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Questions and Answers on Release Notification Requirements and Reportable Quantity Adjustments

NOTICE

The Questions and Answers presented here are provided as general guidance on complying with the requirements for reporting releases of hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (section 103), and the Emergency Planning and Community Right-to-Know Act (section 304). The information does not represent formal rulemaking by the Environmental Protection Agency. It cannot be relied upon to determine compliance with the law nor to create rights enforceable by any party in litigation with the United States. Instead, the applicable statutes and regulations should be consulted directly.

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ACRONYM LIST

BHP	Biodegradation, hydrolysis or photolysis
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
Ci	Curie
CWA	Clean Water Act
DOT	Department of Transportation
EHS	Extremely hazardous substance
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERD	Emergency Response Division
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FR	Federal Register
ICR	Ignitability, corrosivity, and reactivity
LEPC	Local emergency planning committee
NESHAPS	National emission standards for hazardous air pollutants
NRC	National Response Center
NSPS	New source performance standards
NPRM	Notice of proposed rulemaking
OSC	On-scene coordinator
POTW	Publicly owned treatment work
RCRA	Resource Conservation and Recovery Act
RQ	Reportable quantity
SERC	State emergency response commission
SSI	Statistically significant increase
TCLP	Toxicity characteristic leaching procedure
TPQ	Threshold planning quantity
TSCA	Toxic Substances Control Act

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Administrative reporting exemptions, radionuclides	57 FR 56726, November 30, 1992
CAA hazardous air pollutants, RQ adjustment	58 FR 54836, October 22, 1993
CERCLA hazardous substances	54 FR 3388, January 23, 1989
Continuous releases, reporting requirements	55 FR 30166, July 24, 1990, 40 CFR 302.8
Continuous releases, routine, anticipated, and intermittent	55 FR 30169, July 24, 1990
CWA reporting requirements	50 FR 13473, April 4, 1985, 40 CFR 117.3
EHS, list	40 CFR Part 355
EHS, screening criteria	51 FR 41570, November 17, 1986
Federally permitted release exemption	53 FR 27268, July 19, 1988 54 FR 29306, July 11, 1989
Hazardous Substances, List and Reportable Quantities	40 CFR 302.4
Mixture rule	40 CFR 302.6(b)
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Owner or operator	52 FR 13383, April 22, 1987
Person in charge	50 FR 13459, April 4, 1985
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Release, aggregated	50 FR 13459, April 4, 1985
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Release, metal particles	50 FR 13461, April 4, 1985
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Introduction

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, gives the Federal government authority to compel parties responsible for releases of hazardous substances to remove them, and to take action to remedy any danger they pose to human health, welfare, and the environment. It also gives the government authority to respond directly to these releases in appropriate circumstances, and it creates a framework within which the government can exercise its role. Many of CERCLA's provisions deal with cleanup, liability, and compensation associated with inactive or abandoned hazardous waste sites. Equally important sections address responsibilities for reporting and responding to releases of hazardous substances as they occur.

CERCLA establishes a list of "hazardous substances." There are now about 800 specific substances and 1500 radionuclides. These substances were first identified under other statutes, including the Clean Water Act (CWA), the Clean Air Act (CAA), and the Resource Conservation and Recovery Act (RCRA). CERCLA authorizes the Administrator of the EPA to add to this list "substances which, when released into the environment may present substantial danger to the public health or welfare or the environment..."

For each CERCLA hazardous substance, EPA establishes a reportable quantity (RQ). For hazardous substances that are not radionuclides, RQs are established at 1, 10, 100, 1,000, or 5,000 pounds. The RQs for radionuclides are expressed in curies, and range from 0.001 to 1,000 curies. These RQs serve as reporting triggers. When an RQ or more of a hazardous substance is released into the environment, the person in charge of the facility or vessel from which the release occurs must immediately report it to the National Response Center (NRC) under CERCLA. Under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), the owner or operator of a facility also must notify the appropriate State and local authorities of such releases.

CERCLA establishes statutory one-pound RQs for all hazardous substances that did not already have RQs established under the CWA. It charges EPA with adjusting the RQs by regulation. These regulations are published in the U.S. Code of Federal Regulations (CFR).

EPA is providing this document to promote better understanding of CERCLA and EPCRA release notification requirements and RQ adjustment issues. Questions are organized by broad subject categories. The table of contents lists topics addressed in each subject section. An index helps the reader locate questions according to key words or issues, and a regulatory index lists topic areas with corresponding regulatory citations where topics are addressed in more detail.

To resolve a question, a reader should first consult the table of contents. As an example, a reader looking for information about hazardous substance releases which may be exempted from reporting under CERCLA will find under "Notification" a reference to releases excluded from CERCLA reporting. The reader will find four questions in that section of the document addressing reporting exemptions. Still more information can be found by turning to the regulatory index, where several regulatory citations addressing reporting exemptions are listed.

Many common concerns are reflected in letters and telephone calls the Agency receives from members of the regulated community, and these are addressed in the document. Readers with additional questions on release notification requirements and RQ adjustments may submit them to EPA using the form on page 40. The Agency welcomes such questions, and will consider them for subsequent editions of this document.

Notification

Who Is Required to Notify?

1. Under CERCLA, who is responsible for reporting releases and when must the report be made?

Section 103 of CERCLA requires the person in charge of a facility or vessel, as soon as he or she has knowledge of a release of a hazardous substance in an amount equal to or greater than an RQ, to report the release immediately to the NRC. The NRC number is 1-800-424-8802, or (202) 267-2675 in the Washington, DC area.

2. How does one determine who is the person in charge?

Determining who is the person in charge depends on a number of variables, including the specific operation involved, the management structure, and other case-specific considerations. EPA believes that it is unnecessary and impractical for the government to determine the person in charge at all entities affected by CERCLA. The management of the affected organizations should designate the specific individual(s) or position(s) responsible for reporting releases (50 FR 13459, April 4, 1985).

3. Under EPCRA, who is responsible for reporting releases and when must the report be made?

Under section 304 of EPCRA, the owner or operator of a facility is required to report immediately to the appropriate State emergency response commissions (SERCs) and local emergency planning committees (LEPCs) when there is a release of a CERCLA hazardous substance or of an extremely hazardous substance (EHS) at or above the RQ.

4. Who is the owner or operator?

EPCRA section 304 allows either the owner or operator of a facility to give notice after a release. Owners and operators may make their own arrangements concerning which party is to provide release notification; however, under EPCRA section 304 both the owner and operator are responsible if no notification is provided (52 FR 13383, April 22, 1987).

5. What facilities or vessels are covered under CERCLA release reporting requirements?

CERCLA section 101(9) defines facility broadly to include any site or area where a hazardous substance is located, but the definition specifically excludes consumer products in consumer use. Vessel is defined in CERCLA section 101(28) as any watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water. See question 53 for further discussion of what facilities or vessels are not covered under release reporting requirements.

6. What facilities are covered under EPCRA release reporting requirements?

EPCRA section 329(4) defines facility to include stationary structures on a single site, or on contiguous or adjacent sites owned or operated by the same person. For purposes of release reporting under EPCRA section 304, motor vehicles, rolling stock, and aircraft are included in the definition of facility. However, the only covered facilities are those that produce, use, or store a "hazardous chemical." See question 53 for further discussion of what facilities are not covered under release reporting requirements.

What Information Must Be Provided?

7. What information does the NRC request from individuals reporting a release?

When reporting a release, the person making the report should provide as much of the following information as possible:

- Name, address, and telephone number of the person reporting and the responsible party;
- Specific location of the incident;
- Date and time the incident occurred or was discovered;
- Name of the material released;
- Source and cause of the release;
- Total quantity discharged;
- Medium into which the substance was discharged;
- Amount spilled into water;
- Weather conditions;
- Name of the carrier or vessel, the railcar/truck number, or other identifying information;
- Number and type of injuries or fatalities;
- Whether an evacuation has occurred;
- Estimation of the dollar amount of property damage;
- Description of current and future cleanup actions; and
- Other agencies notified or about to be notified.

