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DOE/EH-4-13752

Environmental



Guidance

RCRA CORRECTIVE ACTION
for
UNDERGROUND STORAGE TANKS
Subtitle C or Subtitle I

August 1995

U.S. Department of Energy
Office of Environmental Policy & Assistance
RCRA/CERCLA Division, EH-413
Washington, D.C.

United States Government

Department of Energy

memorandum

DATE: August 24, 1995
REPLY TO
ATTN OF: Office of Environmental Policy and Assistance(EH-413):Coalgate:6-6075
SUBJECT: Corrective Action for Releases from Underground Storage Tanks
TO: Distribution

The purpose of this memorandum to provide Program Offices and Field Elements with a copy of an environmental guidance document entitled: *RCRA Corrective Action for USTs - Subtitle C or Subtitle I?* This guidance is directed primarily to DOE and DOE contractor personnel responsible for the planning and implementation of corrective measures addressing cleanup of releases of hazardous wastes, hazardous constituents, or regulated substances¹, from underground storage tanks (USTs) regulated under RCRA Subtitle C or Subtitle I, respectively, of the Resource Conservation and Recovery Act (RCRA).

The EPA has developed separate regulatory corrective action programs for Subtitle C treatment, storage and disposal facilities (TSDFs) and Subtitle I UST systems. In the case of TSDFs, 40 CFR 264.100 - 264.101 (Corrective Action for Solid Waste Management Units) applies. Furthermore, the Subpart S proposed regulations (55 FR 30798, July 27, 1990) are used as guidance by EPA regions in establishing corrective action requirements. For USTs containing petroleum or regulated substances, 40 CFR 280.60 - 280.67 (Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances) defines requirements for corrective action. The intent of the guidance document is to provide a "regulatory roadmap" for determining whether Subtitle C or Subtitle I corrective action requirements apply to the remediation of releases, based on a consideration of the content and location of leaking underground storage tanks.

Questions regarding corrective action of releases of petroleum or regulated substances from underground storage tanks or releases of hazardous wastes or hazardous constituents at treatment, storage, and disposal facilities may be directed to Jerry DiCerbo or Jerry Coalgate of my staff at (202) 586-5047 or (202) 586-6075, respectively.



Thomas P. Traceski
Director, RCRA/CERCLA Division
Office of Environmental Policy and Assistance

Attachment

¹ Regulated substances include: (1) petroleum (i.e., motor fuels, lubricants, petroleum solvents, used oils, etc.), or a mixture of petroleum and de minimis quantities of other regulated substances; and (2) hazardous substances as defined by CERCLA (see 40 CFR 300.5), except for solid wastes having the characteristics of, or listed as, hazardous wastes pursuant to RCRA (see 40 CFR 260.3).



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DOE/EH--413052

**RCRA CORRECTIVE ACTION
for USTs --
SUBTITLE C OR SUBTITLE I?**

EH-413-052/0895

AUGUST 1995

Prepared by

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OFFICE OF ENVIRONMENTAL POLICY AND ASSISTANCE
RCRA/CERCLA DIVISION
(EH-413)
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Questions of policy or questions requiring policy decisions are not dealt with in this EH-413 booklet unless that policy has already been established through appropriate documentation. Please refer any questions concerning the material covered in this booklet to Gerald C. DiCerbo, (202) 586-5047, or Jerry Coalgate (202) 586-6075, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, EH-413.



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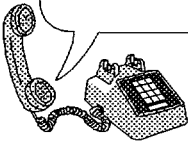
APPENDIX A DEFINITIONS

APPENDIX B MAJOR CORRECTIVE ACTION ACTIVITIES REQUIRED BY RCRA SUBTITLES C AND I

HELLO....?

**Can you tell me what to do about this
leaking tank I've got here?**

HELLO....? Is anybody there?



1 BACKGROUND

The Resource Conservation and Recovery Act (RCRA) mandates two regulatory programs that govern the cleanup of leaks from underground storage tanks (USTs): Subtitle C, sec. 3004(u) and (v) [requiring EPA to include corrective action provisions for solid waste management units in RCRA treatment, storage and disposal (TSD) permits] and Subtitle I, secs. 9001 through 9010 [requiring UST owners to perform corrective action in response to leaks of petroleum and hazardous substances]. EPA has developed regulations to implement each program: existing 40 CFR 264.100 - 264.101 (Corrective Action for Solid Waste Management Units) and proposed 40 CFR 264.500 - 264.560 (Corrective Action for Solid Waste Management Units) for Subtitle C; and existing 40 CFR 280.60 - 280.67 (Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances) for Subtitle I.

Under the existing Subtitle C corrective action implementing regulations (40 CFR 264.100 - 264.101), EPA must consider each site on a case-by-case basis. However, the Agency plans to eventually provide a comprehensive regulatory framework in 40 CFR 264.500 - 264.560 (referred to as Subpart S), which were proposed on July 27, 1990 (55 FR 30798). The bulk of proposed Subpart S remains to be finalized, but EPA relies on it as guidance.

