoethane acetylene dibromide sym-dibromodithylene		
1,1-dimethyl-2,2-dichloroethane			Diquat	107062	1,2-dichloroethane sym-bichloroethane		
1,1-dimethyl-2,2-dibromoethane			Diquat	1185575	Ammonium ferric citrate		
1,1-dimethyl-2,2-dichloroethane			Diquat	2944674	Ammonium ferric oxalate		
1,1-dimethyl-2,2-dibromoethane			Diquat	5548874			
1,1-dimethyl-2,2-dichloroethane			Diquat	7705080	Flores maris, iron trichloride		
1,1-dimethyl-2,2-dibromoethane			Diquat	7783508	iron nitrate		
1,1-dimethyl-2,2-dichloroethane			Diquat	10421484	Ferric persulfate, ferric sesquisulfate, ferric tersulfate		
1,1-dimethyl-2,2-dibromoethane			Diquat	10028225			
1,1-dimethyl-2,2-dichloroethane			Diquat	10045893	Monie salt, iron ammonium sulfate		
1,1-dimethyl-2,2-dibromoethane			Diquat	7758943	Iron chloride, iron dichloride, von protoklonde		
1,1-dimethyl-2,2-dichloroethane			Diquat	7720787	Green vitriol		
1,1-dimethyl-2,2-dibromoethane			Diquat	7782630	Iron vitriol, iron sulfate, von protosulfate		
1,1-dimethyl-2,2-dichloroethane			Diquat	50000	Methyl aldehyde, methanal, formalin		
1,1-dimethyl-2,2-dibromoethane			Diquat	64186	Methanoic acid		
1,1-dimethyl-2,2-dichloroethane			Diquat	110178	Trans-butenedioic acid, trans-1,2-ethylene-dicarboxylic acid, maleic acid, allomaleic acid		
1,1-dimethyl-2,2-dibromoethane			Diquat	98011	2-furaldehyde, pyromucic aldehyde		
1,1-dimethyl-2,2-dichloroethane			Diquat	86500	Gusathion, azinphos-methyl		
1,1-dimethyl-2,2-dibromoethane			Diquat	76448	Veiscol-104, Dnnox, Heptagran		
1,1-dimethyl-2,2-dichloroethane			Diquat	77474	Perchlorocyclopentadiene		
1,1-dimethyl-2,2-dibromoethane			Diquat	7647010	Hydrogen chloride, muretic acid		
1,1-dimethyl-2,2-dichloroethane			Diquat	7664393	Fluohydric acid		
1,1-dimethyl-2,2-dibromoethane			Diquat	74908	Hydrocyanic acid		
1,1-dimethyl-2,2-dichloroethane			Diquat	7783064	Hydro-sulfuric acid sulfur hydride		
1,1-dimethyl-2,2-dibromoethane			Diquat	78795	2-methyl-1,3-butadiene		
1,1-dimethyl-2,2-dichloroethane			Diquat	42504461			
1,1-dimethyl-2,2-dibromoethane			Diquat	115322	Di(p-chlorophenyl)-trichloromethylcarbinol, DTMC, dicofol		
1,1-dimethyl-2,2-dichloroethane			Diquat	143500	Chlordecone 1,1a,3,3a,4,5,5a,5b,6-d-chlorooctahydro-1,3,4-metheno-2H-cyclobuta[cd]pentalen-2-one		
1,1-dimethyl-2,2-dibromoethane			Diquat	301042	Sugar of lead		
1,1-dimethyl-2,2-dichloroethane			Diquat	7784409			
1,1-dimethyl-2,2-dibromoethane			Diquat	7645252			
1,1-dimethyl-2,2-dichloroethane			Diquat	10102484			
1,1-dimethyl-2,2-dibromoethane			Diquat	7758954			
1,1-dimethyl-2,2-dichloroethane			Diquat	13814965	Lead fluoroborate		
1,1-dimethyl-2,2-dibromoethane			Diquat	7783462	Lead difluoride, plumbous fluoride		
1,1-dimethyl-2,2-dichloroethane			Diquat	10101630			
1,1-dimethyl-2,2-dibromoethane			Diquat	10099748			
1,1-dimethyl-2,2-dichloroethane			Diquat	7428480	Stearic acid lead salt		
1,1-dimethyl-2,2-dibromoethane			Diquat	1072351			
1,1-dimethyl-2,2-dichloroethane			Diquat	52652592			
1,1-dimethyl-2,2-dibromoethane			Diquat	7446142			
1,1-dimethyl-2,2-dichloroethane			Diquat	1314870	Galena		
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2,2-dibromoethane			Diquat				
1,1-dimethyl-2,2-dichloroethane			Diquat				
1,1-dimethyl-2							



