ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[FRL–4595–9]

RIN 2050–AD69

Exemption of Petroleum-Contaminated Media and Debris From Underground Storage Tanks From RCRA Hazardous Waste Requirements: Proposed Rule

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to take final action on an issue deferred in the 1990 hazardous waste Toxicity Characteristics (TC) rule under the Resource Conservation and Recovery Act (RCRA). The Agency proposes to exempt, from certain portions of EPA's hazardous waste regulations, petroleum-contaminated media and debris, such as soils and groundwater, that are generated from underground storage tank (UST) corrective actions that are subject to subtitle I of RCRA. The exemption would be limited to the 25 newly listed organic chemicals under the TC (i.e., Hazardous Waste Codes D018 through D043 only). After consideration of comments received in response to this proposed rule, EPA will publish a rule containing the Agency's final determination regarding the permanent regulatory status of UST petroleum-contaminated media and debris under RCRA.

DATES: Written comments on this proposed rule must be submitted on or before April 13, 1993.

ADDRESSES: Written comments on today's proposal should be addressed to the docket clerk at the following address: U.S. Environmental Protection Agency, RCRA Docket (OS–305), 401 M Street, SW., Washington, DC 20460. One original and two copies of comments should be sent and identified by regulatory docket reference number F–93–DPUP-FFFFF. The docket is open from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. Docket materials may be reviewed by appointment by calling (202) 260–9327. Copies of docket materials may be made at a cost of $0.15 per page.

FOR FURTHER INFORMATION CONTACT: For general information about this proposal, contact the RCRA/Superfund Hotline, Office of Solid Waste, U.S. Environmental Protection Agency Washington, DC 20460, (800) 424–9346 (toll-free) or (703) 412–9810 (local). For the hearing impaired, the number is (800) 553–7672 (toll-free), or (703) 412–3323 (local). For technical information on this proposal, contact John Heffelfinger in the EPA Office of Underground Storage Tanks at (703) 308–8881. To obtain copies of the reports or other materials referred to in this proposal, contact the RCRA Docket at the phone number or address listed above.

SUPPLEMENTARY INFORMATION:

I. Background

A. Toxicity Characteristics Rule

The Toxicity Characteristics (TC) rule for identifying hazardous wastes was promulgated by the Agency on March 29, 1990 (55 FR 11798), was amended on June 29, 1990 (55 FR 26986), and became effective on September 25, 1990. The rule replaced the Extraction Procedure (EP) leach test with the Toxicity Characteristic Leaching Procedure (TCLP), added 25 organic chemicals to the list of toxic constituents of concern, and established regulatory levels for these organic chemicals.

The overall effect of the TC rule was to subject additional solid wastes to regulatory control under the hazardous waste provisions of subtitle C of RCRA. Under this rule, a waste may be a hazardous waste if any chemicals listed in the rule, such as benzene, are present in leachate from the waste (generated from use of the TCLP) at or above the specified regulatory levels. Management of such hazardous waste is subject to stringent RCRA subtitle C controls.

B. The UST Deferral

Among the wastes that could be TC wastes are petroleum contaminated media and debris. At the time of promulgation of the final TC rule, the Agency made a determination to temporarily defer applicability of the TC rule to media and debris (e.g., soils and groundwater) contaminated with petroleum from underground storage tanks (USTs) that are subject to the corrective action requirements of subtitle I of RCRA. 55 FR 11862 (March 29, 1990), as amended 55 FR 26986 (June 29, 1990). The deferral was limited to the 25 newly listed organic chemicals under the TC (i.e., Hazardous Waste Codes D018 through D043 only). See 40 CFR 261.4(b)(10).

The deferral was the result of several factors. See 55 FR 11836 (March 29, 1990). Because the potential impact of the TC on materials generated from UST cleanups did not become apparent until very late in the rulemaking process, at the time of promulgation of the final TC rule, the Agency had little information regarding the full impact of the TC rule on UST cleanups, particularly regarding the amount of contaminated media that would become hazardous waste and the type of management feasible and appropriate for such waste. However, available information suggested that the impact of applying subtitle C to UST cleanups might be severe in terms of the administrative feasibility of both the subtitle C and subtitle I programs. A preliminary assessment indicated that the number of UST cleanup sites and the amount of media and debris at each site that would exhibit the toxicity characteristic could be extremely high, with EPA expecting hundreds of thousands of UST releases to be identified in the next few years. The Agency believed that subjecting all, or even a portion, of these sites to subtitle C requirements could overwhelm the hazardous waste permitting program and the capacity of existing hazardous waste treatment, storage, and disposal facilities.

In addition, EPA believed that imposition of the requirements could delay UST cleanups significantly, require an enormous new commitment of Federal and State resources, and undermine the State and local focus of the UST program. All of these factors suggested that EPA needed additional time to determine with more certainty what the impacts of the TC would be on UST cleanups before subjecting such materials to hazardous waste requirements. In addition, EPA needed time to investigate whether regulatory changes could be made to RCRA subtitle C regulations to allow appropriate integration of the two programs. EPA also believed that the UST regulations governing cleanup at these sites would be adequate to protect human health and the environment in the interim, until a final determination was made regarding the regulation of UST wastes.

In the preamble explaining the need for the deferral, EPA committed to undertaking several studies and meetings in order to make a final determination concerning the regulation of these UST wastes under the subtitle C program. Since the temporary deferral was published on March 29, 1990, EPA has conducted several studies and held meetings with interested members of the public regarding the temporary deferral and the anticipated effects of regulating UST petroleum-contaminated media and debris as hazardous wastes under subtitle C of RCRA. EPA recently published a Notice of Data Availability summarizing the findings of these studies and the results of the public meetings. 55 FR 36866 (August 14,

1992). Comments received in response to the Notice of Data Availability will also be used by the Agency in making its final determination regarding the permanent regulatory status of UST petroleum-contaminated media and debris as hazardous waste under RCRA subtitle C.