In some instances, it may be difficult to determine whether the Subtitle C or Subtitle I regulatory program applies. For example, do you know which regulatory program would apply to a leaking underground storage tank:

- Containing spent solvents and located at a RCRA TSD facility (permitted or interim status)?
- Containing spent solvents and located at a site not seeking any RCRA permit (e.g., a generator site storing the spent solvents for less than 90 days)?
- Containing calcium hypochlorite, located at a RCRA TSD facility and constituting part of a Clean Water Act-regulated waste water treatment facility?
- Containing waste ethylene glycol contaminated with radionuclides and located at a RCRA TSD facility?
- Containing gasoline and located at a RCRA TSD facility?
- Containing virgin sulfuric acid and located at a site not seeking any RCRA permit?
- Containing mixed waste (i.e., waste having both a radioactive component and a hazardous component) and located at a RCRA TSD facility?

This guidance document is intended to assist DOE hazardous waste managers in answering questions such as these.

WHAT IS AN UNDERGROUND STORAGE TANK?

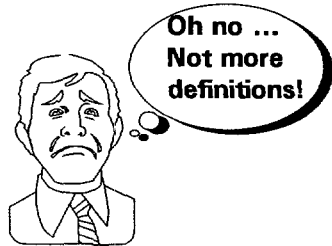
The regulations implementing RCRA Subtitles C and I define the term "underground storage tank" differently. However, for purposes of determining the applicable corrective action requirements, the discrepancies are not significant. As Table 1 indicates, the differences involve the contents of the tank and the percentage of the volume of the tank located beneath the ground surface.

TABLE 1
DEFINITIONS OF "UNDERGROUND
STORAGE TANK"

| Subtitle C - 40 CFR 260.10 | Subtitle I - 40 CFR 280.12 |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| a stationary device | any one or combination of stationary devices (including underground pipes connected thereto) |
| designed to contain an accumulation of hazardous waste | used to contain an accumulation of regulated substances |
| constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support | constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support |
| whose entire surface area is totally below the surface of and covered by the ground. | the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. |

3 ARE THERE OTHER TERMS IMPORTANT TO ANALYZING WHETHER UST CORRECTIVE ACTION IS GOVERNED BY SUBTITLE C OR SUBTITLE I?

Yes. Appendix A provides complete definitions for the terms defined by the regulations implementing Subtitles C and I that are important to deciding which RCRA subtitle governs corrective action at an UST site. The primary factors influencing the decision are the nature of the tank contents and whether the tank is located at a RCRA treatment, storage or disposal facility. Hence, the important terms defined in Appendix A relate largely to these aspects of tanks.



Pertinent terms defined by Subtitle C regulations include: solid waste; hazardous waste; solid waste management unit (SWMU); and treatment, storage or disposal (TSD) facility. Pertinent terms defined by Subtitle I regulations include: regulated substance; hazardous substance; hazardous substance UST; deferred UST; and excluded UST.

4 ARE THERE GUIDELINES FOR DETERMINING WHETHER RCRA SUBTITLE C OR I APPLIES TO UST CORRECTIVE ACTIONS?

Guidelines can be derived from the definitions presented in Appendix A, the regulations defining applicability for the Subtitle C and I corrective action programs (i.e., 40 CFR 264.100 and 40 CFR 280.60, respectively), and instructions provided by EPA in the preamble to the proposed regulations that will implement Subtitle C's corrective action requirements. Table 2 summarizes these guidelines.

**TABLE 2
GUIDELINES FOR ANALYZING APPLICABILITY TO USTs OF
CORRECTIVE ACTION REQUIREMENTS**

| SUBTITLE C CORRECTIVE ACTION REGULATIONS APPLY WHEN: | SUBTITLE I CORRECTIVE ACTION REGULATIONS APPLY WHEN: |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| The UST is located at a RCRA TSD facility and contains RCRA solid or hazardous waste. | The UST contains only petroleum, or only hazardous substances that are not RCRA solid or hazardous wastes, or some combination of these. |
| | Subtitle I regulations would otherwise apply, but the UST is deferred. |
| SUBTITLE C CORRECTIVE ACTION REGULATIONS DO NOT APPLY WHEN: | SUBTITLE I CORRECTIVE ACTION REGULATIONS DO NOT APPLY WHEN: |
| The UST is not a SWMU.* | The UST does not contain a regulated substance. |
| The UST contains only petroleum, or hazardous substances that are not RCRA solid or hazardous wastes, or some combination of these. | The UST is excluded from regulation under Subtitle I |
| The UST is not located at a RCRA TSD facility. | The UST contains RCRA hazardous waste. |

* See Appendix A for the definition of solid waste management unit (SWMU).

CAUTION: *These guidelines are VERY definition-dependent. To apply them properly, you MUST thoroughly understand the definitions in Appendix A.*

Table 3 indicates which RCRA corrective action program applies for possible combinations of content and location.

TABLE 3
RCRA CORRECTIVE ACTION PROGRAMS
APPLICABLE TO USTS BASED ON CONTENT AND
LOCATION

| CONTENT | LOCATION | |
|-------------------------------------|-------------------|------------------|
| | RCRA TSD FACILITY | NON-TSD FACILITY |
| Petroleum | Subtitle I | Subtitle I |
| Hazardous waste | Subtitle C | Neither* |
| Solid waste/Hazardous Substance | Subtitle C | Subtitle I |
| Solid waste/Not Regulated Substance | Subtitle C | Neither* |
| Non-waste/Hazardous Substance | Subtitle I | Subtitle I |