## Hazardous Substances—Continued

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Synonyms	Isomers	CAS No.	Common name	CAS No.	Synonyms	Isomers	CAS No.
1,1,1-trichloro-2,2,2-trifluoroethane			Propionic acid	79094	Propionic acid, methacetic acid, ethylformic acid		
1,1,1-trichloroethane			Propionic anhydride	123626	Propionic anhydride, methacetic anhydride		
1,1-dichloro-1,2,2-trifluoroethane			Propylene oxide	75569	Propene oxide		
1,1-dichloroethane			Pyrethrin I	121299	Pyrethrin I		
1,2-dichloroethane			Pyrethrin II	121211	Pyrethrin II		
1,2-dichloroethane			Quinoline	91225	1-benzazine, benzo(b)pyridine, leucoline, chindoline, leucol		
1,2-dichloroethane			Resorcinol	108463	Resorcin, 1,3-benzenediol, meta-dihydroxybenzene		
1,2-dichloroethane			Selenium dioxide	7446084	Selenium dioxide		
1,2-dichloroethane			Silver nitrate	7761888	Nitric acid silver (1-) salt lunar caustic		
1,2-dichloroethane			Sodium	7440235	Sodium		
1,2-dichloroethane			Sodium arsenate	7831892	Disodium arsenate		
1,2-dichloroethane			Sodium arsenite	7844465	Sodium metaarsenite		
1,2-dichloroethane			Sodium bichromate	10588019	Sodium dichromate		
1,2-dichloroethane			Sodium bisulfide	1333831			
1,2-dichloroethane			Sodium bisulfite	7631905	Sodium acid sulfite, sodium hydrogen sulfite		
1,2-dichloroethane			Sodium chromate	7775113			
1,2-dichloroethane			Sodium cyanide	143339			
1,2-dichloroethane			Sodium dodecylbenzene-sulfonate	25155300			
1,2-dichloroethane			Sodium fluoride	7581494	Villiumite		
1,2-dichloroethane			Sodium hydrosulfide	16721805	Sodium hydrogen sulfide		
1,2-dichloroethane			Sodium hydroxide	1310732	Caustic soda, soda lye, sodium hydrate		
1,2-dichloroethane			Sodium hypochlorite	7581529	Bleach		
1,2-dichloroethane			Sodium methoxide	10022705			
1,2-dichloroethane			Sodium nitrate	124414	Sodium methoxide		
1,2-dichloroethane			Sodium phosphate, dibasic	7632000			
1,2-dichloroethane			Sodium phosphate, tribasic	7558794			
1,2-dichloroethane			Sodium selenite	10039324			
1,2-dichloroethane			Sodium selenite	10140655			
1,2-dichloroethane			Sodium selenite	7785844			
1,2-dichloroethane			Sodium selenite	7601549			
1,2-dichloroethane			Sodium selenite	10101890			
1,2-dichloroethane			Sodium selenite	10361894			
1,2-dichloroethane			Sodium selenite	7758294			
1,2-dichloroethane			Sodium selenite	10124588			
1,2-dichloroethane			Sodium selenite	10102168			
1,2-dichloroethane			Sodium selenite	7782823			
1,2-dichloroethane			Sodium selenite	7789062			
1,2-dichloroethane			Sodium selenite	57249			
1,2-dichloroethane			Sodium selenite	100425	Vinylbenzene, phenylethylene, styrol, styrolene, cinnamene, cinnamol		
1,2-dichloroethane			Sulfuric acid	7664939	Oil of vitrol, oleum		
1,2-dichloroethane			Sulfur monochloride	12771083	Sulfur chloride		
1,2-dichloroethane			2,4,5-T acid	93785	2,4,5-trichlorophenoxyacetic acid		
1,2-dichloroethane			2,4,5-T amines	6369966	Acetic acid (2,4,5-trichlorophenoxy)-compound with N,N-dimethylmethanamine (1:1)		
1,2-dichloroethane			2,4,5-T esters	6369977	Acetic acid (2,4,5-trichlorophenoxy)-compound with N-methylmethanamine (1:1)		
1,2-dichloroethane			2,4,5-T esters	1319728	Acetic acid (2,4,5-trichlorophenoxy)-compound with 1-amino-2-propanol (1:1)		
1,2-dichloroethane			2,4,5-T esters	3813147	Acetic acid (2,4,5-trichlorophenoxy)-compound with 2,2'-nitroethane [ethanol] (1:1)		
1,2-dichloroethane			2,4,5-T esters	2545597	2,4,5-trichlorophenoxyacetic esters		
1,2-dichloroethane			2,4,5-T salts	93798			
1,2-dichloroethane			2,4,5-T salts	61792072			
1,2-dichloroethane			2,4,5-T salts	1928478			
1,2-dichloroethane			2,4,5-T salts	25168154			
1,2-dichloroethane			2,4,5-T salts	13560991	Acetic acid (2,4,5-trichlorophenoxy)-sodium salt		
1,2-dichloroethane			TDE	72548	DDD		
1,2-dichloroethane			2,4,5-TP acid	93721	Propanoic acid 2-(2,4,5-trichlorophenoxy)-		
1,2-dichloroethane			2,4,5-TP esters	32534955	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-, isooctyl ester		
1,2-dichloroethane			Tetraethyl lead	78002	Lead tetraethyl, TEL		