II. Explanation of Today's Proposal

Today's action proposes to exempt contaminated media and debris, that are generated from petroleum UST corrective actions that are subject to subtitle I of RCRA, from certain portions of the RCRA Toxicity Characteristics rule. The exemption would be limited to the 25 newly listed organic chemicals under the TC rule (i.e., Hazardous Waste Codes D018 through D043 only).

The proposed action would be accomplished by maintaining the language contained in the current temporary deferral for UST petroleum-contaminated media and debris, found at 40 CFR 261.4(b)(10). This deferral currently reads as follows:

Section 261.4 Exclusions

* * * * *

(b) *Solid wastes which are not hazardous wastes.* The following solid wastes are not hazardous wastes:

* * * * *

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of section 261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the corrective action regulations under part 280 of this chapter.

If EPA issues the final determination as it is being proposed today, the current language of the deferral would remain unchanged. Each of the individual elements of the proposal is discussed in more detail below.

A. Contaminated Media and Debris

The term contaminated media includes naturally-occurring materials such as soil, groundwater, surface water, and air that have become contaminated with substances released from petroleum underground storage tanks.

The term debris means solid material exceeding 60 mm (2.5 inch) particle size that is: (1) A manufactured object; or (2) plant or animal matter; or (3) natural geologic material. This term is defined by EPA at 40 CFR 268.2(g). See 57 FR 37270 (Aug. 18, 1992). The definition of debris includes material that is plant or animal matter such as grass, trees, and stumps; or is natural geologic material such as rocks and boulders; or is a solid, man-made material such as concrete, buried tires, buried empty drums, as well as empty petroleum USTs and empty piping that are present at the site. Included in this term are the UST and piping from which the petroleum substance was released, provided they are empty in accordance with EPA's closure regulations for underground storage tanks. 40 CFR 280.70(a) of these regulations defines an UST system to be empty when "no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system."

B. Petroleum UST Corrective Actions

Under today's proposal, contaminated media and debris are exempted if "subject to the corrective action regulations" under 40 CFR part 280. EPA interprets this to include all media and debris generated in response to known or suspected releases from a petroleum UST system. The term "petroleum UST system" is defined in EPA's UST regulations at 40 CFR 280.12. Responses to releases from petroleum UST systems are covered by EPA's UST regulations at 40 CFR part 280 under subpart E—Release Reporting, Investigation, and Confirmation, and subpart F—Release Response and Corrective Action for UST Systems Containing Petroleum and Hazardous Substances.

The proposed exemption also includes contaminated media and debris discovered as a result of routine petroleum UST closures, UST site assessments, and UST replacements. The rationale for this approach is that the discovery of contamination when performing these routine activities requires reporting under EPA's UST regulations, as the contamination represents a known or suspected release from an UST. See 40 CFR 280.50. Such releases are subject to subparts E and F of EPA's UST regulations, referenced above.

C. Subtitle I of RCRA

Today's proposal applies only to contaminated media and debris from petroleum USTs that are subject to the corrective action regulations under subtitle I of RCRA (40 CFR part 280.60–280.67). Contaminated media and debris from non-subtitle I regulated sources (e.g., above ground tanks; farm and residential motor fuel USTs of 1100 or less gallons capacity) are not included in the proposed exemption. These materials, however, are the subject of a separate proposed rulemaking by the Agency. This separate rulemaking is discussed elsewhere in today's preamble.

USTs storing heating oil for consumptive use on the premises where stored are not regulated under subtitle I and, thus, are not covered by the proposed exemption. However, contaminated media and debris generated from residential heating oil tanks are "household wastes" under 40 CFR 261.4(b)(1). Under EPA's subtitle C regulations, household wastes are solid wastes but are excluded from consideration as hazardous wastes. Thus, contaminated media and debris from residential heating oil tanks are not hazardous wastes under subtitle C of RCRA.

D. Request for Comments

EPA requests commenters to indicate their support or opposition, with supporting rationale, to the proposed exemption for UST petroleum-contaminated media and debris as described in the preceding paragraphs. In particular, EPA is interested in comments addressing whether the scope of the proposed exemption is appropriate, or whether it should be broadened or narrowed. EPA is also interested in any analytical test data that indicate the concentration of the TCLP constituents in petroleum UST-contaminated media and debris. EPA also requests comments on alternatives to the exemption proposed today, which are discussed below.

E. Other Options Considered

1. Expansion of the Exemption to all TC Contaminants

When the temporary deferral was clarified in June, 1990, it was limited to the 25 newly listed organic contaminants under the 1990 TC rule. The deferral does not apply to the original 14 contaminants identified under EPA's 1980 Extraction Procedure (EP) toxicity characteristic rule. The contaminants regulated under the EPTC are arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver, as well as endrin, lindane, methoxychlor, toxaphene, 2,4-D, and 2,4,5-TP silvex. The deferral was limited only to the new contaminants because the issue of the relationship between hazardous waste rules and UST cleanups came to the Agency's attention during the development of the TC rulemaking, and was a result of the regulation of new constituents under that rule.

Since the original 14 contaminants were not part of the temporary deferral, generators are currently obligated to make a determination of whether the petroleum-contaminated media and debris would be hazardous for the original 14 constituents. Generators are allowed to make the determination either by subjecting the materials to the TCLP, or "applying knowledge of the

hazard characteristic of the waste in light of the materials or the processes used" (40 CFR 262.11(c)).