***REMEMBER**

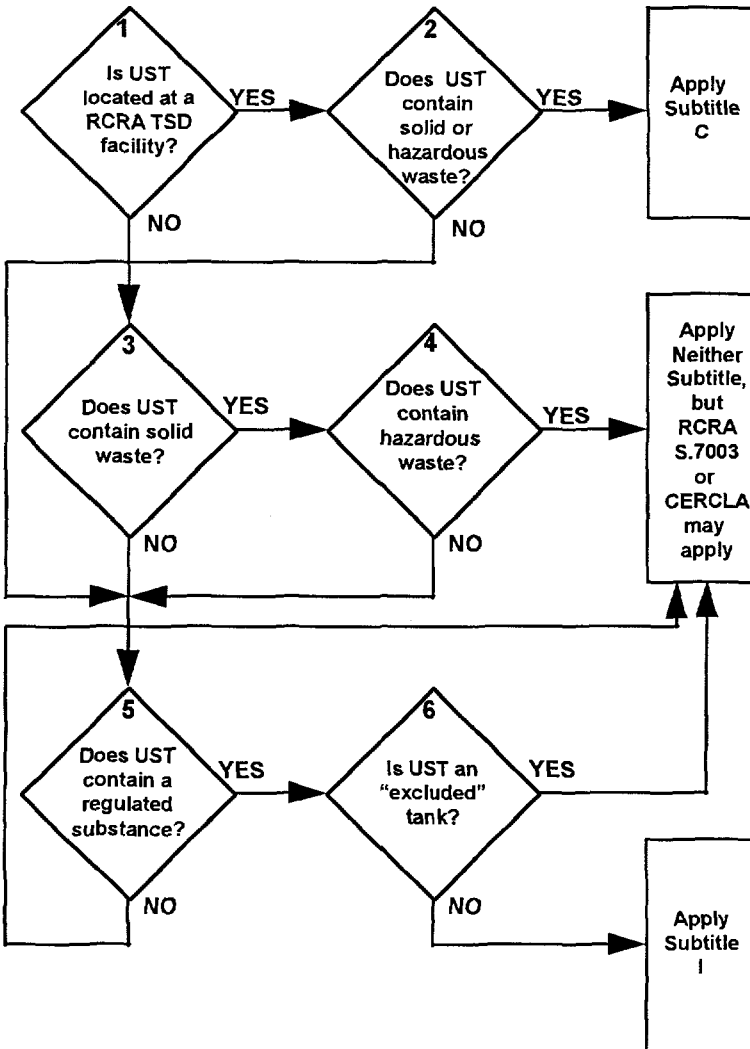
Even if neither RCRA corrective action program applies, EPA has sufficient authority under the "imminent and substantial endangerment" provision of RCRA §7003 [42 U.S.C. §6973] and the equivalent provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), to compel remedial action for any UST. Also, regardless of the authority under which remedial action is conducted, the remediation waste generated must be characterized, and, if hazardous, must be managed according to RCRA Subtitle C hazardous waste management regulations. However, petroleum-contaminated media and debris that are generated during corrective action pursuant to Subtitle I, and that fail the TCLP for the toxicity characteristic (TC) organics (D018 through D043), are temporarily excluded from being "solid wastes." (40 CFR 261.4(b)) EPA has proposed making this exclusion permanent. (58 FR 8504, Feb. 12, 1993) A final rule is expected in 1995 [59 FR 58256, Nov. 14, 1994].

5 HOW WERE THE CONCLUSIONS ON TABLE 3 REACHED?

Figure 1 depicts an overview flow diagram of the information presented on Table 3. On the pages following Figure 1, the flow diagram is explained in a graphic guidance format.

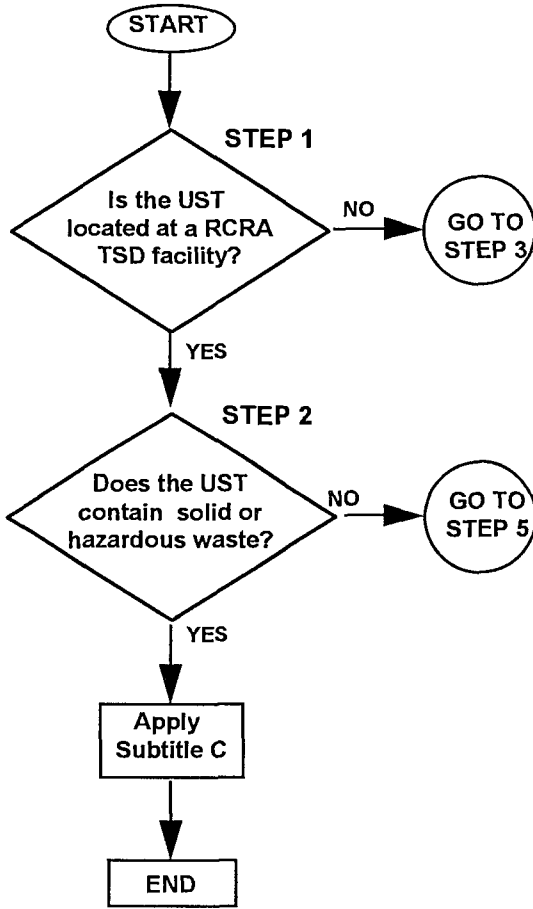
**FIGURE 1
OVERVIEW**

ANALYSIS OF RCRA PROGRAM APPLICABILITY



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ANALYSIS OF RCRA UST PROGRAM APPLICABILITY



ANALYSIS OF RCRA UST PROGRAM APPLICABILITY

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RCRA Subtitle C corrective action authority extends only to owners and operators of permitted or interim status hazardous waste treatment, storage or disposal (TSD) facilities [RCRA §§ 3004(u) (facilities seeking permits) and 3008(h) (facilities with interim status)]. The existing RCRA Subtitle C regulations addressing corrective action at permitted TSD facilities are located in 40 CFR subpart F (§§ 264.90 through 264.101) and 40 CFR subpart S (§§ 264.552 and 264.553). Additionally, EPA issued proposed corrective action regulations (40 CFR subpart S) on July 27, 1990 which are used as guidelines [55 Fed. Reg. 30798]. With respect to interim status TSD facilities, the existing and proposed regulations serve as guidelines for corrective action orders imposed under RCRA §3008(h).