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Tetraethyl pyrophosphate	107493	TEPP		
Thallium sulfate	10031591 7446186			
Toluene	108883	Toluol, methylbenzene, phenylmethane, Methacide		
Toxaphene	8001352	Camphchlor		
Trichlorfon	52686	Dipterex Dylox		
Trichloroethylene	79016	Ethylene trichloride		
Trichloropentol	25167822	Collunolol, Dow, do 2 or 2S, Omal, Phen-achlor	(2,3,4-) (2,3,5-) (2,3,6-) (2,4,5-) (2,4,6-) (3,4,5-)	15950660 74931 933755 933755 95954 88062 609198
Triethanolamine dodecylbenzene-sulfonate	27323417			
Triethylamine	121448			
Trimethylamine	75503	TMA		
Uranyl acetate	541093			
Uranyl nitrate	10102064 36478769			
Vanadium pentoxide	1314621	Vanadic anhydride, vanadic acid anhydride		
Vanadyl sulfate	27774138	Vanadic sulfate, vanadium sulfate		
Vinyl acetate	108054	Acetic acid ethylene ether		
Vinylidene chloride	75354	1,1-dichloroethylene		
Xylene (mixed)	1330207	Dimethylbenzene	m- o- p-	108383 35476 106423
Xylenol	1300716	Dimethylphenol, hydroxydimethylbenzene		
Zinc acetate	557348			
Zinc ammonium chloride	14639975 14639986 52628258			
Zinc borate	1332078			
Zinc bromide	7699458			
Zinc carbonate	3486359			
Zinc chloride	7646857	Butter of zinc		
Zinc cyanide	557211			
Zinc fluoride	7783495			
Zinc formate	557415			
Zinc hydrosulfite	7779864			
Zinc nitrate	7779888			
Zinc phenolsulfonate	127822	Zinc sulfocarbolate		
Zinc phosphide	1314847			
Zinc silicofluoride	16871719	Zinc fluosilicate		
Zinc sulfate	7733020	White vitrol, zinc vitrol, white copperas		
Zirconium nitrate	13746899			
Zirconium potassium fluoride	16923958			
Zirconium sulfate	1404612	Disulfatozirconic acid		
Zirconium tetrachloride	10026116			

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER

CAS No.	Common name
50000	Formaldehyde
50293	DOT
51285	2,4-Dinitrophenol
52686	Trichlorfon
54382	Parathion
56724	Coumaphos
57249	Strychnine
57749	Chlordane
56896	Lindane

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
60002	Ethylenediaminetetraacetic acid (EDTA)
60571	Dieldrin
62533	Aniline
62737	Dichlorvos
63252	Carbaryl
64186	Formic acid
64197	Acetic acid
65850	Benzoic acid