EPA believes it may also be unnecessary to require a hazardous waste determination for the 14 EP contaminants. As discussed in the preamble to EPA's underground storage tank regulations on September 23, 1988 (53 FR 37189), information the Agency had at that time from several States indicated it was highly unlikely that UST petroleum-contaminated soils would exhibit the characteristic of EP toxicity, even for lead that may have resulted from releases of leaded gasoline. Further, with the phase-out of leaded gasoline, it would seem even less likely for contaminated media and debris resulting from more recent releases of gasoline to exhibit the Toxicity Characteristic for lead. Thus, inclusion of these contaminants in the exemption would appear to have no impact on protection of human health or the environment, and testing for these contaminants appears unnecessary.

In addition, including these contaminants in the exemption will result in cost savings in the form of avoided TCLP sampling and analysis costs because owners and operators would no longer be required to determine whether petroleum contaminated media and debris exhibits the Toxicity Characteristic. If UST owners make this determination through TCLP testing of the materials, rather than applying some form of "knowledge" about them, laboratory analytical costs can range from a few hundred to more than a thousand dollars per sample. Since several samples of the contaminated media and debris would likely be necessary in order to adequately characterize the contamination at a particular site, the savings in sampling and analysis costs could amount to several thousand dollars per facility. These cost savings could be used to pay for proper management of the contaminated media and debris, rather than for unnecessary sampling and laboratory analyses.

Therefore, the Agency is interested in obtaining comments from the public regarding whether the final rule for the exemption should include these contaminants. EPA is particularly interested in commenters' rationale for including these contaminants within the exemption, and in any supporting data that indicate the concentration of these contaminants in petroleum UST-contaminated media and debris.

2. Expansion of the Exemption to Other Hazardous Waste Characteristics

EPA considered, but has tentatively rejected, proposing to expand the exemption for UST petroleum-contaminated media and debris to the other three characteristics of hazardous waste, in addition to the Toxicity Characteristic. These three characteristics are Ignitability, Corrosivity, and Reactivity. See 40 CFR 260.20–260.23. EPA generally believes that UST petroleum-contaminated media and debris are unlikely to exhibit these characteristics and, thus, would be unlikely to be regulated as hazardous waste because of these characteristics. However, in the event that UST petroleum-contaminated media and debris were to exhibit one of these characteristics, improper management of the media or debris could pose severe acute human health or environmental impacts. The Agency believes that the potential for such acute impacts warrants management of contaminated media and debris as hazardous waste, in the unlikely event that these materials exhibit one of these three characteristics. EPA is interested in public comments on this aspect of today's proposal.

3. Subtitle I Management Standards for Contaminated Media and Debris

Another option considered by EPA in lieu of regulation under subtitle C was to develop Federal management standards under subtitle I for the treatment and disposal of UST petroleum-contaminated media and debris. Such management standards may provide a greater degree of certainty regarding the ultimate disposition of these materials than the current subtitle I regulatory structure, while avoiding the problems associated with regulating these materials under subtitle C. This approach, however, would reduce the flexibility that the States currently have in terms of establishing technology requirements, cleanup standards, and oversight processes that they consider adequate and appropriate for management of these materials.

This approach would also tend to inhibit the development of innovative technologies for remediation of these materials. The Agency is currently promoting the use of innovative technologies for cleanups and the streamlining of State corrective action procedures, in an effort to improve the effectiveness and efficiency of corrective actions. Establishing Federal management standards for UST petroleum-contaminated media and debris could limit the effectiveness of these efforts.

Establishing new regulations under subtitle I would likely require States to enact new legislation or regulations to be "no less stringent" than the Federal requirements in order to obtain approval of their State UST program to operate in lieu of the Federal program. This could cause administrative problems for those States that have already received approval of their State UST program from EPA, as well as delay those that are far along in the approval process.

EPA is interested in comments on this issue, particularly regarding the scope and content of potential Federal management standards for UST petroleum-contaminated media and debris under subtitle I. EPA is interested in comments regarding the usefulness and desirability of such Federal standards, in view of existing State UST corrective action and solid waste management programs.

III. Basis for Today's Proposal

A. Purpose and Legal Basis

The primary purpose of today's action is to allow corrective action, including management of petroleum-contaminated media and debris, to occur under the authority of subtitle I of RCRA rather than under overlapping requirements of both subtitle C and subtitle I. Subtitle I contains comprehensive requirements for the reporting and cleanup of soil and groundwater contamination from petroleum USTs. Further, subtitle I requires that treatment or disposal of soils be conducted in compliance with applicable State and local requirements. See 40 CFR 280.62.

Subtitle I requirements are primarily implemented by each of the individual States and Territories, under provisions of subtitle I State Program Approval regulations, or under Memoranda of Agreement with EPA in States whose programs have not yet been approved by EPA. In the case of an approved State, EPA has deemed the State's UST program to be "no less stringent" than the Federal subtitle I program. In a State operating under a Memorandum of Agreement with EPA, the State is implementing the subtitle I regulations on behalf of EPA. EPA retains the authority to implement the requirements, where necessary, in unapproved States. In either case, the UST program is protective of human health and the environment, despite differences in specific corrective action procedures or approaches that may exist between States.

EPA believes that States are in the best position to oversee management of

the approximately 50,000 new UST releases identified each year. As discussed below, EPA studies confirm that State agencies are currently managing UST petroleum-contaminated media and debris in a manner that protects human health and the environment. Thus, it is unnecessary to subject these materials to management as hazardous wastes under subtitle C of RCRA.

Section 1004 of RCRA defines a "hazardous waste" as a solid waste which may pose a substantial threat "when improperly * * * managed." In addition, section 3001 of RCRA authorizes EPA to determine whether subtitle C regulation is appropriate in determining whether to designate a waste as "hazardous." EPA thus may determine that subtitle C regulation is not appropriate because such wastes are not "hazardous" when properly managed and, based on existing regulatory programs, would not be mismanaged. Under this approach, regulation of UST petroleum-contaminated media and debris under subtitle C is not necessary to protect human health and the environment, due to the presence of the Federal subtitle I regulations for underground storage tanks and the UST programs that are active in each of the States.