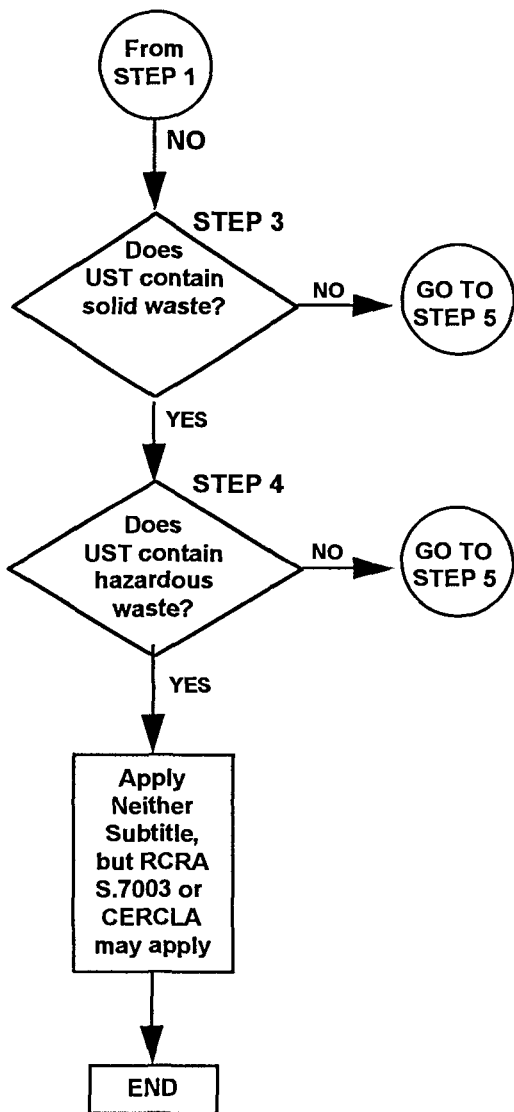
EPA has adopted the following position concerning which RCRA corrective action program applies to USTs ["Regulated Underground Storage Tanks," chap. 11, p. 11-7, DOE/EH-231/004/0191 (June 1992); 55 FR 30798, 30857, column 3 (July 27, 1990)]:

If an UST is located at an interim status facility or other RCRA hazardous waste TSD facility, and the UST contains either a RCRA solid waste or a RCRA hazardous waste, then the corrective action for releases from such UST must be performed according to RCRA Subtitle C regulations.

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40 CFR 264.90 explains that the Subtitle C corrective action requirements apply only to releases from solid waste management units located at hazardous waste TSD facilities. While the current regulations do not define the term "solid waste management unit," EPA has proposed a definition which it uses as guidance that encompasses "any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste" [55 FR 30798, 30874 *proposing* 40 CFR 264.501 (July 27, 1990)]. Therefore, unless an UST contains, or has in the past contained solid waste, the Subtitle C corrective action program cannot apply to remediation of releases from it because it is not a solid waste management unit. However, if it ever contained solid or hazardous waste, then it *would* be a solid waste management unit and Subtitle C requirements must be followed during remediation of releases [55 FR 30798, 30857, column 3 (July 27, 1990)].

ANALYSIS OF RCRA UST PROGRAM APPLICABILITY (cont'd)



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An UST may contain solid waste (which could be hazardous), but not be located at a RCRA TSD facility (e.g., an UST could be used by a hazardous waste generator to accumulate wastes for less than 90 days). In this circumstance, Subtitle C does not apply, and Subtitle I will apply only if the UST is not "excluded" [see Step 6], and the solid waste in the UST is a "regulated substance" as defined by RCRA Subtitle I [see RCRA § 9001(1)].

