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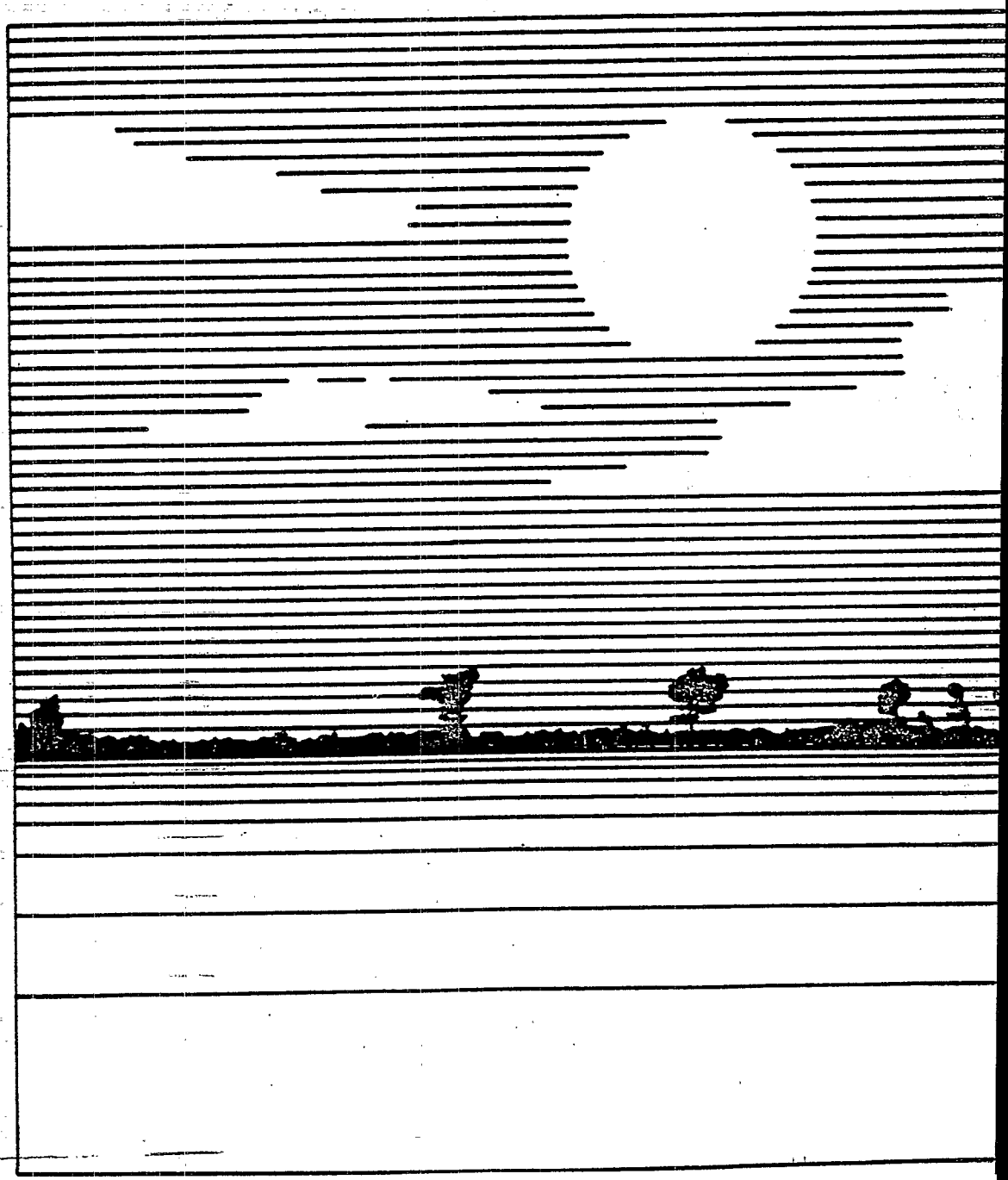
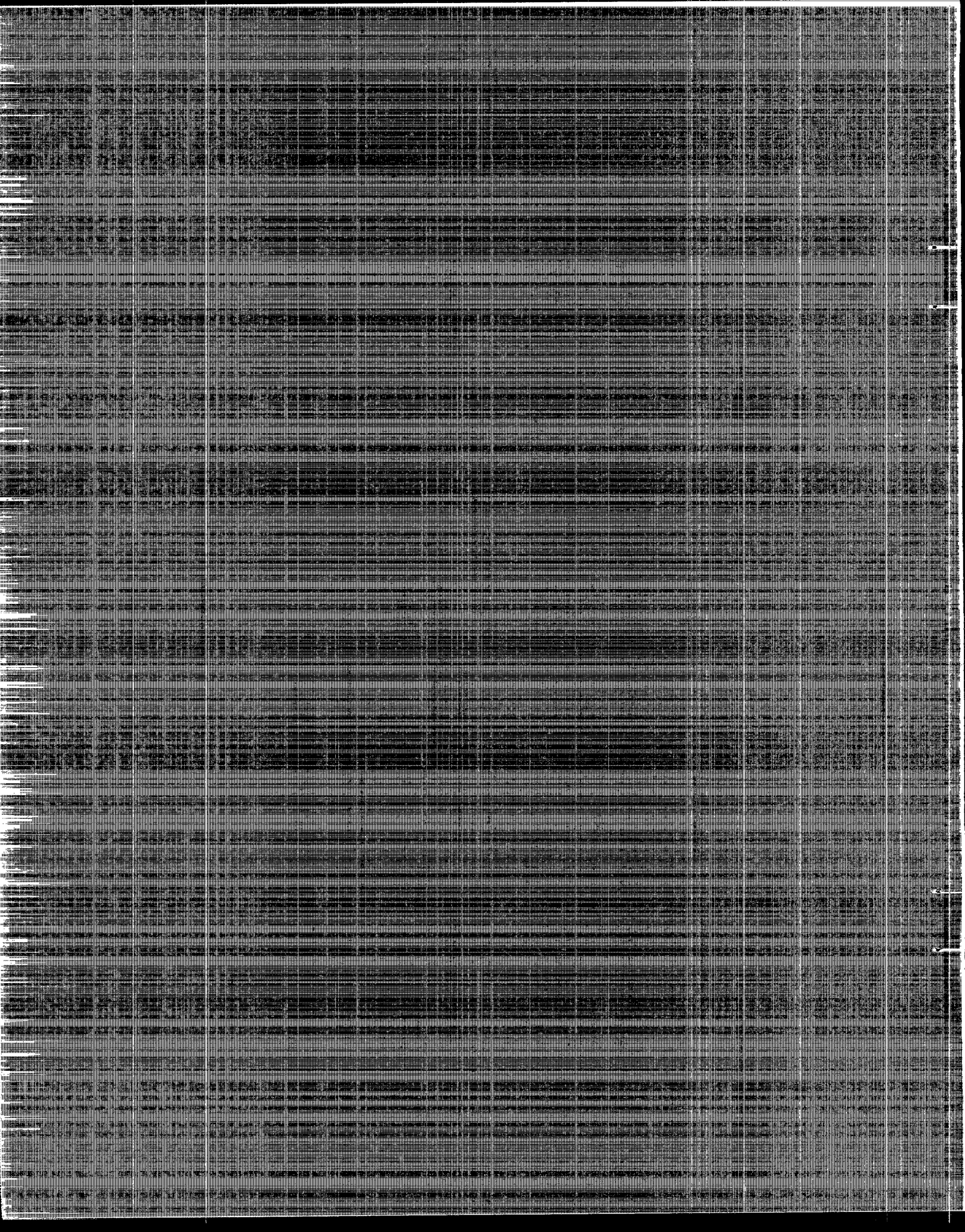
Questions and Answers on Land Disposal Restrictions for Solvents and Dioxins