EPA is also concerned about the implementation and risk impacts associated with subjecting some or all aspects of petroleum UST cleanups to subtitle C. As discussed in more detail below, EPA believes that the findings of its studies and the information received during the course of meetings with interested members of the public support today's proposal for a final determination to make permanent the current temporary deferral for UST petroleum-contaminated media and debris.

B. EPA's Studies

The findings of the Agency's studies corroborate the preliminary assessment that EPA made at the time of promulgation of the temporary deferral. Specifically, the findings of EPA's studies indicate that removing the TC deferral would significantly affect UST cleanup procedures, delay remedial actions, and increase soil remediation costs. Further, delays in site remediation caused by compliance with subtitle C requirements could increase health and environmental risks prior to cleanup.

In addition to findings concerning the impacts of removing the deferral, these studies also indicate that many States have programs in place to adequately regulate the management of UST petroleum contaminated media and debris. The vast majority of these State programs address in some manner the entire cycle of UST petroleum contaminated soils and groundwater management, from initial characterization through storage and ultimate treatment or disposal.

1. Technical Study

The Agency has made available for public comment a draft report titled "TC Study of Petroleum UST Contaminated Media and Debris." This report is organized as follows:

- Estimates of the amounts of UST petroleum contaminated soils that might be expected to exhibit the hazardous waste characteristic of toxicity if subjected to the TCLP test,
- Impacts on hazardous waste capacity nationwide if these materials required management as a hazardous waste,
- State management practices for petroleum contaminated soils from USTs,
- Overview of technologies currently used for management of petroleum contaminated soils and groundwater, and
- Impacts on the RCRA subtitle I and C programs of removing the temporary deferral.

2. Impacts Study

The Agency has also made available for public comment a draft report titled "The Impacts of Removing the TCLP Deferral for Petroleum-Contaminated Media at Underground Storage Tank Sites." This report is organized as follows:

- Procedural impacts of removing the deferral with regard to changes that would be required in cleanup procedures, technologies and the pace of UST corrective actions,
- Cost impacts of removing the deferral, both to the regulated community, as well as EPA and States, and
- Preliminary assessment of health risk impacts associated with removing the temporary deferral.

3. Study Findings

As stated previously, EPA believes that these study findings support a final determination to make permanent the current temporary deferral for UST petroleum contaminated media and debris. The primary study findings that serve as a basis for making the deferral permanent are summarized below.

a. Procedural impacts. Removal of the deferral would result in substantial delays in UST cleanups due to the necessity of issuing a RCRA permit, by EPA or authorized States, for cleanups that involve treatment of TC-hazardous contaminated media on site (other than treatment that occurs on site in tanks in less than 90 days, or other units exempt from permitting). EPA's studies estimate that approximately 10% to 20% of the soil contaminated at a petroleum UST release may exhibit the Toxicity Characteristic. A significant consideration, however, is that this percentage contamination may exist at the majority of UST release sites, which currently average about 50,000 new release sites identified each year. EPA's studies indicate that on-site treatment of soils currently occurs at at least 20% of the UST soil remediation sites, with the trend increasing toward additional on-site treatment of soils. The situation with regard to groundwater contamination is also an important consideration. Virtually all treatment of petroleum-contaminated groundwater at UST release sites is performed on site. Although some of the groundwater treatment techniques may be exempt from RCRA permitting requirements, others would not be exempt.

Delays in UST cleanups would occur, in part, due to the tremendous increase in the number of permit applications for UST cleanups that would likely have to be handled with current Federal or State RCRA subtitle C permitting staff resources. It takes approximately one to four years, at current workload levels, to issue a RCRA subtitle C permit. Further, in States not yet authorized under subtitle C for the TC portion of the regulatory program, EPA alone would be responsible for issuance of permits. The substantial delays discussed above would allow subsurface contamination to continue and spread, increasing the costs of remediation, and increasing the potential for ground water contamination and for additional receptors to be affected.

Removal of the deferral would result in significant changes in the UST corrective action process. The current subtitle I remedial decision-making process is relatively simple and straightforward, compared to the more complex process associated with managing contaminated media and debris as hazardous waste. One example of the increased complexity of implementing remedial measures for hazardous waste would be the need to evaluate on-site versus off-site options for the management of the material. This would include identifying RCRA permitted treatment, storage, or disposal (TSD) facilities that would accept the waste, balancing transportation and off-site disposal costs with on-site management costs, and formal

consideration of the risks and benefits of on-site versus off-site management.

If the TC deferral were eliminated, the flexibility EPA currently allows States in the choice of cleanup technologies would be significantly reduced. For example, based on the current subtitle C regulations, UST owners and operators would likely be limited, in practice, to a choice of three cleanup options: (1) Excavate and send contaminated soil off-site to RCRA subtitle C permitted hazardous waste treatment, storage, or disposal facilities, (2) treat soils on-site in less than 90 days in a tank, in accordance with subtitle C tank generator and accumulation regulations, or (3) become a permitted TSD facility, thereby allowing on-site treatment of the petroleum contaminated media and debris.