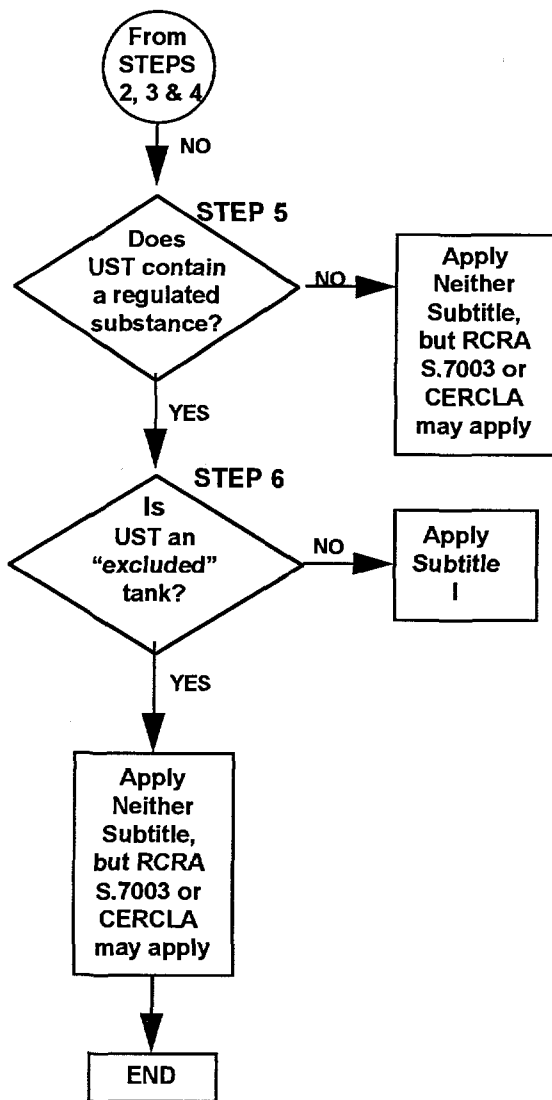
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Subtitle I regulations define the term "regulated substance" as specifically not including any solid wastes having the characteristics of, or listed as hazardous wastes pursuant to RCRA [40 CFR 280.12]. Therefore, if an UST not located at a RCRA TSD facility contains hazardous wastes, neither the Subtitle C nor the Subtitle I corrective action program will apply.

REMEMBER

Even if neither RCRA corrective action program applies, EPA has sufficient authority under the "imminent and substantial endangerment" provision of RCRA §7003 [42 U.S.C. §6973] and the equivalent provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), to compel cleanup of releases from any UST.

ANALYSIS OF RCRA UST PROGRAM APPLICABILITY (cont'd)



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For the reasons explained in steps 2, 3 and 4, corrective action for releases from an UST containing a "regulated substance" will be: (1) governed by Subtitle C if the UST is located at a RCRA TSD facility and the regulated substance is also a solid waste; and (2) governed by Subtitle I if the UST is located at any facility other than a RCRA TSD, unless the UST is "excluded" either by statute or regulations from Subtitle I regulatory jurisdiction. It is important to DOE that any radionuclide is a CERCLA hazardous substance, which makes wastes containing radionuclides "regulated substances." If an UST located at a facility that is not a RCRA TSD facility contains a solid waste that is not a regulated substance, then neither the Subtitle C nor the Subtitle I corrective action program will apply.

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Congress has determined that some USTs do not present enough risk of hazardous constituent releases to warrant regulation under the RCRA Subtitle I program. 40 CFR 260.12 lists those tanks explicitly indicated by the statute for exclusion. Additional exclusions have been crafted by EPA and are listed in 40 CFR 280.10(b). The RCRA Information Brief entitled "Excluded USTs" [EH-231-012b/0593 (May 1993)] discusses the identification and regulation of *excluded* USTs in detail. A few examples of *excluded* USTs are septic tanks, flow-through process tanks, USTs holding hazardous wastes listed or identified under RCRA Subtitle C or mixtures of such hazardous wastes and other regulated substances, and USTs with less than 110 gallons of capacity.

REMEMBER

Even if neither RCRA corrective action program applies, EPA has sufficient authority under the "imminent and substantial endangerment" provision of RCRA §7003 [42 U.S.C. §6973] and the equivalent provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), to compel corrective action for any UST.

6 WHAT ARE SOME EXAMPLES OF HOW TO ANALYZE WHICH RCRA UST CORRECTIVE ACTION PROGRAM APPLIES?

Following are examples of UST scenarios that may occur at DOE facilities. Each example is analyzed to illustrate which RCRA UST corrective action program should be applied.

1. *An UST containing spent solvents and located at a RCRA TSD facility.*



An UST located at a RCRA TSD facility will be subject to the Subtitle C corrective action

program if it has ever contained solid or hazardous waste (i.e., if it is a solid waste management unit). Since spent solvents are listed as hazardous (F001-F005), this UST is a solid waste management unit, and corrective action will be governed by the Subtitle C corrective action program.

2. *An UST containing spent solvents and located at a site not seeking any RCRA permit (e.g., a generator site storing the spent solvents for less than 90 days).*

Because this UST is not located at a RCRA TSD facility, Subtitle C corrective action requirements will not apply. Whether Subtitle I requirements apply depends on whether the UST contains a regulated substance, and if so, whether the UST is excluded. Spent solvents are RCRA hazardous wastes. Therefore, since the definition of "regulated substance" excludes RCRA hazardous wastes, Subtitle I corrective action requirements also do not apply. It is important to remember, however, that even though neither the Subtitle C nor the Subtitle I corrective action program applies, EPA has sufficient authority under the "imminent and substantial endangerment" provision of RCRA § 7003 [42 U.S.C. § 6973] and the equivalent provisions of CERCLA to conduct cleanup.

3. *An UST containing calcium hypochlorite, located at a RCRA TSD facility and constituting part of a Clean Water Act-regulated waste water treatment facility?*

Since this UST is located at a RCRA TSD facility, RCRA Subtitle C regulations would dictate cleanup requirements if the UST were a solid waste management unit. However, calcium hypochlorite being used for water treatment is not solid or hazardous waste. Therefore, this UST is not a solid waste management unit, and Subtitle C requirements do not apply.