Enviro  
T.  
SUBS  
CAS

87663  
71432  
72208  
72435  
72548  
74895  
74908  
74931  
75047  
75070  
75150  
75207  
75445  
75503  
75649  
75865  
75990  
76448  
76448  
78002  
78795  
78819  
79094  
79312  
79367  
80326  
85007  
85500  
85600  
87865  
88755  
91203  
91225  
93765  
93796  
94111  
94757  
94791  
94804  
95476  
95487  
98011  
98884  
98953  
99650  
100027  
100254  
100414  
100425  
100447  
100470  
105464  
106423  
106445  
107028  
107051  
107131  
107153  
107186  
107493  
107926  
108054  
108247  
108316  
108383  
108394  
108463  
108883  
108907  
108952  
109739

OUS SUBSTANCES—Continued

Synonyms	Isomers	CAS No
benzene, phenylmethane		
oxide 2 or 2S, Omal, Phen	(2,3,4-) (2,3,5-) (2,3,6-) (2,4,5-) (2,4,6-) (3,4,5-)	15950660 933788 933755 95954 88062 609198
oxide, vanadic acid anhydride		
vanadium sulfate		
ylene ether		
ylene		
ene		
ne	m- o- p-	108383 95478 108423
yl, hydroxydimethylbenzene		
olate		
inc vitrol, white copperas		
nic acid		

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
67663	Chloroform
71432	Benzene
72208	Endrin
72435	Methoxychlor
72548	TDE
74895	Monomethylamine
74908	Hydrogen cyanide
74931	Methyl mercaptan
75047	Monoethylamine
75070	Acetaldehyde
75150	Carbon disulfide
75207	Calcium carbide
75445	Phosgene
75503	Trimethylamine
75649	tert-Butylamine
75865	Acetone cyanohydrin
75990	2,2-Dichloropropionic acid
76448	Heptachlor
79002	Tetraethyl lead
79795	Isoprene
79819	iso-Butylamine
79094	Propionic acid
79112	iso-Butyric acid
79367	Acetyl chloride
80626	Methyl methacrylate
85007	Diquat
86500	Guthion
87865	Pentachlorophenol
88755	o-Nitrophenol
91203	Naphthalene
91225	Quinoline
93765	2,4,5-T acid
93798	2,4,5-T ester
94111	2,4-D ester
94757	2,4-D acid
94791	2,4-D ester
94804	2,4-D Butyl ester
95476	o-Xylene
95487	c-Cresol
98011	Furfural
98884	Benzoyl chloride
98953	Nitrobenzene
99650	m-Dinitrobenzene
100027	p-Nitrophenol
100254	p-Dinitrobenzene
100414	Ethylbenzene
100425	Styrene
100447	Benzyl chloride
100470	Benzonitrile
105464	sec-Butyl acetate
106423	p-Xylene
106445	p-Cresol
107028	Acrolein
107051	Allyl chloride
107131	Acrylonitrile
107153	Ethyleneimine
107186	Allyl alcohol
107493	Tetraethyl pyrophosphate
107926	n-Butyric acid
108054	Vinyl acetate
108247	Acetic anhydride
108316	Maleic anhydride
108383	m-Xylene
108394	m-Cresol
108463	Resorcinol
108683	Toluene
108907	Chlorobenzene
108952	Phenol
109739	n-Butylamine