8. What information must be provided when reporting releases under EPCRA?

EPCRA section 304(b)(1) directs that notice include the following information, if known, and if inclusion will not cause a delay in responding to the emergency:

- Chemical name or identity of the released substance(s);
- Whether the substance is an EHS;
- Estimate of the quantity of the substance released;
- Time and duration of the release;
- Media into which the release occurred;
- Associated health risks and medical attention necessary for exposed individuals;
- Precautions to take due to the release; and
- Name and telephone number of contact person for further information.

As soon as practicable after this initial notice, EPCRA section 304(c) requires the facility owner or operator to submit written follow-up notices providing and updating the initial notice's information and including additional information regarding response actions taken, any known or anticipated acute or chronic health risks associated with the release, and, where appropriate, advice on medical attention for exposed individuals.

9. What information must be provided when reporting a continuous release?

A continuous release is a release that occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes. There are four steps in the continuous release notification process: (1) initial telephone notification (to the NRC, SERC, and LEPC); (2) initial written notifications to the appropriate EPA Regional Office (within 30 days of the initial telephone notification); (3) follow-up written reports; and (4) change notifications. Details on the information required are found in 40 CFR 302.8. A general description of the information required follows. For more detailed information concerning the continuous release reporting requirements, see U.S. EPA, *Reporting Requirements for Continuous Releases of Hazardous Substances: A Guide for Facilities and Vessels on Compliance*," Office of Emergency and Remedial Response, OSWER Directive 9360.7-01, October 1990. Questions 57, 58, and 59 provide more information on continuous releases.

The person in charge is required to provide the following information in the initial telephone notification:

- Statement that this is an initial telephone notification of a continuous release;
- Name and location of the facility or vessel responsible for the release; and
- Name and identity of each hazardous substance released.

The initial written notification must include the following types of information:

- General information on the facility or vessel, and the area surrounding the facility or vessel; and
- Source information, including the identity of each release source, the names and quantities of the hazardous substances released from each source, the basis for stating that the release qualifies as continuous and stable in quantity and rate, the environmental medium affected by the release, the normal range of the release from the source, and the frequency of the release from each source.

The information required in the written follow-up report is identical to that required in the initial written notification, but it is based on release data gathered over the year (i.e., during the period since the submission of the initial written report). If there are any changes in a continuous release, the EPA Regional Office must be notified. If there is a change in the source or composition of a continuous release, the release is considered a "new" release.

Who Must Be Notified?

10. Who must be notified of a release under CERCLA?

One call to the NRC fulfills the requirement to report releases of hazardous substances under CERCLA and several other regulatory programs, including those under CWA section 311, RCRA, and the U.S. Department of Transportation's Hazardous Materials Transportation Act. If direct reporting to the NRC is not practicable, reports may be made to the EPA predesignated On-Scene Coordinator (OSC) for the geographic area where the release occurred. All such reports must be relayed promptly to the NRC. If it is not possible to notify the NRC or the OSC immediately, reports may be made immediately to the nearest Coast Guard unit, provided that the person in charge notifies the NRC as soon as possible (40 CFR Part 300 and 33 CFR Part 153).

11. Who must be notified of a release under EPCRA?

The notice required by section 304 of EPCRA is to be given by the owner or operator of a facility (by telephone, radio, or in person) immediately after the release of a CERCLA hazardous substance or of an EHS at or above the RQ. Notice is to be given to both the community emergency coordinator for each LEPC for any area likely to be affected by the release and to the SERC of any State likely to be affected by the release. Notice requirements for transportation-related releases are satisfied by dialing 911 or, in the absence of a 911 number, calling the operator and providing the release information.

12. When is a release reportable to State and local response authorities?

EPCRA State and local emergency notification requirements apply to the release of a CERCLA hazardous substance or an EHS in an amount equal to or greater than their RQs. EPCRA exempts from State and local reporting releases that result in exposure to persons solely within the site or sites on which a facility is located. See questions 52, 53, 54, 55, and 56 for additional release exclusions, and the flowchart on page 22 for more information on release reporting requirements.

13. Are reports made to State and local government agencies relayed to the NRC and, if so, does the original call satisfy reporting requirements under CERCLA section 103?

Although reports are sometimes passed on to the NRC by State and local government agencies, a person responsible for reporting under CERCLA relies on such state or local "relay" of information at his or her own risk. This relay of information does not automatically satisfy CERCLA reporting requirements and state or local agencies cannot be responsible for an individual's compliance with a Federal statute. CERCLA section 103(a) specifically requires the person in charge of a vessel or facility to report immediately to the NRC a release of a hazardous substance whose amount equals or exceeds the assigned RQ. If the appropriate information is not received within an appropriate timeframe at the NRC, the person responsible for CERCLA reporting still may be found not to have complied with the section 103 notification requirements.

14. Would the NRC need to be notified of a release of a hazardous substance in an amount equal to or exceeding an RQ at a Superfund site during cleanup activities?

Yes. Unless otherwise exempted from CERCLA section 103 notification requirements, a release of a hazardous substance that equals or exceeds its RQ, including a release from a Superfund site (including a Federal facility) that occurs during cleanup activities, must be reported to the NRC. If, however, a release of a hazardous substance from a Superfund site is "continuous" (occurs without interruption, or is routine, anticipated, and incidental to normal operations), the release may be reportable under the reduced reporting provisions of the continuous release reporting regulation (see 40 CFR 302.8). See question 15 for information on reporting requirements for Federal facilities.

15. Would the NRC need to be notified of a release of a hazardous substance in an amount equal to or exceeding an RQ at a Federal facility?

Yes. Under CERCLA section 120, all requirements of CERCLA apply to the Federal government in the same manner and to the same extent that they apply to any non-governmental entity. Therefore, even if the Superfund site is a Federal facility, the section 103 notification requirements apply.

What Substances Are Covered?

Hazardous Substance Definitions

16. CERCLA section 103 release reporting requirements apply to "hazardous substances." How are CERCLA hazardous substances defined?

CERCLA section 101(14), as amended, defines "hazardous substance" by referencing other environmental statutes, including:

- CWA sections 311 and 307(a);
- CAA section 112;
- RCRA section 3001; and
- TSCA section 7.

CERCLA section 102(a) also gives EPA authority to designate additional hazardous substances not listed under the statutory provisions cited above. There are currently about 800 CERCLA hazardous substances. In addition, there are approximately 1,500 known radionuclides, approximately 760 of which are listed individually in 40 CFR 302.4, Table 302.4, Appendix B. The flowchart on page 22 provides more information on release reporting requirements.

17. EPCRA section 304 release reporting requirements apply to CERCLA hazardous substances and EPCRA extremely hazardous substances (EHSs). What are EHSs?

The EHS list was first compiled by EPA, and subsequently incorporated into EPCRA, to identify chemicals that could cause serious irreversible health effects from accidental releases. EHSs are listed in 40 CFR Part 355. The flowchart on page 22 provides more information on release reporting requirements for EHSs.

18. How are EHSs related to CERCLA hazardous substances?

There are currently about 360 EHSs defined under EPCRA section 302; over a third of them are also CERCLA hazardous substances. Aside from this overlap of listed substances, CERCLA and EPCRA also have closely related notification requirements when releases of CERCLA hazardous substances occur.

19. What are radionuclides and what reporting requirements apply to their release?

A radionuclide is a type of atom with an unstable nucleus. The atom releases energy by a process of decay called radioactivity. There are approximately 1,500 known radionuclides.

All radionuclides are hazardous substances because they are designated generically as hazardous air pollutants by CAA section 112 and CERCLA section 101(14)(E) defines the term "hazardous substance" to include CAA hazardous air pollutants. Even though the source of their listing is the CAA, releases of radionuclides to all media — not just to air — are covered by CERCLA's reporting requirements.

On May 24, 1989, EPA issued a final regulation adjusting the statutory RQ for radionuclides. The adjusted RQs for radionuclides are in units of curies (Ci), which provide a measure of the amount of radioactivity emitted by a radionuclide. EPA established the adjusted radionuclide RQs in units of curies rather than pounds (like the RQs for other hazardous substances) because curies better reflect the intrinsic hazard posed by radionuclides and because the unit is more commonly used by people who handle radionuclides. The final radionuclide RQ adjustment rulemaking establishes seven RQ categories: 0.001, 0.01, 0.1, 1, 10, 100, and 1,000 Ci. A total of approximately 760 radionuclides are listed individually and assigned to one of these RQ categories. All other radionuclides not listed individually are assigned an RQ of 1 Ci.