With regard to the above management scenarios under subtitle C, the Agency is not aware of any currently used cleanup technologies that would involve the treatment of large volumes of petroleum-contaminated soils on site in tanks for less than 90 days. Thus, this appears to be an unlikely management alternative. As for obtaining a RCRA TSD permit, two States have estimated owner/operator administrative costs to obtain a TSD permit for petroleum release sites ranging from $21,000 to $80,000. Because of the delays and relatively high cost of a subtitle C TSD permit, which would be required for many on-site remediations of hazardous waste, petroleum contaminated soil management and disposal is more likely to be conducted off-site if it were considered hazardous waste. Since disposal in a subtitle C landfill is generally less expensive than subtitle C incineration, the Agency believes that for the majority of sites, the practical result of regulating UST petroleum-contaminated media and debris as hazardous waste would be the excavation and disposal of these materials in subtitle C landfills. This option, however, may be limited in time. When the TC land disposal restrictions are promulgated, incineration or other forms of treatment would likely be required for these materials prior to disposal, if they were considered hazardous waste.

On the contrary, the flexibility afforded under subtitle I for managing UST petroleum-contaminated media and debris as non-hazardous allows for the use of a much broader spectrum of management options for these materials, such as aeration, low temperature thermal treatment, soil vapor extraction, and bioremediation. While there is currently variation between states in the Subtitle I soil technologies commonly used, the majority currently rely on excavation and relatively simple treatment and disposal methods. The trend during the past several years, however, and EPA's preferred approach to management of these materials, is to treat them on site, in situ, i.e., without excavation or transportation off-site.

Since the Agency believes that, in most cases, the practical result of regulating UST petroleum-contaminated media and debris as hazardous waste at this time would be the excavation and disposal of these materials in subtitle C landfills, this would adversely affect the Agency's current efforts to promote the use of innovative technologies for treatment of these materials, particularly those that can be used in situ, such as bioremediation and soil vapor extraction. In addition, EPA estimates that landfilling of these materials at subtitle C facilities would increase the amount of waste going to these facilities by 8 to 20 percent annually. Since the Agency's studies confirm that these materials are currently being managed under subtitle I State programs that are protective of human health and the environment, the Agency believes that it would be more prudent to reserve the nation's limited hazardous waste landfill capacity for those wastes that might otherwise be mismanaged, or for which no equivalent subtitle I-type program exists.

Although it is difficult to estimate the precise pace at which UST remediations would proceed when the contaminated media and debris is considered hazardous waste, EPA's studies indicate that they would take substantially longer than cleanups currently managed solely under subtitle I. Several factors may contribute to the increased duration of cleanups, such as more extensive sampling and analysis requirements, and increased complexity of corrective action procedural requirements, as described previously.

More important, however, than the increased length of time needed to perform the actual cleanup, are the delays that would occur prior to the beginning of corrective action, particularly if the site requires permitting. For example, permit standards and conditions are established on a site-specific basis under subtitle C. In-situ soil vapor extraction or bioremediation are treatment approaches with which the RCRA program has little permitting experience to date, so uncertainties exist as to the most appropriate permit conditions for such cleanups. This uncertainty is likely to result in further delays in issuing of permits for such sites, as well as the imposition of additional permit conditions that are beyond the conditions typically imposed by States under subtitle I.

In addition to the permitting requirements for the "regulated unit," i.e., the remediation unit where TC-hazardous waste is treated, stored, or disposed at the UST site, any existing "solid waste management units," or SWMUs, at the facility would have to be cleaned up in accordance with RCRA section 3004(u) corrective action authorities and EPA's corrective action guidance for permitted hazardous waste TSD facilities. SWMUs at a typical UST facility might include a used oil tank, a trash disposal area, or an old drum storage area, but include virtually any portion of the property at which solid waste has ever been managed. Cleanup for these units under a RCRA TSD permit would generally be to risk-based levels, as determined on a site-specific basis. See 55 FR 30798 (July 27, 1990). As part of the permit conditions, UST owners or operators would be required to undertake a RCRA Facility Assessment, a RCRA Facility Investigation, a Corrective Measures Study and, finally, Corrective Measures Implementation for any SWMUs at the site. In addition, public participation requirements apply prior to issuance of each RCRA permit. This includes local notice of the proposed permit action and providing the public an opportunity for public hearings on the permit. These additional requirements add to delays in the subtitle C permitting process and are likely to severely discourage UST owners from undertaking on-site, in-situ cleanups. This result has also been corroborated by an Agency study on Corrective Action Management Units (CAMUs). See 57 FR 48195 (October 22, 1992). The study indicates that applying the hazardous waste land disposal restrictions to remediation wastes increases risks by causing less treatment, and less on-site treatment in particular, thereby increasing risks from transport of hazardous waste and leaving wastes in place without treatment.

An important consideration for UST cleanups that would require subtitle C permitting is that cleanup cannot begin until the permit is issued. The delays associated with permit issuance will allow contamination to continue unabated, increasing the costs of remediation and increasing the potential for groundwater contamination and for additional receptors to be affected.

b. Risk impacts. EPA's studies considered human health risk impacts that potentially would result if the UST petroleum-contaminated media deferral were removed. The studies evaluated

three components of health risk. The first component is interim risk, which is the health risk present at an UST site prior to remediation, including drinking water risks, and risks such as fire and explosions, and inhalation of vapors. Interim risk would be expected to rise significantly without the exemption, since permitting delays prior to remediation would allow increased migration of petroleum contaminants, thereby increasing exposure potentials for populations near the site.

EPA also evaluated a second component of risk, known as residual risk. Residual risk is the health risk remaining at the site following soil and groundwater remediation. EPA's studies indicate that residual risk would likely remained unchanged, i.e., neither increased nor decreased, by removal of the deferral and regulation of UST petroleum-contaminated media and debris as hazardous waste. This is due to the fact that the Toxicity Characteristic is not relevant to residual risk, because it is not a cleanup standard. Rather, the TC and associated subtitle C regulations impose requirements on how the waste generated from a cleanup can be managed. The soil and groundwater cleanup standards for the UST portion of the remediation is likely to be identical either with or without the exemption being proposed today.