Questions and Answers on Land Disposal Restrictions for Solvents and Dioxins

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INTRODUCTION

In 1976, Congress enacted the Resource Conservation and Recovery Act (RCRA) to protect human health and the environment from improper waste management practices. On November 8, 1984, the Hazardous and Solid Waste Amendments (HSWA) were signed into law, imposing substantial new responsibilities on those who manage hazardous waste. Among other things, the amendments prohibit land disposal of untreated hazardous wastes beyond specified dates, unless a petitioner demonstrates to the Administrator of the Environmental Protection Agency (EPA) that there will be no migration of hazardous constituents from the land disposal unit for as long as the waste remains hazardous. These prohibitions are intended to protect the environment from contamination by the continued land disposal of hazardous wastes.

HSWA also directs EPA to develop treatment standards for all hazardous wastes. These treatment standards are based on technologies that substantially reduce the toxicity of the waste or the likelihood of migration of hazardous constituents from the waste. Wastes and treatment residuals that meet these treatment standards are not subject to the land disposal prohibitions.

On November 7, 1986, EPA promulgated a final rule which establishes a regulatory framework to implement the land disposal prohibitions (51 FR 40572). This framework includes, among other things, the procedures for:

- Setting treatment standards for hazardous wastes based on the levels achievable by current technology.

- Granting nationwide capacity extensions from the statutory effective dates due to insufficient alternative treatment capacity.
- Granting case-by-case extensions to the effective dates due to insufficient capacity and based on a demonstration that a binding contractual agreement has been made to assure that capacity will be made available.
- Evaluating petitions demonstrating that continued land disposal of hazardous wastes is protective of human health and the environment.
- Evaluating petitions for a variance from the treatment standards in cases where a particular waste is significantly different from wastes considered when determining the treatment standards.

In addition, the rule establishes treatment standards and effective dates for the first class of hazardous wastes to be prohibited: certain dioxin-containing wastes and spent solvent wastes. Since its promulgation, the Agency has received a number of questions concerning interpretation and applicability of the land disposal restrictions final rule. Many of these questions have been similar or duplicates of one another. This document presents a summary of the most frequently asked questions and the appropriate responses.

Some of the questions contained in this volume concern the application of regulations to specific situations. Because the regulations are complex, their applicability can depend heavily upon individual circumstances. The reader should, therefore, avoid reading more into the responses than has been provided. EPA staff are prepared to respond to specific questions regarding the applicability of the November 7, 1986 rule. For information call the RCRA Hotline, toll-free, at 800-424-9346 (202/382-3000 in the Washington, D.C. metropolitan area). Contact the EPA

Regional Offices for additional information, and for guidance on specific wastes or sites. The addresses and telephone numbers of the EPA Regional Offices are listed in the Appendix of this document.

The answers provided in this document reflect land disposal prohibition requirements covered by the Federal rules promulgated on November 7, 1986. The regulated community should note, however, that compliance with applicable Federal requirements does not relieve an individual from compliance with applicable State requirements.

SCOPE AND APPLICABILITY

Q: What specific solvent and dioxin wastes are covered by the November 7, 1986 final rule?

A: Under this final rule, EPA promulgated specific treatment standards and effective dates for solvent-containing hazardous wastes numbered F001, F002, F003, F004, and F005, and dioxin-containing hazardous wastes numbered F020, F021, F022, F023, F026, F027, and F028.

Q: The "California list" is expected to be promulgated as the next phase of Land Disposal Restrictions in July 1987. What effect will these additional regulations have on the November 7, 1986 final rule?

A: Promulgation of the "California list" will increase the number and types of waste streams that are subject to the provisions of the November 7, 1986 final rule. Petition procedures for case-by-case extensions, treatability variances, no-migration petitions, and other provisions of the November 7, 1986 final rule will apply to these wastes unless otherwise stated in the California list final rule. In addition, the Agency has proposed (December 11, 1986, 51 FR 44714) to extend the effective date of the Land Disposal Restrictions for certain California list wastes due to insufficient nationwide treatment capacity. To the extent there is an overlap of regulatory requirements between the November 7, 1986 final rule and the California list rule, the standards established in the November 7, 1986 rule will supersede the California list standards.

Q: Can EPA extend the effective date of the land disposal restrictions beyond the 2-year national capacity extension provided under the statute?