20. What are the reporting requirements for discharges of oil?

If a discharge of oil reaches waters of the United States, it is reportable to the NRC under 40 CFR Part 110, which was established under the authority of the CWA. Discharges of oil must be reported if they "(c)ause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines." (40 CFR 110.3(b))

21. Would disposal of a hazardous substance into a RCRA Subtitle C permitted facility or interim status facility be reportable?

No. The disposal of hazardous substances into a disposal facility in accordance with EPA regulations is not subject to CERCLA notification provisions. Where the disposal of wastes into permitted or interim status facilities is properly documented through the RCRA manifest system and RCRA regulations are followed, notification under CERCLA does not provide a significant additional benefit, if the facility is in compliance with all applicable regulations and permit conditions. For example, if a waste generator or building owner or operator properly disposes of lamps containing one pound or more of mercury into a RCRA-permitted facility during a 24-hour period, the generator or owner or operator would not be required to report the release under CERCLA. Where the person in charge knows that the facility is not in substantial compliance, that person must report the disposal of an RQ or more of a hazardous substance to

the NRC. Of course, spills and accidents occurring during disposal that result in the release of an RQ or more of a hazardous substance must also be reported to the NRC.

Hazardous Substances Lists

22. What is the relationship between the hazardous substance lists under the CWA and under CERCLA?

All CWA hazardous substances are CERCLA hazardous substances (only some CERCLA hazardous substances are CWA hazardous substances). Table 117.3 in 40 CFR 117.3, which is entitled "Reportable Quantities of Hazardous Substances," lists substances that were designated as hazardous under section 311(b)(4) of the CWA. Table 117.3 provides the CWA RQs for the substances. Substances designated under this section of the CWA are automatically CERCLA hazardous substances because CERCLA section 101(14) defines "hazardous substance" chiefly by reference to lists under other statutes, including CWA section 311(b)(4) (see CERCLA section 101(14)(A)). Therefore, all of the hazardous substances in Table 117.3 are also in 40 CFR 302.4, Table 302.4, the list of CERCLA hazardous substances. Table 302.4 identifies by the digits "1" and "2" in the statutory code column those substances listed under sections 311(b)(4) and 307(a) of the CWA, respectively.

23. What is the relationship between CERCLA hazardous substances and the U.S. Department of Transportation's (DOT) Hazardous Materials Regulations?

CERCLA section 306(a), as amended, requires the DOT to list and regulate as hazardous materials all CERCLA hazardous substances. Thus, all CERCLA hazardous substances are covered by the DOT's Hazardous Materials Regulations. The DOT Hazardous Materials Regulations (see 49 CFR Parts 171 and 172) require that when these materials are shipped in quantities equal to or greater than their RQs, and are present in a single package, above certain concentration thresholds (49 CR 171.8), they must be identified as such on shipping papers and by package markings. See question 47 for more information on concentration cutoffs for RQs.

24. Can releases of wastes that are not individually listed as CERCLA hazardous substances still be subject to CERCLA reporting requirements?

Yes. CERCLA reporting requirements apply not only to all of the substances individually listed in 40 CFR 302.4, but also to wastes or waste streams exhibiting the characteristics of ignitability, corrosivity, reactivity, or toxicity under RCRA. The release of a non-designated substance exhibiting any of these four RCRA characteristics is a release of a hazardous substance if the substance is a waste prior to release or becomes a waste after release. Under RCRA regulations, a substance becomes a waste after release if it is not cleaned up or if it is cleaned up only for eventual disposal.

Wastes or waste streams exhibiting the characteristics of ignitability, reactivity, or corrosivity have RQs of 100 pounds. The RQs of wastes or waste streams that exhibit the characteristic of toxicity have the RQs of the contaminant on which the toxicity characteristics are based.

25. What tests can be used to determine whether a waste exhibits the RCRA characteristic of toxicity?

In 1990, EPA replaced the extraction procedure test for determining whether wastes exhibit the toxicity characteristic with the toxicity characteristic leaching procedure (TCLP) (55 FR 11876, March 29, 1990). Currently, a waste is considered toxic if an extract obtained from a sample of the waste using the TCLP contains any of 25 organic constituents listed in the regulation in concentrations at or above specified levels. Wastes that exhibit the RCRA toxicity characteristic are automatically RCRA hazardous wastes and, therefore, CERCLA hazardous substances.

26. The CERCLA list contains generic classes of compounds (e.g., chlorinated benzenes, phthalate esters, etc.). If a compound is not individually listed but falls under one of these generic listings, how do CERCLA reporting requirements apply to it?

To date, the Agency has not established any RQs for the CWA broad generic classes of compounds that are CERCLA hazardous substances. Therefore, releases of substances that are not individually listed, but fall within these categories, currently do not have to be reported under section 103. Releases of these substances that are excluded from reporting requirements, however, would remain subject to other CERCLA provisions, including liability for cleanup costs, and natural resource damages.

27. If a company has had its petition to delist a specific RCRA hazardous waste granted by an EPA-approved State RCRA program, and that company releases this waste in excess of its RQ, is it required to notify the NRC?

Under RCRA regulations, a person may petition to exclude a waste at a particular generating facility from the list of hazardous wastes. The petitioner must demonstrate that the waste produced by that facility does not meet any of the criteria under which the waste type was listed or characterized as hazardous. If granted, the exclusion applies only to the waste generated at the individual facility covered by the petitioner's demonstration. If the waste "has been shown not to contain constituents or exhibit characteristics that are considered hazardous under RCRA," and does not contain any other listed CERCLA hazardous substance, the exempted waste is not subject to CERCLA notification requirements.

28. Phenylenediamine (para-isomer) is listed under the CAS number 106503 in Appendix A to 40 CFR 302.4, Table 302.4. 2-Chloro-1,3-butadiene is listed in the same appendix under CAS number 126998. Neither of these substances is represented in the alphabetical listing in Table 302.4. Are these hazardous substances under CERCLA? If so, what are their respective RQs?

When phenylenediamine (para-isomer) and 2-chloro-1,3-butadiene were originally listed in Appendix A of 40 CFR 302.4, neither of the substances had been designated as a hazardous substance under CERCLA. These two substances are components of hazardous waste streams. When the waste streams that contain phenylenediamine and 2-chloro-1,3-butadiene were added to Appendix A, these two waste stream constituents were also added to the Appendix A list. Because neither of the substances were specifically listed CERCLA hazardous substances, they should not have been included in either 40 CFR 302.4, Table 302.4 or Appendix A of 40 CFR 302.4.

Since then, phenylenediamine (para-isomer) and 2-chloro-1,3-butadiene have become CERCLA hazardous substances. CERCLA section 101(14)(E) defines hazardous substances to include "any hazardous air pollutant listed under section 112 of the Clean Air Act." In November of 1990, phenylenediamine (para-isomer) (CAS number 106503, also known as p-phenylenediamine) and 2-chloro-1,3-butadiene (CAS number 126998, also known as chloroprene) were added to the list of hazardous air pollutants under section 112 of the Clean Air Act. Consequently, these two substances were automatically designated as CERCLA hazardous substances pursuant to CERCLA section 101(14)(E), and were assigned one-pound RQs. The Agency published a proposed rule to adjust these statutory one-pound RQs on October 22, 1993 (58 FR 54836). When this rule is promulgated, p-phenylenediamine and chloroprene will be included in 40 CFR 302.4, Table 302.4 and Appendix A of 40 CFR 302.4.

29. How does EPA choose the chemical name(s) to list for each substance on the List of Hazardous Substances at Table 302.4 of 40 CFR 302.4?

A single chemical may often be known by several different names. To avoid confusion, the Agency has limited the chemical names listed in 40 CFR 302.4, Table 302.4 to the name(s) used to identify each substance under the environmental statutes and implementing regulations incorporated in the definition of hazardous substance (see CERCLA section 101(14)). If a substance has more than one chemical name listed under these other statutes or regulations, each chemical name will appear as a separate entry (with the same CAS Registry Number) in Table 302.4. (See 48 FR 23554, May 25, 1983 and 50 FR 13460, April 4, 1985).