The remaining component of risk, the treatment/disposal risk, relates to the exposure potential associated with treatment or disposal of contaminated soil and groundwater. The effect of removing the deferral on this element of risk is ambiguous. Different subtitle I and subtitle C technologies imply increased exposure potential, while others imply decreased potential. For example, in general, leak protection and subsurface monitoring at subtitle C landfills is generally superior to that at subtitle D landfills, where UST petroleum-contaminated soils may be disposed of in certain States. Thus, health risk potential is likely reduced by disposal in a subtitle C landfill versus subtitle D. In other cases, however, thermal treatment of subtitle I soils would provide more rapid contaminant destruction than subtitle C landfilling. Under this scenario, this type of treatment would likely pose less risk than subtitle C disposal.

A further risk consideration involves the transport of contaminated soils. When soils are hauled over long distances, as would more likely be the case if they required management as hazardous waste and were excavated for off-site landfiliing or incineration, the potential for accidental releases of contaminants is increased. Many States lack commercial subtitle C capacity to manage these materials, so transport over long distances is likely. In contrast, subtitle I treatment often occurs on site, as indicated in EPA's studies. Off-site treatment and disposal under subtitle I is typically accomplished within the State, resulting in far less hauling distances for the contaminated soils and, thus, less risk due to transportation.

c. Cost Impacts. EPA's study findings indicate that per-site remediation costs under subtitle C would be substantially higher than those currently incurred under subtitle I. As discussed previously, as a practical matter, the techniques that would likely be used in managing UST petroleum-contaminated media and debris as hazardous waste would be more limited than those currently used under subtitle I. For the majority of cases, it is likely that excavation followed by subtitle C landfilling or incineration would occur. For sites involving soil management only, the studies indicate that typical subtitle C costs may range from two to 15 times or more higher than the costs of cleanup under subtitle I. The primary source of this increase is the relative expense of the likely subtitle C soil management approaches compared to those currently used under subtitle I. The broad range of the increase is dependent upon the subtitle C approach selected by the UST owner or necessitated by site conditions.

For example, unit costs for subtitle I thermal treatment of soils in one State average $55 per cubic yard, compared to $1060 for subtitle C incineration and $510 for subtitle C landfills. Assuming management of 150 cubic yards of soil, subtitle I costs would be $8250, compared to $76,500 for subtitle C landfilling and $159,000 for subtitle C incineration.

As a direct result of this increase in per-site cleanup costs, the removal of the deferral would result in significant nationwide increases in annual UST remediation costs. The range of possible subtitle C management approaches and soil and groundwater remediation technologies makes it difficult to predict the size of the increases. However, based on reasonable assumptions about the likely mix of technologies selected, EPA's studies indicate national cost increases may range from $1.9 billion to $4.0 billion in each of the first five years following removal of the deferral. These estimates represent an 81 percent to 108 percent increase over current subtitle I projected cleanup costs.

Based on the discussion of risk impacts previously, such cost increases are unnecessary in achieving adequate protection of human health and the environment. Further, if hazardous waste permitting of UST cleanups occurred, there would likely be a decrease in the protection currently provided under subtitle I UST programs, but at an increased cost.

C. Public meetings

In the preamble to the 1990 TC rule, EPA also stated its intention to convene a public forum to discuss the issues associated with regulating UST petroleum-contaminated soils and debris under subtitle C of RCRA. To fulfill this commitment, in September and December, 1991, EPA convened several meetings with various interested parties (including representatives from the States, Congressional staff, environmental groups and the waste treatment and waste generating industries) to discuss issues related to the cleanup of petroleum contamination from UST as well as non-UST sources, and the potential impacts of the TC rule on these cleanups.

The thirteen States attending these meetings expressed significant concern about the adverse environmental impacts resulting from the application of the TC rule to petroleum UST releases. The State representatives indicated that regulation of petroleum contaminated media and debris as hazardous waste would significantly increase the cost of cleanup of these releases, substantially delay cleanup, and in some cases (by delaying cleanup) negatively impact human health and the environment.

A number of States have funds that provide a significant portion of the cleanup costs for petroleum UST releases. According to these States, if petroleum contaminated media and debris are regulated as hazardous wastes, the resulting dramatic increases in costs of waste management would significantly impair the ability of the State to pay for future cleanups. Further, if there is no guarantee that payment will be forthcoming, several States believe that many responsible parties and their cleanup contractors will be much less willing to report and respond promptly to releases. The net result, according to these States, will be that fewer sites will be remediated and remediations will be delayed, thus increasing the migration of contamination off-site, and in turn negatively impacting human health and the environment.

In the view of many States, the delays associated with RCRA subtitle C management would allow for volatilization and migration of certain

TC constituents, such as benzene, prior to cleanup. These States point to RCRA testing and permitting as significant sources of delay. In addition, States cautioned EPA to recognize that, because of the high costs associated with subtitle C management, there would be a significant disincentive to promptly report and undertake corrective action for petroleum releases. They explained that UST owners may instead purposely allow the waste to volatilize until it no longer exhibits the toxicity characteristic, thus rendering it non-hazardous.

Groups representing the waste generating industries (e.g., petroleum and petrochemical industries) at the meetings generally agreed with the views being expressed by the States, although several stated that the problems associated with applying subtitle C standards to remediations were not unique to petroleum contaminated media.

Environmental group representatives acknowledged the importance of these problems, but saw the issue as similar to other claims that regulations deter effective corrective actions. The environmental group representatives agreed on the merits of streamlining the subtitle C administrative processes and procedures (e.g., RCRA subtitle C permitting, as discussed later in this notice), but felt that regulatory control was necessary to ensure environmental safety. The environmental group representatives also argued that the important benefits of a RCRA permit, particularly public involvement and facility-wide corrective action, would be lost if EPA adopted the approach suggested by the States, i.e., making the UST deferral permanent.