A: Yes. Although the Agency does not have the authority to grant a national capacity extension for more than 2 years, EPA can grant case-by-case extensions of an effective date after that time. The Agency will consider applications for a one year extension of the effective date (renewable once) if the applicant demonstrates that a binding contract has been entered into to construct or otherwise provide alternative capacity that cannot reasonably be made available by the applicable effective date due to circumstances beyond the applicant's control.

Q: Are injection wells covered under the November 7, 1986 final rule?

A: No. Congress established a separate schedule for making determinations regarding the prohibition of disposal of solvent, dicxin, and California list hazardous wastes in injection wells. The statutory deadline for disposal of these hazardous wastes in injection wells is August 8, 1988.

Q: Does the November 7, 1986 rule for solvents and dioxins apply to the disposal of lab packs?

A: Yes. If a lab pack contains restricted wastes, the entire lab pack is subject to the land disposal restrictions. Thus, a lab pack may not be land disposed unless the solvents or other restricted wastes are removed before land disposal, the solvents in the lab pack meet the treatment standard, or a successful petition demonstration has been made under §268.6 (i.e., a "no-migration" petition).

Q: Do the Land Disposal Restrictions apply to disposal of restricted wastes in on-site land disposal facilities?

A: Yes. All restricted wastes must meet the treatment standards (or be the subject of a successful "no-migration" petition) before being placed in or on the land regardless of whether the land disposal facility is located on- or off-site.

Q: Who has the ultimate responsibility for determining whether restricted wastes meet the applicable treatment standard prior to land disposal?

A: The disposal facility has the ultimate responsibility for verifying that only wastes meeting the treatment standards are land disposed. The land disposal facility must maintain all documentation that the wastes are in compliance with the applicable treatment standards. However, generators that send wastes directly to land disposal and treatment facilities have the obligation to certify in writing that restricted wastes (or residuals from treatment of restricted wastes) meet the applicable treatment standards.

Q: Is the ash or residue resulting from incineration of restricted wastes subject to the treatment standards?

A: Yes. Residuals from treatment of restricted wastes must meet the treatment standards if these residuals are to be placed in or on the land.

Q: Does the November 7, 1986 final rule require that wastes subject to the 2-year nationwide capacity extension be placed in units that meet the minimum technological requirements?

A: No. Such wastes may be placed in units that do not meet the minimum technological requirements provided that the facility meets the requirements of Parts 264 and 265 for any new, expanded, or replacement units the facility may have.

Q: Are the "P" and "U" listed solvent wastes (i.e., 40 CFR 261. 33(e) and (f)) corresponding to the F001-F005 waste streams subject to the November 7, 1986 rule?

A: No. The statute does not require EPA to set treatment standards for the commercial chemical products and off-specification species ("P" and "U" hazardous wastes) corresponding to the F001-F005 solvent-containing wastes by the November 8, 1986 deadline. The Agency will evaluate the "P" and "U" solvent wastes in accordance with the final schedule for land disposal prohibitions which was promulgated on May 28, 1986 (51 FR 19300).

Q: What is the effect of the November 7, 1986 rule on reclamation or other recycling of restricted hazardous wastes?

A: Restricted wastes may continue to be recovered or reclaimed. However, while the reclamation operation itself is currently exempt from regulation under RCRA, storage of restricted wastes prior to reclamation is still subject to the provisions specified in §268.50 of the final rule. Still bottoms and other residues from reclamation of restricted wastes remain subject to the land disposal restrictions.

Q: If restricted wastes are excavated and removed after the November 8, 1986 effective date, are they subject to restrictions although they were originally placed in the ground prior to November 8, 1986?

A: The Agency interprets the land disposal restrictions adopted in the November 7, 1986 rule as applying prospectively to the affected hazardous wastes. Where restricted wastes land disposed prior to the applicable effective date are removed, subsequent placement of such wastes in or on the land would be subject to the prohibitions and treatment provisions. If, however, the excavated wastes constitute contaminated soil and debris from CERCLA 104 and 106 response actions or RCRA corrective actions, the wastes are subject to a two-year statutory exemption. Futhermore, a two-year nationwide capacity extension to the November 8, 1986 effective date was provided to CERCLA and RCRA corrective action wastes other than soil and debris.

Q: What happens when a State rule requires more stringent treatment methods than are mandated by the Federal rule (e.g., California's standard for defining an empty container does not allow 1 inch of material left in the container as does the Federal standard)?

A: State requirements which are determined to be more restrictive than Federal requirements are fully enforceable and may be enforced by both Federal and State authorities. State requirements that are broader in scope than Federal requirements (i.e., there are no Federal analogs) are enforceable only by State authorities. When Federal and State requirements are mutually exclusive (e.g., a Federal requirement is promulgated that is incompatable with a current State regulation), the Federal requirements govern.

Q: Is the 1 percent cut-off for solvent wastes granted a 2-year nationwide capacity extension from the effective date based on volume or weight?

A: The percentage of total F001-F005 solvent constituents is by weight.

Q: How does the Agency define RCRA and CERCLA contaminated soil and debris?

A: CERCLA and RCRA contaminated soil and debris wastes include, but are not limited to, soils, dirt, and rock as well as materials such as contaminated wood, tree stumps, clothing, equipment, building materials, storage containers, and liners. The Agency will define soils when it proposes the land disposal restrictions for CERCLA and RCRA contaminated soil and debris.

Q: Do open detonation and open burning constitute forms of land disposal?

A: No. The final rule states that open detonation and open burning of explosive wastes do not constitute land disposal. These methods are primarily treatment processes that typically result in by-products which are no longer reactive, and, therefore, are not considered hazardous. However, in cases where explosive wastes are mixed with F001-F005 solvents or other restricted wastes before being open detonated or burned, the residues must meet or be treated to the applicable treatment standards if they are to remain in or on the land (except where the explosive wastes are mixed with an F003 waste and the residues no longer exhibit the characteristic of ignitability).

Q: What is the definition of land disposal?