30. What determines whether a "Regulatory Synonym" is listed for a substance in Table 302.4 of 40 CFR 302.4?

In general, no entry is made in the "Regulatory Synonym" column of 40 CFR 302.4, Table 302.4 for a substance if only one chemical name is used to identify that substance under the environmental statutes and implementing regulations referred to in CERCLA section 101(14). If,

however, a substance has more than one chemical name listed under these other statutes or regulations, then: (1) each chemical name will appear as a separate entry in Table 302.4 (as noted in question 29); and (2) each entry will include the other chemical name(s) (appearing as separate entries in Table 302.4) for that substance in the "Regulatory Synonym" column.

31. What is the RQ for a PCB aroclor specifically listed in Table 302.4?

Aroclors are listed in two different ways in 40 CFR 302.4, Table 302.4. First, seven aroclors (Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, and Aroclor 1260) are specifically listed alphabetically (under "A") in Table 302.4. The one-pound RQs for each of these seven aroclors appear next to this alphabetical listing. Second, these same seven aroclors are listed beneath the listing of the category "POLYCHLORINATED BIPHENYLS (PCBs)" in Table 302.4. The one-pound RQs for the seven aroclors, however, have not been repeated in this second listing. An RQ of one pound has been established, and is listed in Table 302.4, for the category "POLYCHLORINATED BIPHENYLS (PCBs)."

32. Are the CWA broad generic categories for which no RQ has been established subject to other provisions of CERCLA?

Yes. Releases of compounds within these categories, although not reportable under CERCLA section 103 (unless the compound is listed separately in 40 CFR 302.4, Table 302.4), would remain subject to response (section 104), abatement (section 106), and liability (section 107) provisions under CERCLA.

Petroleum Exclusion

33. What is the CERCLA petroleum exclusion?

The term "hazardous substance" is defined in CERCLA section 101(14) to include substances listed under four other environmental statutes (as well as those designated under CERCLA section 102(a)). The definition excludes "petroleum, including crude oil or any fraction thereof," unless specifically listed or designated under CERCLA. See question 34.

34. What substances are specifically excluded from CERCLA regulation by the petroleum exclusion?

EPA interprets CERCLA section 101(14) to exclude crude oil and fractions of crude oil — including the hazardous substances, such as benzene, that are indigenous in those petroleum substances — from the definition of hazardous substance. Under this interpretation, petroleum includes hazardous substances that are normally mixed with or added to crude oil or crude oil fractions during the refining process. This includes indigenous hazardous substances, the levels of which are increased as a normal part of the refining process. However, hazardous substances that are added to petroleum or that increase in concentration as a result of contamination of the

petroleum during use are not considered part of the petroleum, and are therefore regulated under CERCLA. For example, releases of oils that have had hazardous substances added to them subsequent to the petroleum refining process are not excluded from CERCLA regulation. In addition, some oils are regulated under CERCLA because they are specifically listed. For example, 40 CFR 302.4, Table 302.4 specifically lists a number of waste oils (e.g., F010, and K048 through K052) and their RQs. If these waste oils are released in quantities equal to or greater than their RQs, the release must be reported. (See question 20 for CWA requirements for reporting oil discharges.) The definition of hazardous substance also excludes natural gas, natural gas liquids, liquified natural gas, and synthetic gas usable for fuel.

35. Does blended (oxygenated) gasoline fall within the scope of the CERCLA petroleum exclusion?

Historically, the Agency has interpreted the CERCLA section 101(14) petroleum exclusion to cover crude oil and the crude oil constituents that are indigenous to the petroleum (e.g., xylene), or that are normally mixed with or added to crude oil or crude oil fractions during the refining process (e.g., tetraethyl lead). On August 12, 1983, EPA's Office of General Counsel (OGC) issued a memorandum indicating that gasoline blended during the refining process is within the scope of the petroleum exclusion. In particular, the 1983 OGC memo stated that "[b]ecause virtually all of the gasoline which is sold as motor transportation fuel is blended gasoline rather than raw gasoline, a reasonable interpretation of the petroleum exemption is that it applies to the blended gasoline product as well as raw gasoline." Under this interpretation, oxygenated gasoline, which may involve the blending of a CERCLA hazardous substance into gasoline, whether the blending takes place at a refinery or a terminal, would fall within the petroleum exclusion. Therefore, the blended gasoline would not be a hazardous substance and would not be subject to CERCLA reporting, response, or liability requirements.

36. Are mineral spirits considered petroleum derivatives and therefore excluded from the CERCLA definition of hazardous substance?

In most cases, yes. CERCLA section 101(14) specifically excludes petroleum from the definition of hazardous substance, consequently petroleum releases are not subject to CERCLA reporting and liability provisions. As mentioned in question 33, the petroleum exclusion includes "crude oil or any fraction" of petroleum unless the fraction is specifically listed or designated under the statute.

Mineral spirits, also known as Stoddard solvent, naphtha, or white spirits, are usually derived from refined petroleum distillates from the light end of crude oil but could possibly be derived from coal. Mineral spirits that are distilled from petroleum are considered petroleum for the purpose of CERCLA section 101(14) and, therefore, are excluded from the definition of hazardous substance.

Mineral spirits often contain substances, such as toluene, that are CERCLA hazardous substances. If these substances are present naturally or are added to petroleum-derived mineral spirits in the

normal refining process, then they would be excluded as petroleum. However, hazardous substances added to mineral spirits outside the refining process, or that increase in concentration solely as a result of contamination during use, are not part of the "petroleum" and, thus, are not excluded from CERCLA regulation. In such cases, EPA may respond to releases of the added substance, but not the mineral spirits.

There are circumstances in which mineral spirits could be regulated as a hazardous substance. For instance, coal-derived mineral spirits would not qualify for the petroleum exclusion and potentially could be regulated as a hazardous substance. In addition, the exclusion would not apply if the mineral spirits were "specifically listed or designated" under one of the statutory provisions cited in section 101(14) of CERCLA.

Mixture Rule

37. How are mixtures of hazardous substances (other than radionuclides) reported?

EPA issued the "mixture rule" (40 CFR 302.6(b)), developed in connection with CWA section 311 regulations, as a method for determining when to report releases of mixtures or solutions. Under the mixture rule, if the quantities (or concentrations) of all the hazardous constituents of the waste stream are known, notification is required only where an RQ or more of any hazardous constituent is released. However, if the quantity of one or more of the hazardous constituents of the waste is not known, notification is required where the total amount of the waste released equals or exceeds the RQ for the hazardous constituent with the lowest RQ (i.e., the RQ for the waste stream). See questions 41 and 42 for information on how radionuclides are reported. **Exhibit 1** provides several scenarios that show how the mixture rule works.

38. Where there are several waste streams with the same identification number, is it sufficient to know the average quantities, or the maximum observed quantity, of hazardous constituents of the waste streams in order to apply the mixture rule to all of them?

No. The mixture rule provision applies only to the particular waste stream for which the quantities of all the hazardous constituents are known. Thus, knowledge that the average quantities of hazardous constituents — or the maximum observed quantity in a waste stream with the same identification number — are below their respective hazardous constituent RQs is not a sufficient basis for applying the mixture rule to all waste streams with that identification number. In such a case, the provision could be applied only to the individual waste streams for which the quantities of hazardous constituents are known.

39. Are facilities required to determine the quantities or concentrations of hazardous constituents released within a waste stream that is listed under CERCLA?

No. The determination of the exact quantities of hazardous substances released in a mixture, solution, or waste stream may be difficult; such a determination is not required by CERCLA. Potential releasers may choose instead, as provided by 40 CFR 302.6(b), to report waste stream releases when the total amount of the waste stream released equals or exceeds the RQ listed for

EXHIBIT 1
Mixture Rule Scenarios

1) **Lead metal (10-pound RQ) is the hazardous constituent with the lowest RQ in a waste stream. The quantity of lead in the waste stream is not known. When would this release be reportable?**

   Because the quantity of lead in the waste stream is not known, reporting would be required where the amount of the waste stream released is 10 pounds or more.