The Subtitle I corrective action program would apply to this UST if calcium hypochlorite were a regulated substance and the UST were not "excluded." The definition of "regulated substance" encompasses all substances defined by CERCLA as hazardous, except for RCRA hazardous wastes. 40 CFR 300.5 presents a listing of CERCLA hazardous substances which includes calcium hypochlorite. Listings of USTs that are excluded from regulation under the Subtitle I program are provided in 40 CFR 280.10(b) and 40 CFR 280.12. These lists indicate that any waste water treatment tank that is part of a waste water treatment facility regulated under the Clean Water Act is an excluded UST. Therefore, the UST in this example is not subject to the Subtitle I corrective action program. Once again, however, EPA could conduct cleanup under other authorities at such a tank, if necessary.

If the tank in this example had been part of a waste water treatment facility *not* regulated under the Clean Water Act, the UST would have been "deferred," but not "excluded." Under Subtitle I, certain categories of USTs, including USTs that treat waste water or storm water but are not covered by section 402 or 307(b) of the Clean Water Act, are "deferred." "Deferred" USTs are subject to some, but not all of the Subtitle I regulations. The corrective action regulations are among the regulations which continue to apply to "deferred" USTs. Therefore, corrective action for a tank like the one in this example, but not regulated under the Clean Water Act, would have been subject to the Subtitle I corrective action program.

4. *An UST containing waste ethylene glycol contaminated with radionuclides and located at a RCRA TSD facility.*

Because any radionuclide is a CERCLA hazardous substance, the material in this tank is a "regulated substance" under Subtitle I, even though ethylene glycol is not a CERCLA hazardous substance [see 40 CFR 300.5]. Hence, the Subtitle I corrective action provisions could apply. However, EPA's policy statement in the preamble to the RCRA Subtitle C proposed corrective

action regulations, clarified that in circumstances where an UST is a solid waste management unit located at a RCRA TSD facility, the Subtitle C program applies, even if Subtitle I could apply. Therefore, since this UST is located at a RCRA TSD facility, corrective action will be governed by the RCRA Subtitle C program if the tank is a solid waste management unit.

Waste ethylene glycol is not a RCRA hazardous waste, but it does fall within the definition of solid waste. Therefore, this UST is a solid waste management unit, and cleanup of releases of ethylene glycol is subject to the requirements of RCRA Subtitle C. Nevertheless, if the radionuclides in the tank are regulated under the Atomic Energy Act (AEA) (i.e., source, special nuclear, or byproduct material), such radionuclides are exempt from RCRA Subtitle C regulation. [40 CFR 261.4(a)(4)]

If the tank in this example were located at a facility *not* holding or seeking any RCRA permit, corrective action would be governed by Subtitle I, not Subtitle C. Under Subtitle I, certain categories of USTs, including USTs containing radioactive materials regulated under the AEA, are "deferred." "Deferred" USTs are subject to some, but not all of the Subtitle I regulations. The corrective action regulations are among the Subtitle I regulations that continue to apply to "deferred" USTs. Therefore, even if the tank were deferred because it contained AEA-regulated radionuclides, corrective action would still be governed by Subtitle I regulations if the tank were located at a facility not holding or seeking any RCRA permit.

5. *An UST containing gasoline and located at a RCRA TSD facility.*

Since this UST is located at a RCRA TSD facility, corrective action will be governed by the RCRA Subtitle C program if the UST is a solid waste management unit. However, gasoline is not solid or hazardous waste. Therefore, this UST is not a solid waste management unit, and Subtitle C corrective action requirements do not apply.

The Subtitle I corrective action program will apply to this UST if gasoline is a regulated substance and the UST is not excluded. Since the definition of "regulated substance" includes petroleum (e.g., motor fuels, lubricants, petroleum solvents and used oils), this UST will clearly be subject to Subtitle I corrective action requirements, unless it is an excluded tank. The example does not give enough facts to evaluate whether this tank is excluded. Under some circumstances, it would be: for example, if its capacity were less than 110 gallons [see 40 CFR 280.10(b)(4)].

6. *An UST containing virgin sulfuric acid and located at a site not seeking any RCRA permit.*

Because this UST is not located at a RCRA TSD facility, Subtitle C corrective action requirements will not apply. Whether Subtitle I requirements apply depends on whether the UST contains a regulated substance, and, if so, whether it is an excluded tank.

Virgin sulfuric acid qualifies as a regulated substance [40 CFR 300.5]. Furthermore, consultation with 40 CFR 280.10(b) and 280.12 reveal that unless the capacity of this UST is less than 110 gallons, it is not an excluded tank. Therefore, corrective action for releases must proceed in accordance with RCRA Subtitle I regulations.

7. *An UST containing mixed waste (i.e., waste having both an AEA-regulated radioactive component and a RCRA-regulated hazardous component) and located at a RCRA TSD facility.*

Corrective action for releases from this UST will be governed by RCRA Subtitle C regulations because the UST is located at a RCRA TSD facility and contains RCRA hazardous waste. Nevertheless, the AEA-regulated radionuclides in the tank are exempt from RCRA Subtitle C regulation. [40 CFR 261.4(a)(4)]

The tank in this example is excluded from Subtitle I regulations because it contains a mixture of hazardous wastes and other regulated substances. [40 CFR 280.10(b)(1)]

7 HOW DO THE UST CORRECTIVE ACTION REQUIREMENTS OF RCRA SUBTITLES C AND I COMPARE?

Under the RCRA Subtitle I corrective action provisions, certain actions by the owner or operator are automatically required without prior approval of the responsible regulatory agency whenever a release from a regulated UST is confirmed. After taking the required self-implementing actions, the UST owner or operator must submit reports to the responsible agency describing the actions. The Subtitle C program contains no comparable self-implementing provisions. Instead, Subtitle C corrective action activities are subject to much greater concurrent implementing agency oversight.