A: For the purposes of land disposal restrictions, the statute specifically defines land disposal to include, but not be limited to, any placement of hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome or salt bed formation, or underground mine or cave (RCRA section 3004(k), 42 U.S.C. 6924(k)). The Agency also considers placement in concrete vaults or bunkers intended for disposal purposes as methods of waste management subject to the land disposal restrictions.

Q: What materials are considered residue after incineration?

A: Any materials derived from the incineration process--ash and scrubber water.

TREATMENT/BEST DEMONSTRATED AVAILABLE TECHNOLOGIES

Q: How are treatment standards based on the Best Demonstrated Available Technology (BDAT) developed?

A: To be considered a "demonstrated" treatment technology, a full scale facility must be known to be in operation for the waste or similar wastes. The determination of "available" treatment technologies is based on a showing that the technology does not pose greater risks than land disposal, that it provides substantial treatment, and that if the technology is a proprietary or patented process it can be purchased from the proprietor. Once the demonstrated available treatment technologies have been determined for a waste treatability group, the Agency collects data (from literature and sampling) representing treatment performance and information on the design and operation of the treatment systems. Identification of BDAT results from a statistical analysis of performance data from well-designed and well-operated treatment units.

Q: Is there a provision for changing the treatment standards if new treatment technologies are developed?

A: Yes. If a new technology is shown to be more effective in reducing the concentration of hazardous constituents in the waste (or the waste extract) than the existing technology upon which the treatment standard has been based, the Agency may revise the treatment standard. Such a revision would follow the normal regulatory amendment process (i.e., publish a proposal for public comment before taking final action).

Q: How did EPA collect the data upon which the treatment standards for solvents and dioxins were based?

A: The majority of the performance data evaluated by EPA in developing BDAT for F001-F005 solvents were from full-scale operations. The Agency included some pilot- and bench-scale data from treatment technologies which are also demonstrated on a full scale basis. With respect to dioxin-containing wastes, the Agency evaluated existing data from the field demonstration of EPA's Mobile Incineration System and other available data of incineration at 99.9999% destruction and removal efficiency.

Q: Is dilution which occurs as part of a treatment process prohibited under the November 7, 1986 final rule?

A: No. Treatment which necessarily involves some degree of dilution (such as biological treatment or steam stripping) is acceptable under the Land Disposal Restrictions. Also, mixing wastes together prior to treatment is not considered dilution. Dilution is prohibited if it is conducted in lieu of adequate treatment for purposes of attaining the applicable treatment standards.

Q: Does the November 7, 1986 final rule require treatment of restricted spent solvent wastes by the technology EPA used in setting its treatment standards?

A: The November 7, 1986 rule sets treatment standards as measures of performance; the rule does not require the regulated community to utilize a prescribed technology to meet a treatment standard. Therefore, wastes may be treated by any technology which is capable of achieving the treatment standard, or may already meet the treatment standards as generated. Appendix II to the November 7, 1986 final rule describes the treatment technologies which were used in developing the treatment standards. More information on treatment technologies capable of achieving the treatment standard is available in the BDAT development document in the RCRA Docket.

Q: Is solidification considered an acceptable method of treating restricted wastes?

A: Yes. Wherever possible, the Agency will establish treatment standards as performance standards rather than requiring a specific treatment method. In such cases, any method (other than inappropriate solidification practices that would be considered dilution to avoid adequate treatment) which can meet the treatment standard is acceptable. When the Agency has specified a technology as the treatment standard, the applicable wastes must be treated using the specified technology. It should be noted that for many organics, solidification/stabilization is not effective in immobilizing the constituents of concern, and therefore it may not be possible to meet the treatment standards using these treatment methods. Solidification may, nonetheless, be a necessary prerequisite to land disposal to comply with the prohibition against free liquids in landfills (40 CFR 264.314 and 265.314).

Q: Do innovative technologies have to be permitted?

A: The Agency has recently proposed regulations (to be codified in Subpart X of Part 264) which provide the mechanisms for obtaining permits for innovative and miscellaneous technologies (51 FR 40726, November 7, 1986). These proposed rules establish environmental performance standards to be met by such miscellaneous units for which no specific design or operating standards exist elsewhere in Part 264. The proposed rules also propose changes to Part 270, establishing the mechanisms for applying for and receiving permits under Subpart X of Part 264. When the Subpart X rules are promulgated, innovative technologies used to treat hazardous wastes will have to be permitted.

Q: Will all treatment technologies require Subpart X permits?

A: No. All treatment of hazardous waste is required to have a RCRA permit according to the existing provisions in Part 264 (i.e., Subparts I, J, K or O) unless exceptions exist (e.g., treatment in totally enclosed systems, treatment in wastewater treatment units, etc). Subpart X regulations (when promulgated) will be used to permit hazardous waste management technologies not covered by the existing design or performance standards addressed elsewhere in the RCRA regulations (e.g., incineration standards of Subpart O).

SMALL QUANTITY GENERATORS

Q: Are small quantity generators (SQGs) of 100-1000 kilograms per month of hazardous wastes subject to the November 8, 1986 effective date?

A: No. While these generators are subject to the land disposal restrictions regulations in general, SQGs have been granted a 2-year nationwide capacity extension to the effective date. Therefore, the effective date for F001-F005 spent solvent wastes generated by these small quantity generators is November 8, 1988. During the period from November 8, 1986 to November 8, 1988, SQGs may dispose of restricted wastes only at land disposal facilities which meet the minimum technological requirements for any new, expanded, or replacement units which may be present.

Q: Does the 2-year nationwide capacity extension granted to SQG wastes apply if the waste is accepted by a transfer facility?

A: Yes. The 2-year capacity extension is applicable to these wastes as long as it can be clearly demonstrated that the wastes were generated by SQGs. In order for the capacity extension to apply when wastes are consolidated by the transfer facility, the transfer facility must be able to identify with certainty that each container of waste was generated by a SQG. Where wastes are removed from containers and consolidated into a single load, the transfer facility must be able to ascertain that <u>all</u> the waste included in a load was generated by SQGs.

Q: Are SQG wastes which are combined for transport considered large quantity wastes?