2) **A D001 waste is composed of 50% acetone (listed with an RQ of 5,000 pounds) and 50% tert-butylamine (listed with an RQ of 1,000 pounds). One 55-gallon drum spills to the soil. Is this release reportable?**

   The concentration of both hazardous constituents (acetone and tert-butylamine) in this particular waste is known. Thus, under the mixture rule, notification would be required only where an RQ or more of the constituents of the waste, acetone or tert-butylamine, is released. In this 55-gallon release scenario, based on the volume and density of the constituents, roughly 200 pounds of each hazardous constituent would be spilled; consequently, neither the 5,000-pound RQ for acetone nor the 1,000-pound RQ for tert-butylamine would be met or exceeded. Therefore, under the mixture rule, this spill would not be reportable under CERCLA.

3) **4,000 pounds of a D001 waste is released to the soil. 400 pounds of the waste is acetone (with a 5,000-pound RQ). The remaining 3,600 pounds is comprised of tert-butylamine (with a 1,000- pound RQ) and kerosene (not specifically listed), but in unknown proportions. Is the release reportable?**

   First, the waste is not reportable by virtue of its acetone content because the 400 pounds of acetone in the waste is less than its 5,000-pound RQ. The remaining 3,600 pounds of the waste is a mixture of tert-butylamine and kerosene. Kerosene is a petroleum fraction and is "not otherwise specifically listed or designated as a hazardous substance." Thus, under the CERCLA petroleum exclusion (see questions 33, 34, and 35), the kerosene component of the waste also is not reportable. Finally, because the exact quantity of tert-butylamine is unknown, but the quantity of the mixture of tert-butylamine and kerosene (3,600 pounds) is known and exceeds the RQ for tert-butylamine (1,000 pounds), according to the mixture rule, the facility must report a release of tert-butylamine to the NRC and to State and local authorities.

the waste stream constituent with the lowest RQ.

40. In determining whether an RQ has been released, are the quantities of different hazardous constituents additive under the mixture rule?

No. RQs of different substances are not additive under the mixture rule; releasing a mixture containing half an RQ of one hazardous substance (other than radionuclides) and half an RQ of another hazardous substance does not require a report.

41. How are mixtures of radionuclides reported if the composition of the mixture is known?

The requirements for reporting mixtures of radionuclides depend on whether the composition of the mixture is known or unknown. If the identity and quantity (in curies) of each radionuclide involved in a release is known, the decision whether to report the release must be made in the following manner: for each radionuclide in the mixture, determine the ratio between the quantity released and the RQ for the radionuclide. If the sum of the ratios for all radionuclides is less than one, the release need not be reported. If the sum of the ratios is equal to or greater than one, the release must be reported to the NRC.

42. How are mixtures of radionuclides reported if the composition of the mixture is unknown?

If the composition of the radionuclide mixture is unknown, there are two main possibilities: (1) the identity of the radionuclides is known but the quantities of one or more of the radionuclides released are not; or (2) the identity of one or more of the radionuclides released is not known. In the first situation (identity known, but quantity unknown), the RQ for the mixture is the lowest RQ of any radionuclide in the mixture. In the second situation (identity of radionuclides unknown), the release must be reported if the total release is equal to or greater than 1 Ci, or if the total release is equal to or greater than the lowest RQ of any known radionuclide in the mixture, whichever is lower. **Exhibit 2** provides the RQs for four common radionuclide mixtures.

EXHIBIT 2
Reportable Quantities for Four Common Radionuclide Mixtures

For convenience, EPA has used the mixture rule to calculate the RQs for four common radionuclide mixtures:

Radionuclide	RQ
Radium-226 in secular equilibrium with its daughters	0.053 Ci
Natural uranium	0.1 Ci
Natural uranium in secular equilibrium with its daughters	0.052 Ci
Thorium-232 in secular equilibrium with its daughters	0.011 Ci

What Are RQ Levels?

43. How many RQ levels are there for CERCLA hazardous substances?

For purposes of establishing RQ adjustments under CERCLA, EPA has adopted the five RQ levels of 1, 10, 100, 1,000, and 5,000 pounds originally established pursuant to CWA section 311 (40 CFR Part 117). The Agency adopted the CWA five-level system primarily because: (1) it had been successfully used for the CWA; (2) the regulated community was already familiar with these five levels; and (3) it provides a relatively high degree of discrimination among the potential hazards posed by different CERCLA hazardous substances.

There are seven RQ levels for radionuclides: 0.001, 0.01, 0.1, 1, 10, 100, and 1,000 Ci. See question 19 for more information on radionuclide reporting requirements.

What Constitutes a Release Under CERCLA?

44. How is the term "release" defined?

CERCLA section 101(22) defines "release" as 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)...." The flowchart on page 22 summarizes reporting requirements under CERCLA section 103 and EPCRA section 304.

45. How is the term "environment" defined?

CERCLA section 101(8) defines "environment" as "(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 Fishery Conservation and Management Act of 1976, 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."

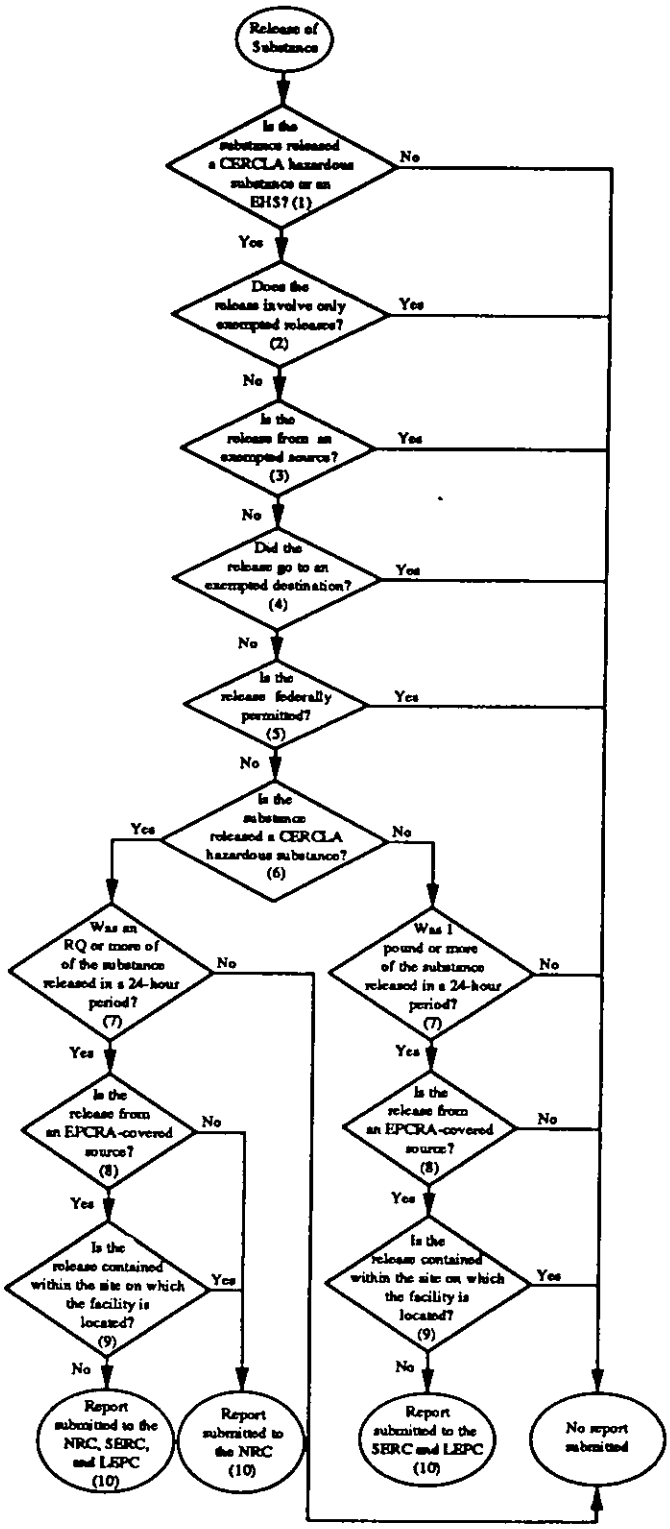
46. Over what time period must an RQ of a hazardous substance be released for that release to be reportable?

EPA has stated that the period during which the person in charge must measure whether an RQ or more has been released is 24 hours (50 FR 13463, April 4, 1985). Reporting must occur immediately upon knowledge of the release.