Certain representatives of the hazardous waste treatment industry expressed strong concerns with exemption from the TC rule as the mechanism for solving the implementation problems posed by subtitle C regulation of petroleum contaminated media and debris. According to these representatives, EPA should consider streamlining the RCRA permitting process for the cleanup and disposal of petroleum contaminated media and debris. They specifically suggested that EPA consider issuing permits-by-rule for petroleum contaminated media and debris, as well as for other cleanup wastes. They also expressed concern that the UST deferral effectively exempts petroleum contaminated media and debris from the RCRA technical standards, in particular the land disposal restrictions. Other representatives of the waste treatment industry however, supported the deferral and favored expanding it to other cleanup wastes.

A complete summary of these meetings is in the docket for this rulemaking. The various viewpoints expressed in these meetings will be considered as part of EPA's final decisionmaking concerning the deferral.

IV. Regulatory Alternatives Under Subtitle C

The studies indicate that subjecting petroleum UST cleanups to the full range of subtitle C regulations would have significant adverse impacts. However, in the context of other previous rulemakings, EPA has explored the concept of alternative, ostensibly more streamlined, types of RCRA regulatory approaches that could be used to expedite cleanups. Some of these alternatives are discussed below. EPA is interested in comments from the public on the efficacy of using these approaches in dealing with UST petroleum-contaminated media and debris under subtitle C of RCRA as an alternative to the exemption being proposed today.

One alternative is reflected in the proposed rulemaking for mobile treatment units (52 FR 20914, June 3, 1987). Thermal treatment of UST petroleum contaminated soils, often in mobile thermal treatment units, is an innovative soil treatment technology that is increasing in use. The primary legal impediments to obtaining this type of "streamlined" permit for UST corrective actions under subtitle C are the need to provide for site specific public participation (as required under RCRA 7004), and the requirement to address facility-wide corrective action (under RCRA 3004(u)). Given that any treatment permit would have to address these statutory requirements, and that doing so would require a considerable time and resource commitment on the part of the issuing government agency(s), as well as the permittee, it may be that creating this type of permit for UST petroleum cleanup situations would actually have little "streamlining" effect.

Another approach is the use of emergency permits under Subtitle C of RCRA as an alternative to full subtitle C permitting. Emergency permits under 40 CFR 270.61 could be used in some situations involving petroleum UST releases. The problem is that these permits are of such short duration (90 days) that they would not be useful for extended cleanup operations, or for sites where cleanup is not being conducted in response to an actual "emergency" situation. Of the 112,000 UST cleanups initiated that have been reported to EPA by the States, only 5900 were categorized as emergency responses.

The concept of permits-by-rule has been considered as a mechanism that could alleviate the administrative impacts of individually permitting petroleum UST cleanups under subtitle C, while maintaining the substantive controls and standards (including the land disposal restrictions) provided under Subtitle C. However, as noted above, Section 7004(b)(2) of RCRA specifies that permits issued under RCRA for hazardous waste facilities must undergo a local hearing process. Thus, the utility of "permits-by-rule" may be limited under RCRA. See *NRDC v. EPA*, 907 F.2d 1146 (DC Cir. 1990) (remanding a hazardous waste permit-by-rule).

Even if the administrative problems associated with issuing permits for petroleum UST cleanups activities could be resolved, additional problems of regulating these cleanups under subtitle C remain. For example, UST owners or operators would have to register as a hazardous waste generator and obtain a generator identification number if they are generating soils or groundwater that exhibit the toxicity characteristic. The thousands of facilities each year that may be involved in such transactions would impose additional burdens on the issuing agency, and likely add to delays in the cleanup process. In addition, generators of hazardous waste are required to prepare and submit to EPA a biennial report of their hazardous waste generation activities, resulting in an increased paperwork burden to the regulated community, and additional administrative costs to EPA to process such reports.

EPA requests comment on the legal and technical defensibility of the above regulatory alternatives for regulation of these materials under RCRA subtitle C. EPA is concerned that some of the alternatives either may present legal concerns or fail to provide sufficient flexibility to remedy the environmental problems caused by regulating these materials as hazardous waste. EPA also requests suggestions concerning other changes to the subtitle C regulations that will allow EPA to regulate these materials under subtitle C while at the same time providing the flexibility to avoid the counterproductive impacts of subtitle C regulation of UST petroleum-contaminated media and debris discussed previously. EPA is also asking for comment on these and other regulatory alternatives in a related rulemaking concerning non-UST petroleum contaminated media and debris.

V. Process for the Final Determination

EPA will review and evaluate the public comments on the studies, public meetings, and this proposed rule as part of its decisionmaking concerning the regulatory status of UST petroleum-contaminated media and debris. Following review of all the public comments submitted on these notices, EPA will publish in the **Federal Register** its final determination regarding the regulatory status of UST petroleum-contaminated media and debris.

VI. Relationship to Non-UST Petroleum-Contaminated Media and Debris

In a separate action (57 FR 61542, December 24, 1992) the Agency has proposed suspension of the TC rule for the 25 newly listed organic contaminants for three years for environmental media and debris contaminated by petroleum products released from sources other than RCRA subtitle I regulated USTs. This suspension has been requested by several States. During the suspension period, the Agency would collect additional data, perform additional analyses, and explore other administrative and legal mechanisms to better tailor RCRA regulatory requirements to unique issues associated with remediation of non-UST petroleum releases.

Persons who would like to submit comments to EPA regarding the separate action for media and debris contaminated by non-UST releases must do so by submitting comments specifically addressing that action, to the appropriate RCRA docket.