A. No. These wastes remain SQG wastes. Proper certification will be required to demonstrate to the disposal facility that these wastes are SQG wastes.

Q: Are SQGs of less than 100 kilograms per month of non-acute hazardous waste subject to the Land Disposal Restrictions regulations?

A: No. These generators are conditionally exempt from regulation under RCRA; therefore, they are not subject to the Land Disposal Restrictions.

CERCLA RESPONSE ACTION/RCRA CORRECTIVE ACTION WASTES

Q: Are contaminated soil and debris generated from CERCLA response actions and RCRA corrective actions subject to the November 8, 1986 effective date?

A: Contaminated soil and debris from CERCLA Section 104 and 106 response actions and RCRA corrective actions are provided a 24-month statutory exemption (i.e., until November 8, 1988) from the land disposal restriction provisions under HSWA.

Q: Does the statutory exemption cover soil and debris generated during non-Federally ordered cleanups such as State-ordered or State-funded cleanups?

A: No. Only the wastes that result from CERCLA Fund-financed actions (section 104), exercise of CERCLA's enforcement authority (section 106), and RCRA corrective actions are covered under the exemption. Wastes that result from State-ordered, State-funded, or private party-funded responses taken under the authority of CERCLA or RCRA or exclusive of this authority are not included in the statutory exemption.

Q: Are RCRA and CERCLA wastes other than contaminated soil and debris also provided a statutory exemption?

A: No. However, these wastes are not prohibited from land disposal until November 8, 1988 under the provisions of the November 7, 1986 final rule. The Agency determined that there is insufficient capacity to handle these wastes; therefore, EPA promulgated a two-year extension of the effective date.

Q: Is a non-Federally ordered cleanup of F001-F005 wastes (non-soil and debris) covered under any exemption?

A: Potentially. It could be exempted from the November 8, 1986 effective date if the waste contains less than 1% total F001-F005 solvent constituents. However, the waste does not qualify for the CERCLA or RCRA corrective action exemption discussed above.

Q: Are wastes that are cleaned up during closure of a permitted facility subject to Land Disposal Restrictions?

A: Yes. However, if closure of the facility was dictated in a Corrective Action Order issued by EPA, the waste is subject to the 2-year nationwide capacity extension for CERCLA and RCRA corrective action wastes (i.e., non-soil and debris). Also, where wastes from a facility closure are disposed in situ (e.g., not removed from the land disposal unit or placed in a different unit) they are not subject to the land disposal restrictions.

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

Q: What is the current regulatory status of the Toxicity Characteristic Leaching Procedure (TCLP)?

A: EPA promulgated the TCLP in the November 7, 1986 rule specifically for evaluation of the solvent and dioxin-containing wastes. The TCLP, as promulgated, included improvements and modifications based on comments received on the proposed Toxicity Characteristic rule (51 FR 21648, June 13, 1986), as well as on the land disposal restrictions proposed rule (51 FR 1602, January 14, 1986). EPA will make decisions regarding the applicability of the TCLP to other restricted wastes according to the final schedule for land disposal restrictions which was promulgated on May 28, 1986. On June 13, 1986 (51 FR 21648), the Agency proposed to amend the Extraction Procedure (EP) Toxicity Characteristic by (1) expanding the characteristic to include 38 additional compounds, (2) applying compound-specific dilution/attenuation factors generated from a groundwater transport model, and (3) introducing the TCLP to replace the current EP protocol. The Agency expects to promulgate the Toxicity Characteristic by late 1987.

Q: For what purpose is the Toxicity Characteristic Leaching Procedure (TCLP) used?

A: Under the November 7, 1986 final rule, the Agency requires that when a waste extract is tested the TCLP is used to determine whether a waste requires treatment. Futhermore, it serves as a monitoring technique to determine whether a treated waste meets the applicable treatment standard.

Q: Are any revisions being considered to improve upon the applicability of the TCLP to oily wastes?

A: The Agency believes it is important that the TCLP be capable of indicating the movement of oily material since these materials have been known to migrate from wastes. In view of this concern, the Agency is continuing to investigate if the TCLP's filtration regime should be altered to better predict movement of the oily phase of a waste. Upon completion of these evaluations, EPA may propose modifications to the TCLP specifically for wastes containing oily or other non-aqueous liquids.

SOLVENTS

Q: What solvents are covered under the F001-F005 spent solvent listings?

A: A solvent waste must meet the following criteria in order to be covered by the spent solvent listings (i.e., EPA Hazardous Waste Nos. F001, F002, F003, F004, and F005):

- the waste must be generated from solvents that are used for their "solvent" properties (i.e., to solubilize (dissolve) or mobilize other constituents),
- with respect to spent solvent mixtures/blends, the mixture must contain, before use, a total of ten percent or more (by volume) of one or more of the solvents listed in F001, F002, F004, or F005.

Q: When does a solvent become "spent"?

A: A solvent is considered spent when it has been used and is no longer fit for use without being regenerated, reclaimed, or otherwise reprocessed.

Q: Are solvent-based paints covered under the F001-F005 solvent listings?

A: The spent solvent listings do not cover manufacturing process wastes contaminated with solvents when the solvents were used as reactants or ingredients in the formulation of commercial chemical products. Therefore, waste solvent-based paints are not within the scope of the F001-F005 spent solvent listings because the solvents are ingredients in the paint.

Q: Are solvent mixtures as defined by the December 31, 1985, solvent mixture rule (50 FR 53315) that is, mixtures containing a total of 10 percent or more (by volume) of one or more of the listed solvents, subject to the November 7, 1986 final rule?

A: Yes. Pursuant to section 3004(g)(4) of RCRA, EPA is required to make determinations within six months whether to subject newly identified or listed hazardous wastes to the land disposal restrictions (the statute does not impose an automatic prohibition if the Agency misses the deadline). In accordance with this section, the Agency included F001-F005 spent solvent mixtures in the November 7, 1986 final rule.

Q: How can I determine whether my spent solvent wastes should be treated to the levels specified in Table CCWE for "wastewater" or "all other spent solvent wastes"?