47. Is there a concentration cutoff below which it is not necessary to report a release, even though an RQ might have been exceeded over a 24-hour period?

No. There are no concentration cutoffs for the RQs (i.e., a lower-bound concentration below which reporting would not be required). Unless permitted or exempted, the release of an RQ or more of a hazardous substance must be reported, regardless of the concentration of the substance released. Notification of releases of hazardous substances that equal or exceed an RQ, even those with relatively low concentrations, is mandated by CERCLA and EPA believes that such reports are essential to allow government personnel to decide whether a response action is necessary to protect public health or welfare or the environment.

REPORTING REQUIREMENTS FOR RELEASES OF SUBSTANCES (CERCLA SEC. 103 AND EPCRA SEC. 304)



(1) CERCLA Hazardous Substances and EHSs
- CERCLA hazardous substances include those
  - Referred to by CERCLA 101(14)
  - Listed in Table 302.4 of 40 CFR 302.4
  - Defined as RCRA "characteristic" hazardous wastes (40 CFR 261.21-24)
- CERCLA hazardous substances exclude petroleum (unless specifically listed under CERCLA 101(14)) and natural gas
- Extremely hazardous substances (EHSs) are listed in Appendices A and B to 40 CFR part 355

(2) Exclusions from "Release" and Exempted Releases
- Certain engine exhaust, certain nuclear accidents, or normal application of fertilizer (40 CFR 302.3)
- Certain solid metals in particles larger than 100 micrometers (40 CFR 302.6(d))
- A non-friable form of asbestos (40 CFR 302.4)
- A registered pesticide used in accordance with its purpose (40 CFR 302.6(a))
- A building or unenclosed containment structure, if contained within the structure

(3) Exempted Sources
- Certain radionuclide sources (e.g., some coal and coal ash piles) (40 CFR 302.6(c))
- A consumer product in consumer use (except vessels) (40 CFR 302.3)

(4) Exempted Destinations
- A permitted or interim status RCRA facility, if properly disposed of at the facility

(5) See CERCLA 101(10), 40 CFR 302.6(a).

(6) See (1) above.

(7) Reportable quantities (RQs) are listed in Table 302.4 of 40 CFR 302.4. Under the mixture rule, if the quantity of all the hazardous constituents of a mixture is known, notification is required only where an RQ (or 1 pound if no RQ exists) or more of any hazardous constituent is released. If the quantity of one or more of the hazardous constituents of the mixture is not known, notification is required where the total amount of the mixture equals or exceeds the RQ (or 1 pound if no RQ exists) for the hazardous constituent with the lowest RQ (40 CFR 302.6(b)).

(8) An EPCRA-covered source is a structure, equipment, other stationary item, motor vehicle, rolling stock, or aircraft that produces, uses, or stores an OSHA hazardous chemical (40 CFR 355.20, 355.40(a)).

(9) See 40 CFR 355.40(a).

(10) Reporting
- National Response Center (NRC): 1-800-424-8802
- State emergency response commission (SERC) (varies by State; usually part of State environmental agency or fire marshal's office)
- Local emergency planning committee (LEPC) (varies by locality; identify through local fire department or SERC)

If the release is an EPA-recognized continuous release, reduced reporting requirements apply (40 CFR 302.8, 355.40).

48. If a number of releases of the same hazardous substance are occurring at several locations at the same time at a facility (e.g., through leaks in pipes or valves), are multiple reports required?

All releases of the same substance from a single facility should be aggregated to determine whether an RQ has been released from the facility into the environment. However, there may be a case where releases occurring at different facilities at a single contiguous plant or installation on contiguous grounds under common ownership cannot be aggregated to determine if an RQ has been released. If the release from each facility was greater than or equal to an RQ, multiple reports would be required. However, these reports may be made in a single call to the NRC. The definition of "facility" under CERCLA section 101(9) is key to an evaluation of CERCLA reporting requirements. For example, as applied to the use of ethylene glycol during aircraft de-icing, there may be releases occurring at different facilities but at a single contiguous plant or installation on contiguous grounds under common ownership. The facility arguably may include the truck applying the de-icer, the aircraft to which the de-icer is applied, the entire airport, and/or other entities, depending on individual circumstances. **Exhibit 3** provides scenarios on aggregated releases.

49. Is the release of an RQ or more of a CERCLA hazardous substance in an encapsulated form reportable?

The term "release" is defined in CERCLA section 101(22) as 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)...*" (emphasis added). Therefore, even if the CERCLA hazardous substance is in encapsulated form, or is otherwise in a closed receptacle, reporting is required when the closed receptacles are abandoned or discarded and the amount of a CERCLA hazardous substance contained within the released material equals or exceeds an RQ. The legislative history makes it clear that the definition applies even to receptacles that have not broken open and are not leaking hazardous substances. **Exhibit 4** provides an example of a reporting scenario for encapsulated releases.

50. If a facility is in the process of removing old light ballasts containing PCBs, would CERCLA reporting be required any time one pound of PCB has been moved in a 24-hour period? Would the same interpretation hold if the objects being moved were mercury-containing lamps?

As defined in CERCLA section 101(22), the term "release" encompasses (among other things) "...the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance..." Because light bulbs and light ballasts may contain mercury, PCBs, or other CERCLA hazardous substances, the abandonment or discarding of such closed containers could constitute a release under CERCLA, depending upon what happened to the containers after they were moved. The moving of one pound or more of PCBs (the RQ for PCBs is one pound) contained in light ballasts could, <u>if the ballasts were then abandoned or discarded</u>, constitute a

EXHIBIT 3
Scenarios on Aggregated Releases

1) **A facility releases nine pounds of a hazardous substance with an RQ of 10 pounds. Later that day, the facility releases two more pounds of the same substance. Should the person in charge notify the NRC?**

Yes. All releases of the same hazardous substance from the same facility occurring within the same 24-hour period must be aggregated to determine if an RQ has been equalled or exceeded within that period (50 FR 13459).

2) **A facility releases one-half of an RQ of a hazardous substance in gaseous form each day and releases three-fourths of an RQ of the same substance in liquid form each day. Should the person in charge notify?**

Yes. All concurrent releases of the same hazardous substance from the same facility into the environment must be aggregated to determine if an amount equal to or greater than an RQ has been released (50 FR 13459). (See questions 57 and 58 for a discussion of reduced reporting requirements for continuous releases.)

EXHIBIT 4
Reporting Scenario for Encapsulated Releases

Polychlorinated biphenyls (PCBs), a component of certain fluorescent light ballasts, are listed as a CERCLA hazardous substance in Table 302.4, and have a one-pound RQ. Would the spilling of PCB-containing light ballasts constitute a release?

The spilling of the light ballasts would be considered a "release" under CERCLA section 101(22) if an "abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant," occurred. Therefore, under CERCLA section 103, persons in charge of facilities that spill and ultimately abandon or discard fluorescent light ballasts would be required to notify the NRC if the amount of PCBs contained in the released ballasts equals or exceeds one pound. See *Lighting Waste Disposal* (EPA 420-R-94-004, March 1994).

release that must be reported to the NRC. If hazardous substance-containing ballasts, lamps, or both are moved without being abandoned or discarded, no release has occurred. The determination of whether "abandonment or discarding" has occurred should be made by the facility or other persons handling the ballasts or bulbs on a case-by-case basis, considering the circumstances of activity. A common sense approach should be used in making this determination. For example, if PCB-containing ballasts are moved from one place to another

place in the environment prior to being transported off-site for disposal, this generally would not constitute a release because the ballasts were not abandoned or discarded. See also Exhibit 4.

51. Are releases of a pollutant into a POTW, when the pollutant is specified in and in compliance with the pretreatment standards of the CWA, subject to CERCLA section 103(a) reporting requirements?

No. The introduction of any pollutant into a POTW, when the pollutant is specified in and in compliance with applicable pretreatment standards of CWA section 307(b) or (c) — and enforceable requirements in a pretreatment program submitted by a State or municipality for federal approval under CWA section 402 — is a "federally permitted release" under CERCLA section 101(10)(J). Such releases are exempt from CERCLA section 103(a) reporting requirements.

What Releases Are Excluded From CERCLA Reporting?