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
109897	Diethylamine
110167	Maleic acid
110178	Fumalic acid
110190	iso-Butyl acetate
110827	Cyclohexane
115297	Endosulfan
115322	Kelthane
117806	Dichloro
121211	Pyrethrin
121299	Pyrethrin
121448	Triethylamine
121755	Malathion
123626	Propionic anhydride
123864	n-Butyl acetate
123922	iso-Amyl acetate
124403	Dimethylamine
124414	Sodium methylate
127822	Zinc phenylsulfonate
133062	Captan
142712	Cupric acetate
143339	Sodium cyanide
151508	Potassium cyanide
298000	Methyl parathion
298044	Disulfoton
300765	Naled
301042	Lead acetate
309002	Aldrin
315184	Mexacarbate
329715	2,5-Dinitrophenol
330541	Duron
333415	Diazinon
506774	Cyanogen chloride
506876	Ammonium carbonate
506987	Acetyl bromide
513495	sec-Butylamine
526290	o-Dinitrobenzene
540885	tert-Butyl acetate
541093	Uranyl acetate
542621	Barium cyanide
543908	Cadmium acetate
544183	Cobaltous formate
554847	m-Nitrophenol
557211	Zinc cyanide
557348	Zinc acetate
557415	Zinc formate
563122	Ethion
573568	2,6-Dinitrophenol
592018	Calcium cyanide
592041	Mercuric cyanide
592858	Mercuric thiocyanate
592870	Lead thiocyanate
625161	tert-Amyl acetate
626380	sec-Amyl acetate
625637	n-Amyl acetate
631618	Ammonium acetate
815827	Cupric tartrate
1066304	Chromic acetate
1066337	Ammonium bicarbonate
1072351	Lead stearate
1111780	Ammonium carbamate
1185575	Ferrous ammonium citrate
1194656	Dichlobenil
1300716	Xylenol
1303282	Arsenic pentoxide
1303328	Arsenic trisulfide
1303339	Arsenic trisulfide
1309644	Antimony trioxide
1310583	Potassium hydroxide
1310732	Sodium hydroxide

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
60004	Ethylenediaminetetraacetic acid (EDTA)
60571	Dieldrin
62533	Aniline
62737	Dichlorvos
63252	Carbaryl
64186	Formic acid
64197	Acetic acid
65860	Benzic acid

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
1314621	Vanadium pentoxide
1314803	Phosphorus pentasulfide
1314847	Zinc phosphide
1314870	Lead sulfide
1319773	Cresol (mixed)
1320189	2,4-D ester
1327533	Arsenic trioxide
1330207	Xylene
1332076	Zinc borate
1333831	Sodium bifluoride
1336216	Ammonium hydroxide
1336363	Polychlorinated biphenyls
1338245	Naphthenic acid
1341497	Ammonium bifluoride
1762954	Ammonium thiocyanate
1863634	Ammonium benzoate
1918009	Dicamba
1928387	2,4-D esters
1928478	2,4,5-T ester
1928616	2,4-D ester
1929733	2,4-D ester
2545597	2,4,5-T ester
2764729	Diquat
2921882	Chlorpyrifos
2944674	Ferric ammonium oxalate
2971382	2,4-D ester
3012655	Ammonium citrate, dibasic
3164292	Ammonium tartrate
3251238	Cupric nitrate
3486359	Zinc carbonate
5893663	Cupric oxalate
5972736	Ammonium oxalate
6060707	Ammonium oxalate
6369966	2,4,5-T ester
7428480	Lead stearate
7440235	Sodium
7446084	Selenium oxide
7448142	Lead sulfate
7447394	Cupric chloride
7558794	Sodium phosphate, dibasic
7601549	Sodium phosphate, tribasic
7631892	Sodium arsenate
7631905	Sodium bisulfite
763200C	Sodium nitrite
7645252	Lead arsenate
7646857	Zinc chloride
7647010	Hydrochloric acid
7647189	Antimony pentachloride
7664382	Phosphonic acid
7664393	Hydrofluoric acid
7664417	Ammonia
7664930	Sulfuric acid
7681494	Sodium fluoride
7681529	Sodium hypochlorite
7697372	Nitric acid
7899458	Zinc bromide
7705080	Ferric chloride
7718549	Nickel chloride
7719122	Phosphorus trichloride
7720787	Ferrous sulfate
7722847	Potassium permanganate
7723140	Phosphorus
7733020	Zinc sulfate
7758294	Sodium phosphate, tribasic
7758943	Ferrous chloride
7758954	Lead chloride
7758967	Cupric sulfate
7773060	Ammonium sulfamate
7775113	Sodium chromate