A: For the purposes of defining applicability of the treatment standards for wastewaters containing F001-F005 spent solvents, wastewaters are defined as solvent-water mixtures containing total organic carbon (TOC) of one percent or less. Wastewaters containing greater than one percent TOC must meet the treatment standard for "all other spent solvent wastes."

Q: What test method should be used to determine if there is a greater than 1% total F001-F005 solvent concentration in a waste?

A: A total organic carbon analysis can be used, or, alternatively, individual tests can be run to determine the concentration of each of the F001-F005 constituents present or expected to be present in the wastes. The individual concentrations are then summed to determine if the 1% threshold is exceeded. Unfortunately, there is no single test to measure all of the F001-F005 constituents.

Q: What treatment technologies were used as the basis for the treatment standards for F001-F005 solvent-containing wastes?

A: Treatment standards for solvent-containing "wastewater" were based on either a combination of biological treatment, steam stripping, and activated carbon technologies or on the technologies individually. The treatment standards for "all other spent solvent wastes" were based on incineration. Appendix II to the November 7, 1986 rule provides a table containing the treatment technologies upon which specific treatment standards were developed.

Q: Does the November 7, 1986 final rule apply to spent solvent-contaminated solids (e.g., rags and metal chips)?

A: Yes, provided the solids are contaminated with a F001-F005 spent solvent.

Q: Does the November 8, 1986 effective date apply to solvent-contaminated solids regardless of total solvent content?

A: No. The November 7, 1986 final rule does not apply immediately to those F001-F005 spent solvent wastes (including solvent-wastewaters, solids, sludges, and soil) that contain less than 1% solvents. A 2-year extension to the effective date has been granted due to insufficient alternative capacity to treat wastes containing less than 1% solvents.

Q: Are solvent mixtures having a total of less than 10% F001, F002, F004, or F005 constituents (before use) regulated under the November 7, 1986 final rule?

A: No. Solvent mixtures are not covered under the F001-F005 listings unless the total of all F001, F002, F004, and F005 constituents meet the ten percent threshold. Therefore, these wastes are not subject to the November 7, 1986 final rule. These solvent mixtures, however, may be regulated under RCRA if they exhibit one or more of the characteristics of hazardous waste (i.e., corrosivity, ignitability, EP toxicity, or reactivity). The Agency will evaluate characteristic hazardous wastes for the purpose of land disposal restriction decisions by May 8, 1990.

Q: Are spent solvents that are shipped off-site to incinerators or recycling operations subject to the November 7, 1986 final rule?

A: Yes. Under the November 7, 1986 final rule, solvent wastes are determined to be restricted from land disposal at the point of generation. Therefore, the generator is required to notify the treatment facility of the appropriate treatment standard, assuming the waste as generated does not meet the treatment standard, and is not otherwise exempt from restriction.

Q: If treatment standards are achieved for a solvent waste, can the generator or owner/operator petition the Agency to delist the treatment residual?

A: Yes. A generator or owner/operator may decide to submit a petition to EPA for a delisting, pursuant to the provisions of 40 CFR 260.22. The generator or owner/operator may choose to submit a delisting petition to the Agency either before or after the restricted waste has been treated to the Part 268 Subpart D treatment standard, as well as, after denial of any of the exceptions to achieving the treatment standard, if the petitioner believes that the waste or the treatment residual meets the delisting criteria (40 CFR 260.22). Delisted wastes are no longer considered hazardous and may be disposed of in a Subtitle D facility. It should be noted that most wastes regulated under the November 7, 1986 final rule contain substances other than solvents, and delisting petitions must address those hazardous constituents that can reasonably be expected to be in a particular waste. During the period that the delisting petition is being considered by the Agency, the petitioner must comply with Land Disposal Restrictions.

Q: Are there any circumstances where dilution of solvent wastes is allowed?

A: Yes. If dilution is a legitimate step in a properly operated treatment process (e.g., if a waste is mixed with other wastes prior to incineration), or if a treatment method includes the addition of reagents to physically or chemically change the waste (and does not merely dilute hazardous constituents into a larger volume of waste so as to lower the constituent concentration), then dilution is allowed. For spent solvent wastes which are exclusively F003 wastes, mixing with a solid waste is an approved method to render these wastes nonhazardous, provided that such mixing results in a residue which is no longer ignitable.

Q: Are solvents used as a reactant in a process regulated under the November 7, 1986 final rule?

A: No. Manufacturing process wastes are not F001-F005 spent solvent wastes and, therefore, are not regulated under the final rule. Prohibitions on the land disposal of these wastes will be promulgated consistent with the May 28, 1986 schedule (51 FR 19300).

Q: Are the residuals (still bottoms) from the recycling or distillation of listed solvents subject to the November 8, 1986 effective date?

A: Residuals from solvent recycling operations that accept restricted wastes are subject to the November 8, 1986 effective date, and thus, must meet the applicable treatment standard before being disposed of in a Subtitle C facility.

Q: Are wastewaters contaminated with F001-F005 restricted wastes covered under the November 7, 1986 rule?

A: Yes. Mixtures of F001-F005 wastes are subject to the regulations. However, certain mixtures are not listed hazardous wastes and so are not presently restricted (see 40 CFR 261.3(a)(2)(iv)(A) and (B)). Hazardous wastewaters containing less than 1% total F001-F005 constituents are subject to the 2-year nationwide capacity extension.

Q: Can restricted wastes be treated to below the 1% threshold and land disposed without meeting the treatment standard?

A: No. If you are required to treat your waste and the treatment residual does not meet the applicable treatment standard, these residuals do not qualify for the nationwide extension of the effective date for solvent wastes containing less than 1% solvent. The waste must be treated to the applicable treatment standard or you may apply for a treatability variance in cases where the waste cannot be treated to the standard.

Q: Is a cutting oil that has been contaminated with a spent solvent subject to the November 7, 1986 rule?

A: Yes. Because of the "mixture rule" in 40 CFR 261.3, the entire waste is subject to the restrictions if it is to be placed in or on the land.