Exemptions

52. If a metal is released in solid form at or above its RQ, is it considered a reportable release?

The Agency allows a reporting exception for massive forms of certain solid metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, and zinc) when the diameter of the released metal equals or exceeds 100 micrometers (0.004 inches) (50 FR 13461, April 4, 1985). The Agency deliberately set the cutoff size 10 times larger than the maximum size considered by EPA to be respirable dust to ensure that the government would be notified of releases containing small, inhalable particles of metals.

53. Are certain types of releases specifically excluded from reporting requirements under CERCLA?

Exclusions from Definition of "Release"

CERCLA section 101(22) specifically excludes from the definition of release:

- Any release which results in exposure to persons solely within a workplace;
- Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine;
- Certain releases of source, byproduct, or special nuclear material from a nuclear incident; and
- Normal application of fertilizers.

Exclusion from Definition of "Facility"

The definition of facility under CERCLA section 101(9) specifically excludes consumer products in consumer use. Releases from such products, therefore, are excluded from CERCLA reporting requirements. See question 5.

Other Reporting Exemptions

Section 103 of CERCLA also exempts from CERCLA reporting requirements:

- Application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) or the handling or storage of such product by an agricultural producer;
- Release of a substance that is required to be reported (or exempted from reporting) under RCRA Subtitle C and has already been reported to the NRC under the Subtitle C regulations; and

- Federally permitted releases (these are also exempted from liability). See question 56 for further discussion of federally permitted releases.

Administrative Reporting Exemptions

Additionally, in a final rule to adjust the RQs for radionuclides (54 FR 22524), the Agency established administrative reporting exemptions from CERCLA section 103 and EPCRA section 304 reporting requirements for four categories of radionuclide releases. Specifically, the Agency exempted:

- Releases of naturally occurring radionuclides from large generally undisturbed land holdings, such as golf courses and parks;
- Releases of radionuclides naturally occurring from the disturbance of large areas of land for purposes other than mining, such as farming or building construction;
- Releases of radionuclides from the dumping of coal and coal ash at utility and industrial facilities with coal-fired boilers; and
- Radionuclide releases to all media from coal and coal ash piles at utility and industrial facilities with coal-fired boilers.

The exemptions apply to reporting only; CERCLA liability provisions continue to apply.

The U.S. Court of Appeals, in The Fertilizer Institute v. United States Environmental Protection Agency, 935 F.2d 1303 (D.C. Cir. 1991), ruled that the administrative reporting exemptions contained in the radionuclide RQ adjustment final rule were improperly established because EPA failed to provide adequate notice of, and opportunity for public comment on, those exemptions. However, the Court left the four exemptions in place while the Agency undertakes a new round of notice and comment rulemaking. The Agency provided notice and an opportunity for comment on the four exemptions in a November 30, 1992 proposed rule (57 FR 56726) and is continuing to evaluate issues related to this topic.

54. Are any releases (in addition to the administratively exempted releases identified in question 53) specifically excluded from reporting requirements under EPCRA section 304?

EPCRA section 304 exempts from State and local reporting releases that result in exposure to persons solely within the site or sites on which a facility is located. EPCRA defines "facility" differently from CERCLA. EPCRA defines "facility" as "...all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person). For purposes of section 304, the term includes motor vehicles, rolling stock, and aircraft..."

55. If a pesticide registered under FIFRA is accidentally spilled, must it be reported?

Yes. Accidents, spills, improper application, and improper disposal are within the scope of the release notification provisions of CERCLA and must be reported. EPA's interpretation of the pesticide exemption in CERCLA section 103 covers only the normal application of registered pesticides in ways that are consistent with the pesticides' purpose (50 FR 13464, April 4, 1985).

Federally Permitted Releases

56. What is the scope of the federally permitted release exemption?

CERCLA section 101(10) defines federally permitted releases in terms of releases permitted under a number of other environmental statutes. Releases that are federally permitted are exempt not only from CERCLA section 103 and EPCRA section 304 notification requirements, but from CERCLA liability as well.

EPA proposed regulations to clarify the scope of the federally permitted release exemption on July 19, 1988 (53 FR 27268). Subsequently, the Agency published a Supplemental Notice of Proposed Rulemaking to the federally permitted releases proposed rule on July 11, 1989 (54 FR 29306), providing additional information to clarify the section 101(10)(H) exemption for air releases. Currently, a particular facility or vessel must determine, based on the language of CERCLA section 101(10), whether its release is federally permitted. **Exhibit 5** provides several scenarios involving federally permitted releases.

In the proposed regulations, EPA interprets the CERCLA section 101(10)(H) "federally permitted release" exemption for air releases to include only those releases that occur in compliance with control regulations or existing federal permits for the facility where the release occurs.

EXHIBIT 5
Scenarios Involving Federally Permitted Releases

1) **A CERCLA hazardous substance is released to water at a facility that has a NPDES permit, under what circumstances would the release be exempt from reporting as a federally permitted release?**

The federally permitted release exemption would apply in this scenario if: (1) The source, nature, and amount of the potential release had been identified and made part of the public record during the permitting process, and (2) The permit contains a condition requiring that the treatment system be capable of eliminating or abating the potential release.

2) **A CERCLA hazardous substance is released to water at a facility that is an indirect discharger, and the release is made through a municipal sewer system and publicly owned treatment works (POTW), under what circumstances would the release be exempt from reporting as a federally permitted release?**

The federally permitted release exemption would apply in this scenario if the release is: (1) In compliance with applicable categorical pretreatment standards and local limits, and (2) Into a POTW with an approved local pretreatment program or a State-administered local program.

3) **A facility with a Clean Air Act (CAA) permit to release 30 pounds of a hazardous substance releases 100 pounds of the substance. The hazardous substance has an RQ of 100 pounds. Does the facility have to report to the NRC?**

No. A release of a hazardous substance beyond the permit limit is not a "federally permitted release." Reporting to the NRC is required when the release of the hazardous substance exceeds its permitted level by an RQ or more. But, in this scenario, the air release exceeds the CAA-permitted level by 70 pounds. Because the RQ is 100 pounds, no report to the NRC is required. However, if the facility in this scenario releases an additonal 30 or more pounds of the same substance into any environmental media within 24 hours of the first release, the person in charge must notify the NRC because the permitted level has now been exceeded by 100 pounds. (See Exhibit 3 for more information on aggregating releases of an RQ and appropriate time periods.)

How Are Continuous Releases Reported?

57. What is the purpose of the continuous release reporting option?

CERCLA section 103(f)(2) provides a reduced reporting requirement for continuous releases of hazardous substances that exceed the RQ. These releases must be "continuous" and "stable in quantity and rate." Notification of continuous releases that equal or exceed the RQ need only be given once, with one follow-up report on the first anniversary of the initial report. Thereafter only "statistically significant increases" need be reported.

58. What is a continuous release?

On July 24, 1990 (55 FR 30166), EPA issued a final rule interpreting the provisions of the continuous release reporting requirements of CERCLA section 103(f)(2). In this regulation, EPA interpreted "continuous" to mean a release that occurs without interruption or abatement or that is routine, anticipated, and intermittent during normal operations or treatment processes (55 FR 30169). EPA interpreted the phrase "stable in quantity and rate" to mean predictable and regular in amount and rate of emission. **Exhibits 6 and 7** provide information on reporting requirements for continuous releases.

The person in charge must make additional notifications if there is a change in the source or composition of the release, a change in the normal range of the release, or a change in other reported information. A change in the source or composition of the release is considered to be a new release and must be reported as such.

EXHIBIT 6
Reporting Requirements for Continuous Releases

The reporting requirements for continuous releases are as follows:

- Prior to notification, the person in charge of the facility or vessel must establish that release data, engineering estimates, knowledge of operating procedures, or professional judgment support the conclusion that a particular release is continuous and stable in quantity and rate.
- The person in charge must then make an initial report by telephone to the NRC, the SERC, and the LEPC.
- Within 30 days of the initial notification, the person in charge must make a written notification of the release to the appropriate EPA Regional Office specifying, among other things, the name/identity of the substance being released, the quantity, frequency, and source of the release, and the environmental media affected.
- Within 30 days of the first anniversary date of the initial written notification, the person in charge must evaluate each continuous hazardous substance release report to verify and update the information submitted in the initial written notification.