Appendix B lists the major corrective action activities required by the RCRA Subtitle I regulations [40 CFR 280.60 - 280.67] and the proposed RCRA Subtitle C program [55 FR 30798 *proposing* 40 CFR 264.500 - 264.560 (July 27, 1990)]. EPA has stated that until the proposed Subtitle C regulations are final, they will be used as guidelines for implementing the Subtitle C corrective action program now described by 40 CFR 264.100 - 264.101 [55 FR 30798, 30802 (July 27, 1990)].

8 REFERENCES

8.1 STATUTES

Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984, Subtitle C, sections 3004(u) [42 U.S.C. 6924(u)] and 3005 [42 U.S.C. 6925] and Subtitle I, sections 9001-9010 [42 U.S.C. 6991].

8.2 REGULATIONS

Code of Federal Regulations, Title 40, Part 280 [Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks], Sections 280.10 [Applicability] and 280.12 [Definitions], and Subpart F [Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances (Sections 280.60 through 280.67)].

Code of Federal Regulations, Title 40, Part 264 [Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities], Sections 264.100 [Corrective Action Program] and 264.101 [Corrective Action for Solid Waste Management Units].

8.3 OTHERS

55 FR 30798 (July 27, 1990), *proposing* Code of Federal Regulations, Title 40, Part 264 [Technical Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities], Subpart S [Corrective Action for Solid Waste Management Units (Sections 264.500 through 264.560)].

Regulated Underground Storage Tanks, Environmental Guidance Manual, DOE/EH-231/004/0191 (June 1992).

"Identifying and Classifying an UST," RCRA Information Brief, EH-231-012a/0593 (May 1993).

"Excluded USTs," RCRA Information Brief, EH-231-012b/0593 (May 1993).

"Deferred USTs," RCRA Information Brief, EH-231-012c/0593 (May 1993).

"Petroleum USTs," RCRA Information Brief, EH-231-012d/0194 (January 1994).

"Hazardous Substance USTs," RCRA Information Brief, EH-231-12e/0194 (January 1994).

APPENDIX A
DEFINITIONS



APPENDIX A

TERMS DEFINED BY SUBTITLE I REGULATIONS

regulated substance

"Regulated substances" include: (1) *petroleum* (e.g., motor fuels, lubricants, petroleum solvents, used oils), or a mixture of petroleum and de minimis quantities of other regulated substances; and (2) *hazardous substances* as defined by CERCLA (see 40 CFR 300.5) (e.g., radionuclides, calcium hypochlorite, ammonia, uranyl nitrate and several hundred other substances), *except for solid wastes* having the characteristics of, or listed as, *hazardous wastes* pursuant to RCRA (see 40 CFR 260.3) [40 CFR 280.12].

hazardous substance

The term "*hazardous substance*" means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act, (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of this Act, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (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, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act, 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. 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). [CERCLA §101(14)]

hazardous substance UST

Hazardous substance UST system means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not

a petroleum UST system. [40 CFR 280.12]

deferred UST

"*Deferred*" USTs are listed in 40 CFR 280.10(c) and (d), and are discussed in detail by "Deferred USTs," RCRA Information Brief, EH-231-012c/0593 (May 1993). USTs containing radioactive material regulated under the Atomic Energy Act of 1954 (AEA) comprise one category of deferred USTs. Some other examples of *deferred* USTs are waste water treatment tanks and field-constructed bulk-storage tanks.

excluded UST

The definition of "*underground storage tank*" in 40 CFR 260.12 lists a number of *excluded* USTs [statutory exclusions]. Additional exclusions are listed in 40 CFR 280.10(b) [regulatory exclusions]. The RCRA Information Brief entitled "Excluded USTs" [EH-231-012b/0593 (May 1993)] discusses the identification and regulation of *excluded* USTs in detail. A few examples of *excluded* USTs are septic tanks, flow-through process tanks, USTs holding hazardous wastes listed or identified under RCRA Subtitle C or mixtures of such hazardous wastes and other regulated substances, and USTs with less than 110 gallons of capacity.

TERMS DEFINED BY SUBTITLE C REGULATIONS

solid waste

A *solid waste* is any discarded material that is not excluded by 40 CFR 261.4(a) or that is not excluded by variance granted under 40 CFR 260.30 and 260.31. Importantly, 40 CFR 261.4(a)(4) excludes source, special nuclear and byproduct materials, as defined by the Atomic Energy Act. A *discarded material* is any material which is: (1) abandoned (i.e., disposed of, burned or incinerated, or accumulated before being disposed of, burned, or incinerated); (2) recycled by being used in a manner constituting disposal, burned for energy recovery, reclaimed, or accumulated speculatively; or (3) considered inherently waste-like. [40 CFR §261.2(a) - (d)]

hazardous waste

The term "*hazardous waste*" means a *solid waste* that exhibits the hazardous characteristic of ignitability, toxicity, corrosivity or reactivity, or that is listed as hazardous waste in 40 CFR 261, subpart D [40 CFR 261.30 - 261.35].

solid waste management unit (SWMU)