Q: If an F003 waste no longer exhibits the characteristic of ignitability is it subject to the November 7, 1986 rule?

A: If an F003 waste is mixed with a solid waste so that it no longer exhibits the characteristic of ignitability the waste is considered nonhazardous (see 40 CFR 261.3(a)(2)(iii)) and, as such, is not subject to the land disposal restrictions. However, unmixed F003 wastes that are incinerated or otherwise treated must meet the treatment standard, even though these wastes may no longer exhibit the characteristic of ignitability. The "derived from rule" (40 CFR 261.3(c)(2)) states that the residue from treatment of a hazardous waste remains a hazardous waste. Thus, the residual from treatment of an F003 waste remains a hazardous waste and must meet the applicable treatment standard.

DIOXINS

Q: What is the regulatory status of listed dioxin-containing wastes (i.e., EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, F028)?

A: These wastes are subject to the 2-year nationwide capacity extension and can be land disposed until November 8, 1988, in accordance with the existing rules on management of dioxin wastes. After this time, generators of dioxin-containing wastes may find it necessary to apply for a case-by-case extension of the effective date due to lack of permitted dioxin treatment facilities.

Q: Are restricted dioxin-containing wastes which contain chlorophenols as constituents subject only to the treatment standard of 1.0 ppb?

A: No. All listed dioxin-containing wastes must be treated to a level below 1 ppb in the waste extract. Dioxin wastes which contain chlorophenols also must be treated below the following detection limits (in the waste extract) for the applicable chlorophenols:

- 2,4,5-trichlorophenol - 50 ppb
- 2,4,6-trichlorophenol - 50 ppb
- 2,3,4,6-tetrachlorophenol - 100 ppb
- pentachlorophenol - 10 ppb

Q: Do the land disposal restrictions for dioxin-containing wastes supersede the dioxin-listing rule (50 FR 1978)?

A: Not immediately. Land disposal of these wastes will be prohibited after November 8, 1988 (except for wastes meeting the treatment standards or otherwise exempt from the prohibition). All prohibitions established under the dioxin-listing rule remain in effect even if the wastes meet the treatment standard.

Q: Do the dioxin regulations apply to all isomers of the affected dioxins?

A: The regulations apply to all constituents listed in Appendix VII to Part 261 identified by the hazardous waste codes F020, F021, F022, F023, F026, F027, and F028.

Q: What test procedure should be used for detecting 1 ppb of dioxin?

A: One ppb is the routinely achievable detection limit using test method 8280 in SW-846. This procedure is also described in Appendix X of 40 CFR Part 261.

TESTING AND RECORDKEEPING

Q: Is the information required on the manifest for shipments of restricted hazardous waste adequate for notification purposes under the Land Disposal Restrictions?

A: No. Along with the waste shipment and the manifest, you must send a notice which includes the EPA Hazardous Waste Number, the applicable treatment standard, the manifest number associated with the shipment of waste, and the waste analysis data (if available). (see §268.7)

Q: Is a notice required for each transfer of restricted wastes off-site?

A: Yes. Each shipment of restricted wastes that is sent to off-site treatment or disposal must be accompanied by a notice.

Q: What actions must be taken by a generator to determine the appropriate treatment standard for a restricted hazardous waste?

A: The generator may identify the applicable treatment standard based on waste analysis data, knowledge of the waste, or both. Where this determination is based solely on the generator's knowledge of the waste, the generator is required to maintain all supporting data used to make this determination in his files.

Q: Is testing required for each batch of waste that is produced by a generator?

A: No. The generator may determine if his waste requires further treatment prior to land disposal either through knowledge of the hazardous constituents in the waste or through analysis of the hazardous constituents in the TCLP generated waste extract. A waste analysis must be conducted if there is a reason to believe that the composition of the waste has changed or if the treatment process has changed.

Q: Is a generator required to notify a recycler that a restricted waste is being shipped for recycling?

A: Yes. A recycler is a treatment facility, therefore, a generator must notify the recycler according to the requirements in §268.7(a)(1)).

Q: What must a generator do who produces a waste which meets the treatment standard and can be land disposed without off-site treatment?

A: In this case, the generator must submit, to the land disposal facility, a notice and a certification stating that the waste meets the applicable treatment standards as outlined in §268.7(a)(2).

Q: What additional recordkeeping is required for on-site treatment and disposal of restricted wastes?

A: An on-site treatment facility must maintain:

- the information contained in the notice required by a generator under §268.7(a)(1), except for the manifest number, and

as an on-site disposal facility, the facility must maintain:

- the information contained in the notice required under §268.7(a)(2), except for the manifest number, in cases where the waste meets the treatment standards and can be land disposed without further treatment, or
- the information contained in the notice required by a treatment facility under §268.7(b)(1), except for the manifest number, whichever is applicable.

Q: What additional documentation must an off-site disposal facility which accepts restricted waste maintain?

A: An off-site disposal facility must maintain:

- waste analysis data obtained through testing of the waste and
- a copy of the notice and certification required by the owner/operator of a treatment facility under §268.7(b)(1) and (2) or
- a copy of the notice and certification required by the generator in cases where the wastes meet the treatment standard and can be land disposed without further treatment §268.7(a)(2) or
- records of the quantities (and date of placement) for each shipment of hazardous waste placed in the unit under an extension of the effective date (a case-by-case extension or a 2-year extension of the effective date) or a no-migration petition and a copy of the notice under §268.7(a)(3).

Q: What additional documentation is an off-site treatment facility responsible for maintaining when accepting restricted wastes?

A: An off-site treatment facility must maintain:

- a copy of the notice required by a generator under §268.7(a)(1).

VARIANCE FROM THE TREATMENT STANDARD

Q: Who may submit a petition for a variance from the treatment standard?

A: Generators or owner/operators of treatment facilities may petition the Agency for a variance from the treatment standard. Wastes may be granted a variance due to physical and chemical characteristics that are significantly different from the wastes evaluated by EPA in setting the treatment standards. In such cases, it may not be possible to treat a restricted waste to the applicable treatment standards.

Q: Where can instructions for applying for a variance from the treatment standard be found?