59. What is a statistically significant increase?

EPA defines a statistically significant increase as any release of a hazardous substance that exceeds the upper bound of the reported normal range of a continuous release. The normal range is defined to include all the releases (in pounds, kilograms, or curies) of a hazardous substance reported or occurring over any 24-hour period under normal operating conditions (that is, normal conditions that prevail during the period establishing the continuity, quantity, and regularity of the release) during the preceding year.

The definition, therefore, does not include releases within the reported normal range of the release. The Agency considers any release that exceeds the reported normal range to be statistically significant because the normal range is established based on a set of historical data representing all releases reported or occurring during normal operations over the previous year. (See 55 FR 30177, July 24, 1990.)

When the quantity released exceeds the upper-bound of the established normal range, this release must be reported to the NRC as a statistically significant increase. If several releases exceed the upper-bound of the range, the person in charge may modify the normal range by informing the

EXHIBIT 7
Additional Detail on Continuous Release Reporting

How does a facility qualify a release as continuous for reporting purposes?

CERCLA section 103(f)(2), on continuous release reporting, requires reporting to the NRC "for a period sufficient to establish the continuity, quantity, and regularity of the release." Under EPA policy, the person in charge of the facility may make the determination of what the appropriate period is for the continuous release at issue. Once the person in charge determines that the release qualifies as a continuous release, he or she is no longer required to report to the NRC each day that an RQ is equalled or exceeded. The person in charge must, however, keep a record of each release at or above the RQ that occurs at the facility. Having established the release as a continuous release, the facility then must follow the reporting requirements delineated in Exhibit 6.

NRC of the change in the range at that time. The person in charge must then submit, within 30 days, a written notification to the EPA Regional Office describing the new normal range and reasons for the change. If there is a change in other reported information, the person in charge must submit written notification to the EPA Regional Office within 30 days of determining that the information submitted previously is no longer valid.

What Is the Relationship Between Liability and Reporting?

60. Once a facility properly notifies the NRC, is it exempted from any liability for damages that the release may cause?

No. Proper and timely reporting of a release in accordance with CERCLA section 103 does not preclude liability for cleanup costs, natural resource damages, and costs of any necessary health studies conducted under CERCLA section 104(i). It does, however, eliminate potential penalties for failure to notify the NRC.

61. If a facility releases a hazardous substance below its RQ level, could it be liable for damages caused by the release?

Yes. A release of a CERCLA hazardous substance below its RQ does not preclude liability from any damages that may result, including the costs of cleaning up that release or for any natural resource damages, should such costs be determined to be appropriate under CERCLA or any other applicable law.

62. What are the penalties for failure to report a release?

Failure to comply with the CERCLA section 103 notification requirements may result in fines, per offense, of up to $500,000 and prison sentences of up to three years (or up to five years for second and subsequent convictions) (see 18 U.S.C. 3571). A person in charge of a vessel or facility with knowledge of a reportable release who fails to report the release immediately, or who submits information that he or she knows is false and misleading, is subject to these penalties. Section 325(b) of EPCRA establishes criminal penalties, per offense, of up to $25,000 and prison sentences of up to two years (or up to $50,000 and five years for second and subsequent convictions) for violations of EPCRA section 304 notification requirements.

CERCLA section 109 and EPCRA section 325 also authorize administrative penalties enforced through civil proceedings. There are two classes of administrative penalties: Class I penalties of up to $25,000 per violation and Class II penalties, which are assessed according to section 554 of the Administrative Procedure Act (which requires a formal hearing), of up to $25,000 per day of a continuing violation, or $75,000 per day for subsequent violations. The Agency may also impose Class II penalties by bringing action in the appropriate U.S. district court.

Reportable Quantity Adjustments

How Does the RQ Adjustment Methodology Work?

63. What properties of CERCLA hazardous substances are evaluated for purposes of adjusting the RQs for these substances?

The Agency evaluates the properties of hazardous substances (other than radionuclides) in a two-step process:

Step 1: Primary Criteria

RQ adjustment begins with an evaluation of the intrinsic physical, chemical, and toxicological properties of each substance. These intrinsic properties — called "primary criteria" — are aquatic toxicity, acute mammalian toxicity (oral, dermal, and inhalation), ignitability, reactivity, chronic toxicity, and potential carcinogenicity. EPA ranks hazardous substances for each intrinsic property (except potential carcinogenicity) on a five-tier scale, associating a specific range of values on each scale with a particular RQ value, from one to 5,000 pounds. For hazardous substances evaluated for potential carcinogenicity, each substance is assigned a hazard ranking of "high," "medium," or "low," corresponding to RQ levels of 1, 10, and 100 pounds, respectively. Each substance receives several tentative RQ values based on its particular intrinsic properties — the lowest of all the tentative RQs becomes the "primary criteria RQ" for that substance. (See question 64 for radionuclides.)

Step 2: Secondary Criteria

After the primary criteria RQs are assigned, substances are further evaluated for their susceptibility to certain degradative processes, which are used as secondary adjustment criteria. These natural degradative processes are biodegradation, hydrolysis, and photolysis (BHP). In general, if a hazardous substance degrades relatively rapidly in the environment to a less hazardous form by one or more of the BHP processes, its primary criteria RQ is raised one level. Conversely, if a hazardous substance degrades to a more hazardous product after its release, the original substance is assigned an RQ equal to the RQ for the more hazardous substance.

EPA has proposed (54 FR 35988, August 30, 1989) that substances be further evaluated after hazardous substances are evaluated for the primary and secondary criteria by applying the EPCRA section 302 methodology for developing threshold planning quantities (TPQs). First, the screening criteria used to identify EHSs (51 FR 41570, November 17, 1986) would be applied to the hazardous substances being evaluated. Second, a level of concern would be established for each hazardous substance that meets the screening criteria. Third, the dispersion potential of each of these hazardous substances would be assessed by considering its physical state and volatility. The level of concern and dispersion potential would be combined to produce an index value, and the screened substances would be ranked according to this index value. Tentative RQs would be assigned to substances using a table of index value ranges. If the tentative RQ assigned

in this way is lower than the primary and (if applicable) secondary criteria RQ, this tentative RQ resulting from application of the TPQ criteria would become the adjusted RQ. Until the addition of the TPQ methodology to the existing RQ methodology is finalized, however, RQs will continue to be adjusted according to the original RQ adjustment methodology.

64. How were the RQs for radionuclides determined?

RQs for radionuclides were determined by estimating the quantity of a radionuclide that, if released into the environment under an assumed set of conditions, could result in an individual receiving a specified dose of radioactivity. To estimate this quantity for each radionuclide, a series of hypothetical (but conservative) exposure scenarios were analyzed to link a quantity released with an accepted dose level.

Specifically, hypothetical releases and exposures were analyzed for four different routes of exposure: inhalation, ingestion of water, ingestion of food, and direct exposure. For each exposure pathway, a "release value" was calculated for 757 radionuclides for which human health data and intake limits have been published. The Agency selected the lowest of the four values for each specific radionuclide. This lowest release value was then rounded down to the nearest decade to determine the RQ for that radionuclide. All radionuclides that do not have published intake limits have been assigned an RQ of 1 Ci. Available information on these radionuclides is insufficient to develop a specific RQ for individual radionuclides in this group. An RQ of 1 Ci was selected because it is the middle RQ category for radionuclides, and the majority of radionuclides (91 percent) examined individually have RQs at least at this level.

What Is the Purpose of RQ Adjustments?

65. Why adjust the CERCLA statutory RQs?

Statutory RQs are often those set provisionally by Congress (usually at one pound), pending detailed scientific analysis by EPA and adjustment through notice and comment rulemaking. They often do not reflect the relative hazard posed to public health and the environment. By adjusting the RQs, the Agency is able to focus its resources on those releases that are more likely to pose potential threats to public health or welfare or the environment, while relieving the regulated community and government emergency response personnel from the burden of making and responding to reports of releases that are less likely to pose such threats.

66. Why adjust the RQs of substances assigned RQs under CWA section 311?

EPA decided to adjust the statutory RQs of CERCLA hazardous substances that are also CWA hazardous substances to make notification requirements for these substances consistent and less confusing for the regulated community. By making the CWA and CERCLA RQs the same, the Agency sought to avoid confusion regarding reporting requirements (50 FR 13473, April 4, 1985).

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