The Agency believes it is appropriate to examine the application of the TC rule to petroleum contaminated media and debris from USTs and non-UST sources separately. Programs that regulate USTs and non-UST sources of petroleum contaminated media and debris can be distinct, with their own regulatory and administrative structures. Hence, the impacts of the TC rule on UST and non-UST cleanups can differ. For this reason, the ultimate determinations as to how to regulate UST and non-UST petroleum contaminated media and debris could be different.

Different exemptions, however, for very similar or identical types of waste, may be confusing to the regulated community and may pose challenges for the enforcement program. EPA is interested in obtaining comment from the public regarding whether and to what extent these two distinct exemptions should be made consistent or identical. Commenters may want to focus their attention on four differences in the non-UST proposal and today's proposal, discussed below.

First, the exemption in the non-UST proposal is limited to petroleum-contaminated media and debris generated at sites that are the subject of a site-specific enforcement order or other written approval from the State. The Agency believes a similar provision is unnecessary in today's proposal, due to the existence of the Federal corrective action regulations for USTs under subtitle I of RCRA, and the existence of active UST regulatory programs in each State that provide oversight of UST corrective action activities.

Second, the non-UST proposal limits the exemption to media and debris that are contaminated solely with petroleum product. The Agency believes a similar provision is unnecessary in today's proposal. Subtitle I of RCRA contains a well-defined universe of "petroleum UST systems" to which the exemption would apply. These petroleum UST systems are subject to the Federal UST corrective action regulations and the State programs discussed above, whether they contain petroleum product only, or other petroleum substances, such as used oil, in certain circumstances.

Third, although not a part of the preferred option, the non-UST proposal solicits comment on whether to limit that exemption to releases of less than a specified size, *e.g.*, less than 10,000 gallons of released product. Larger spills might be subject to full subtitle C controls. While this provision may be appropriate for above ground spills where the quantity of released product can be more easily estimated, the Agency believes such a provision is unsuitable for releases from underground storage tanks, because it would be difficult, if not impossible, to ascertain the amount of material that had been released into the subsurface environment prior to the initiation of cleanup.

Fourth, both proposals limit the exemption to the 25 newly listed TC constituents. However, the non-UST proposal solicits comment on further limiting the scope of the non-UST suspension only to those TC constituents which are known to be indigenous to petroleum product. The Agency is considering three contaminants in this regard under the non-UST rule—benzene, cresols, and methyl ethyl ketone. The Agency believes such a limitation is unnecessary in today's proposal, however, because contaminated media and debris is exempt only if it is generated from a subtitle I petroleum-UST system, which is well defined. See 40 CFR part 280.12. For example, a petroleum UST to which hazardous waste had been added would no longer be a subtitle I petroleum UST system (rather, it would be subject to subtitle C regulations). Thus, media and debris contaminated by releases from such a tank would not be exempt under today's proposal.

VII. Effect on Subtitle C State Authorization

Since today's proposal will, when finalized, make permanent the existing temporary exemption already contained in EPA's hazardous waste regulations, there would be no impact on State subtitle C hazardous waste programs, whether authorized by EPA for the TC or not. EPA did not require States to adopt the UST temporary deferral, nor would they be required to adopt the exemption being proposed today, when final, since this provision is less stringent than subjecting UST petroleum-contaminated media and debris to the full requirements of the TC rule.

VIII. Regulatory Requirements

A. Regulatory Impact Analysis

Executive Order 12291 (46 FR 13193) requires that regulatory agencies determine whether a new regulation constitutes a "major" rulemaking and, if so, that a Regulatory Impact Analysis (RIA) be conducted. An RIA consists of the quantification of the potential benefits, costs, and economic impacts of a major rule. A major rule is defined in Executive Order 12291 as a regulation likely to result in: (1) An annual effect on the economy of $100 million or more; (2) a major increase in costs or prices for consumers, individuals, industries, Federal, State, or local government agencies, or geographic regions; or (3) a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States based enterprises to compete with foreign based enterprises in domestic or export markets.

As discussed elsewhere in this preamble, EPA has estimated that today's proposed rule will result indirectly in significant cost savings, by avoiding the increased costs that would otherwise be associated with regulating UST petroleum-contaminated media and debris as hazardous waste. See EPA's draft reports titled "TC Study of Petroleum UST Contaminated Media and Debris" and "The Impacts of

Removing the TCLP Deferral for Petroleum-Contaminated Media at Underground Storage Tank Sites" for documentation of these cost savings.

Also, EPA does not believe the rule will significantly affect consumers, individuals, industries, Federal, State, or local government agencies, or geographic regions, or have significant adverse effects on competition, employment, investment, innovation, or international trade. Therefore, EPA has determined that today's proposed rule is not a major rule and that a Regulatory Impact Analysis is not required.

B. Regulatory Flexibility Act

Under the Regulatory Flexibility Act (RFA) of 1980 (Pub. L. 96–345), whenever a Federal agency publishes a notice of rulemaking for a proposed or final rule, it must prepare and make available for comment a Regulatory Flexibility Analysis that describes the impact of the rule on small entities, including small businesses, small organizations, and small governmental jurisdictions, unless the Agency head certifies that the proposed action will not have a significant economic impact on a substantial number of small entities.

This proposal will provide significant regulatory relief to businesses, including many small businesses, faced with corrective action as a result of releases from petroleum USTs. Therefore, pursuant to section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities.

C. Paperwork Reduction Act

This rule does not impose any additional reporting, recordkeeping, or information collection requirements on any member of the regulated public. Therefore, no estimate of public reporting burden is required for this rule.

List of Subjects in 40 CFR Part 261

Hazardous waste, Recycling, Reporting and recordkeeping requirements.

Dated: January 20, 1993.

William K. Reilly,

Administrator.

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