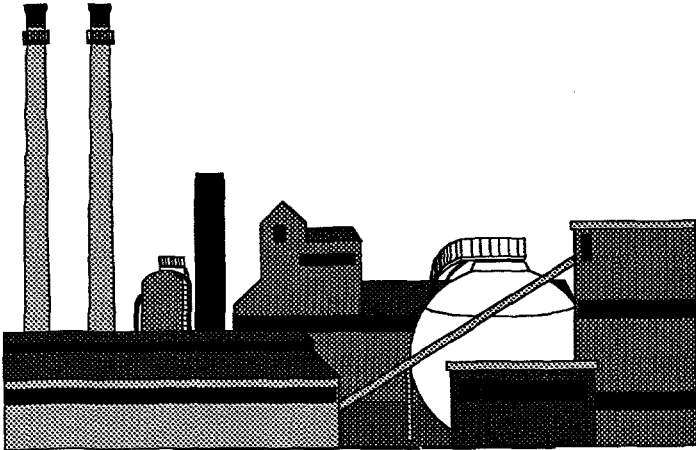
The existing RCRA Subtitle C regulations do not define "*solid waste management unit*." However, as a guideline EPA uses the definition of SWMU proposed on July 27, 1990. Under that definition, a SWMU is "any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste" [55 FR 30798, 30874 (*proposing* 40 CFR 264.501)].

RCRA TSD facility

An UST is located at a RCRA treatment, storage or disposal (TSD) facility if it is located on property that contains an interim status or permitted RCRA TSD unit, or on contiguous property under the control of the owner or operator of such TSD unit [see 40 CFR 260.10].

APPENDIX B

MAJOR CORRECTIVE ACTION ACTIVITIES REQUIRED BY RCRA SUBTITLES C AND I



APPENDIX B

MAJOR CORRECTIVE ACTION ACTIVITIES REQUIRED BY RCRA SUBTITLES C AND I

Table B-1 summarizes the major corrective action activities required by the regulations implementing RCRA Subtitle I (40 CFR 280.60 through 280.67) and the proposed regulations implementing RCRA Subtitle C (55 FR 30798 *proposing* 40 CFR 264.500 - 264.560 (July 27, 1990)). The summary is not an itemized comparison or a comprehensive listing. It is intended to provide an overview and to illustrate the differences in regulatory agency supervision mandated by the two programs. DOE personnel responsible for cleanup of releases from USTs should consult the applicable regulations and agency guidance before acting.

TABLE B-1

MAJOR CORRECTIVE ACTION ACTIVITIES REQUIRED BY RCRA SUBTITLES C AND I

SubTitle C

1. Owner/operator of interim status facility, or facility seeking or holding a treatment, storage or disposal (TSD) permit identifies solid waste management units (SWMUs).
2. Responsible agency conducts RCRA Facility Assessment to find actual or threatened releases of hazardous waste or constituents from any SWMU.
3. Responsible agency can modify permit to require interim measures, if warranted [40 CFR 264.540(a)].
4. Responsible agency must require owner/operator to submit a plan for, conduct, and submit periodic reports during a RCRA facility investigation (RFI) to characterize actual, likely actual and likely potential releases identified during RFA and to determine need for corrective measures study [40 CFR 264.510, 264.512 and 264.513(a)].
5. Responsible agency must require owner/operator to perform a corrective measures study (CMS) evaluating corrective measure alternatives if action levels are exceeded in any media and there is reason to believe the exceedance was caused by a SWMU at the TSD facility [40 CFR 264.520(a) and (b)].
6. Responsible agency can require owner/operator to submit a CMS plan and require periodic reports during the CMS [40 CFR 264.523(a)].
7. Responsible agency must select a remedy based on the CMS results and specify a schedule for initiating and completing remedial activities [40 CFR 264.525].
8. Responsible agency can require detailed construction plans and specifications for implementing the CMS [40 CFR 527(a)].
9. Responsible agency must specify media cleanup standards, points of compliance and remediation waste management standards [40 CFR 264.523(d) - (e) and 264.550(b)].
10. Responsible agency must modify owner/operator's TSD permit using procedures for major modification to specify selected remedy and schedule of compliance [40 CFR 264.526(a)].
11. Owner/operator must implement remedy in accordance with TSD permit, submit progress reports to responsible agency, and, upon completion of remedy, request termination of corrective action schedule of compliance [40 CFR 264.527, 264.528 and 264.530(b)].
12. Responsible agency must modify TSD permit to terminate corrective action schedule of compliance [40 CFR 264.530(c)].

(Note: References in this column are to regulations proposed at 55 FR 30798 (July 27, 1990))

SubTitle I

1. Regulated substance release confirmed by owner/operator [40 CFR 280.61].
2. Confirmed release reported by owner/operator within 24 hours [40 CFR 280.61].
3. Owner/operator takes immediate action to stop release [40 CFR 280.61].
4. Owner/operator mitigates any immediate hazards [40 CFR 280.61].
5. Owner/operator implements initial abatement measures and site check requirements and submits report within 20 days after release confirmation [40 CFR 280.62].
6. Owner/operator assembles information for site characterization and submits within 45 days after release confirmation [40 CFR 280.63].
7. Owner/operator removes free product if necessary [40 CFR 280.64].
8. Owner/operator determines full extent of soil and ground water contamination and submits in accordance with schedule set by responsible agency [40 CFR 280.65].
9. Owner/operator submits corrective action plan on own initiative or because responsible agency requires it [40 CFR 280.66].
10. Owner/operator implements corrective action plan [40 CFR 280.66].
11. If corrective action plan is submitted, responsible agency notifies the public, and may hold a public meeting [40 CFR 280.67].