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
7778441	Calcium arsenate
7778509	Potassium dichromate
7778543	Calcium hypochlorite
7779864	Zinc hydrosulfite
7779886	Zinc nitrate
7782505	Chlone
7782630	Ferrous sulfate
7782823	Sodium selenite
7782887	Mercurous nitrate
7783188	Ammonium thiosulfate
7783359	Mercuric sulfate
7783462	Lead fluoride
7783495	Zinc fluoride
7783508	Ferric fluoride
7783564	Antimony trifluoride
7784341	Arsenic trichloride
7784409	Lead arsenate
7784410	Potassium arsenate
7784465	Sodium arsenite
7785844	Sodium phosphate, tribasic
7786347	Mevinphos
7786814	Nickel sulfate
7787475	Zirconium chloride
7787497	Beryllium fluoride
7787555	Beryllium nitrate
7788989	Ammonium chromate
7789006	Potassium chromate
7789062	Strontium chromate
7789095	Ammonium bichromate
7789426	Cadmium bromide
7789437	Cobaltous bromide
7789619	Antimony tribromide
7790945	Chlorosulfonic acid
8001352	Toxaphene
10022705	Sodium hypochlorite
10025873	Phosphorus oxychloride
10025919	Antimony trichloride
10026116	Zirconium tetrachloride
10028225	Ferric sulfate
10028247	Sodium phosphate, dibasic
10039324	Sodium phosphate, dibasic
10043013	Aluminum sulfate
10045893	Ferrous ammonium sulfate
10045940	Mercuric nitrate
10049055	Chromous chloride
10099748	Lead nitrate
10101538	Chromic sulfate
10101630	Lead iodide
10101890	Sodium phosphate, tribasic
10102064	Uranyl nitrate
10102188	Sodium selenite
10102440	Nitrogen dioxide
10102484	Lead arsenate
10108642	Cadmium chloride
10124502	Potassium arsenite
10124568	Sodium phosphate, tribasic
10140655	Sodium phosphate, dibasic
10192300	Ammonium bisulfite
10196040	Ammonium sulfite
10361894	Sodium phosphate, tribasic
10380297	Cupric sulfate, ammoniated
10415755	Mercurous nitrate
10421484	Ferric nitrate
10588019	Sodium dichromate
11115745	Chromic acid
12002038	Cupric acetoarsenite
12054487	Nickel hydroxide
12125018	Ammonium fluoride
12125029	Ammonium chloride

Environment  
TABLE  
SUBSTA

CAS No.  
12135761  
12771083  
13597994  
13746899  
13785190  
13814866  
13826830  
13852848  
14017415  
14218752  
14258492  
14307358  
14307438  
14639975  
14639986  
14644612  
15699180  
16721805  
16871719  
16919190  
16923958  
25154545  
25154556  
25155300  
25187822  
25168154  
25168267  
26264062  
27176870  
27323417  
27774138  
26300745  
20525894  
6478789  
211055  
274481  
52628258  
52740186  
53487111  
55488874  
61792072

[43 FR 1  
June 26,  
Feb. 18, 1  
FR 66802

PART 1  
PO  
HA

Sec.  
117.1 De  
117.2 Ab  
117.3 De  
ties.

117.11 C

TABLE 118.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No	Common name
101	Calcium arsenate
109	Potassium bichromate
143	Calcium hypochlorite
164	Zinc hydrosulfite
186	Zinc nitrate
305	Chlone
530	Ferrous sulfate
423	Sodium selenite
167	Mercurous nitrate
188	Ammonium thiosulfate
59	Mercuric sulfate
482	Lead fluoride
195	Zinc fluoride
308	Ferric fluoride
164	Antimony trichloride
141	Arsenic trichloride
109	Lead arsenate
110	Potassium arsenate
165	Sodium arsenite
144	Sodium phosphate, tribasic
147	Mevinphos
114	Nickel sulfate
175	Beryllium chloride
197	Beryllium fluoride
155	Beryllium nitrate
189	Ammonium chromate
306	Potassium chromate
182	Strontium chromate
395	Ammonium bichromate
426	Cadmium bromide
437	Cobaltous bromide
919	Antimony tribromide
345	Chlorosulfonic acid
152	Toxaphene
2705	Sodium hypochlorite
5873	Phosphorus oxychloride
5919	Antimony trichloride
9116	Zinc ammonium tetrachloride
3225	Furic sulfate
9247	Sodium phosphate, dibasic
3324	Sodium phosphate, dibasic
1013	Aluminum sulfate
1893	Ferrous ammonium sulfate
5940	Mercuric nitrate
1055	Chromous chloride
3746	Lead nitrate
1538	Chromic sulfate
1830	Lead iodide
1890	Sodium phosphate, tribasic
2064	Uranyl nitrate
2188	Sodium selenite
2440	Nitrogen dioxide
2484	Lead arsenate
3642	Cadmium chloride
1502	Potassium arsenite
1568	Sodium phosphate, tribasic
3655	Sodium phosphate, dibasic
2300	Ammonium bisulfite
1040	Ammonium sulfite
1894	Sodium phosphate, tribasic
3297	Cupric sulfate, ammoniated
5755	Mercurous nitrate
1484	Ferric nitrate
1019	Sodium bichromate
1745	Chromic acid
1038	Cupric acetoarsenite
1487	Nickel hydroxide
3018	Ammonium fluoride
3029	Ammonium chloride

TABLE 118.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No	Common name
2135-81	Ammonium sulfide
2111-803	Sulfur chloride
1597-994	Beryllium nitrate
3746-999	Zirconium nitrate
3765-190	Calcium chromate
3844-855	Lead fluoborate
3820-630	Ammonium fluoborate
7952-848	sec-Butylamine
4017-415	Cobaltous sulfamate
4218-752	Nickel nitrate
4258-922	Ammonium oxalate
4307-358	Ammonium chromate
4307-438	Ammonium tartrate
4679-715	Zinc ammonium chloride
4675-906	Zinc ammonium chloride
4646-172	Zirconium sulfate
5699-190	Nickel ammonium sulfate
6721-805	Sodium hydrosulfide
6871-119	Zinc silicofluoride
6919-190	Ammonium silicofluoride
6923-958	Zirconium potassium fluoride
7554-545	2-nitrobenzene
2515-556	Nitrophenol
2515-300	Sodium dodecylbenzenesulfonate
2516-922	Trichlorophenol
2516-154	2,4,5-T ester
2516-267	2,4-D ester
2626-062	Calcium dodecylbenzenesulfonate
2717-6870	Dodecylbenzenesulfonic acid
2732-347	Tetraethylenediamine dodecylbenzenesulfonate
2774-138	Vanadyl sulfate
2830-745	Antimony potassium tetratelluride
3052-5894	Paralformaldehyde
3647-8789	Uranyl nitrate
3721-1055	Nickel chloride
4250-461	Dodecylbenzenesulfonate isopropanolamine
5262-8258	Zinc ammonium chloride
5274-0166	Calcium arsenite
5346-7111	2,4-D ester
5548-8874	Ferric ammonium oxalate
6179-2072	2,4,5-T ester

[43 FR 10474, Mar. 13, 1978; 43 FR 27533, June 26, 1978, as amended at 44 FR 10268, Feb. 18, 1979; 44 FR 65400, Nov. 13, 1979; 44 FR 66602, Nov. 20, 1979]

## PART 117—DETERMINATION OF REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES

### Subpart A—General Provisions

#### Sec.

117.1 Definitions.

117.2 Abbreviations.

117.3 Determination of reportable quantities.

### Subpart B—Applicability

117.11 General applicability.

117.12 Applicability to discharges from facilities with NPDES permits.

117.13 Applicability to discharges from publicly owned treatment works and their users.

117.14 Demonstration projects.

### Subpart C—Notice of Discharge of a Reportable Quantity

117.21 Notice.

117.22 Penalties.

117.23 Liabilities for removal.

**AUTHORITY:** Secs. 311 and 501(a), Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), ("the Act") and Executive Order 11735.

**SOURCE:** 44 FR 50776, Aug. 29, 1979, unless otherwise noted.

### Subpart A—General Provisions

#### § 117.1 Definitions.

As used in this part, all terms shall have the meanings stated in 40 CFR Part 118.

(a) "Reportable quantities" means quantities that may be harmful as set forth in § 117.3, the discharge of which is a violation of section 311(b)(3) and requires notice as set forth in § 117.21.

(b) "Administrator" means the Administrator of the Environmental Protection Agency ("EPA").

(c) "Mobile source" means any vehicle, rolling stock, or other means of transportation which contains or carries a reportable quantity of a hazardous substance.

(d) "Public record" means the NPDES permit application or the NPDES permit itself and the "record for final permit" as defined in 40 CFR 124.122.

(e) "National Pretreatment Standard" or "Pretreatment Standard" means any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the Act, which applies to industrial users of a publicly owned treatment works. It further means any State or local pretreatment requirement applicable to a discharge and which is incorporated into a permit issued to a publicly owned treatment works under section 402 of the Act.