A: Guidance on petitions for a variance from the treatment standard is being developed by the Agency and is expected to be available within the next few months.

Q: Should petitions for a variance from the treatment standard be submitted to EPA Regional Offices?

A: No. EPA Headquarters will be evaluating petitions for a variance from the treatment standard (as well as "no-migration" petitions and case-by-case extension petitions). The Agency will be handling these variances as a rulemaking procedure subject to notice in the Federal Register and a public comment period. In the December 11, 1986 California list proposed rule (51 FR 44714), the Agency has proposed adopting a simplified (non-rulemaking) procedure for granting variances from the treatment standard.

Q: What options are available to a facility if a waste mixture contains several constituents regulated under the November 7, 1986 rule, and, after treatment, only some of these constituents meet the treatment standards?

A: The facility has the option of applying for a variance from the treatment standard, if the waste mixture differs significantly from those wastes evaluated by the Agency in determining the treatment standards for the affected constituents or the facility must further treat the residues.

Q: Must the facility comply with the land disposal restriction rules while a variance from the treatment standard is being considered by the Agency?

A: Yes. In accordance with §268.44(g), during the petition review process, the applicant is required to comply with all restrictions on land disposal under Part 268 once the effective date for the waste has been reached.

Q: Who will review "no-migration" petitions?

A: The Agency is requiring that applicants submit petitions to the Administrator. Where possible, the Agency intends to process Part B permit applications and "no-migration" petitions concurrently. However, if review of Part B applications or "no-migration" petitions is unduly delayed by concurrent reviews, the Agency will process such applications separately. Applications for "no-migration" petitions will be reviewed at EPA Headquarters, while EPA Regional offices or authorized States are responsible for issuing Part B permits. EPA Headquarters will coordinate reviews with appropriate Regional and State staff responsible for reviewing Part B applications for the same facility.

Q: What must be demonstrated in a "no-migration" petition?

A: The statutory standard for evaluation of "no-migration" petitions requires that the applicable land disposal method may not be determined to be protective of human health and the environment unless it has been demonstrated, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous (RCRA section 3004(d), 42 U.S.C. 2964(d)(1)). The Agency will soon be issuing guidance to the regulated community concerning what information must be submitted to the Agency by the petitioner. The Agency also is encouraging those facilities that are considering submitting a "no-migration" petition to meet with appropriate Agency representatives in a pre-application conference. It is expected, however, that demonstration of "no-migration" will be difficult, but not impossible, to achieve.

CASE-BY-CASE EXTENSIONS

Q: Are there any provisions for those cases where a waste was not granted a national capacity extension and alternative capacity cannot be found by the effective date?

A: Yes. Any person who generates or manages a restricted hazardous waste may submit an application to the Administrator for a case-by-case extension of the applicable effective date. The applicant must demonstrate that a binding contract has been entered into to construct or otherwise provide alternative capacity that cannot reasonably be made available by the applicable effective date due to circumstances beyond the applicant's control.

Q: Can an association apply for a case-by-case extension for the wastes of its members?

A: Yes. However, all of the members covered by the extension request must demonstrate that a binding contract has been entered into to construct or otherwise provide alternative capacity that cannot reasonably be made available by the applicable effective date due to circumstances beyond their control.

Q: Is there a deadline for submitting applications for case-by-case extensions?

A: There is no deadline for submitting these applications to the Administrator. However, case-by-case extensions cannot extend beyond 48 months from the statutory land disposal restriction dates.

Q: Will there be guidance on preparing applications for a case-by-case extension of the effective date?

A: Yes. The Agency expects to have a guidance document available within the next few months.

Q: Can restricted wastes be stored prior to treatment or disposal?

A: Under the November 7, 1986 rule, the storage of hazardous wastes restricted from land disposal is prohibited except where storage is needed to accumulate sufficient quantities to allow for proper recovery, treatment, and disposal.

Q: How long can a large quantity generator store restricted hazardous wastes?

A: A generator may store restricted hazardous wastes on-site within the time limits of 40 CFR 262.34 (i.e., 90 days) without a permit or interim status provided the storage is solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal.

Q: What if a large quantity generator needs to store restricted hazardous wastes for more than 90 days?

A: A generator who stores waste for longer than the 90-day limit must have a RCRA permit or interim status. The generator may apply for facility interim status as long as the storage is necessary to comply with the land disposal restrictions. A generator who needs to obtain interim status should submit a Part A application to the Agency (as provided in 40 CFR Part 270) within 30 days after the 90-day accumulation period ends and must demonstrate that it was "in existence."

Q: How does a generator meet the "in existence" condition?

A: A generator who is accumulating restricted hazardous wastes in tanks or containers on or before the effective date of a regulation under Part 268 is "in existence."

Q: Do small quantity generators (SQGs) generating between 100-1000 kg of wastes per month need to apply for interim status if their waste accumulation will exceed 180 days?

A: Yes. SQGs must apply for interim status by submitting a Part A application if they intend to store wastes for longer than 180 days (270 days if the wastes must be transported more than 200 miles). As with the large quantity generators, the SQGs must submit a Part A application within 30 days after the appropriate accumulation period (180 or 270 days) ends and must demonstrate that it was "in existence."

Q: When does the date start with respect to storage of restricted wastes?

A: This starts as soon as the first volume of waste is placed in a container or tank for storage.

Q: Can any extensions be granted to a generator who stores restricted wastes for longer than 90 days?

A: Yes. A 30-day extension may be granted on a case-by-case basis due to unforeseen, temporary, and uncontrollable circumstances.

Q: How long can a hazardous waste treatment, storage, and disposal (TSD) facility store restricted wastes?

A: Under the November 7, 1986 final rule, owners and operators of hazardous waste treatment, storage, and disposal facilities may store restricted wastes as needed to accumulate sufficient quantities to allow for proper recovery, treatment, and disposal. However, where storage occurs beyond one year, the owner/operator bears the burden of proving, in the event of an enforcement action, that such storage is solely for the purpose of accumulating sufficient quantities to allow for proper recovery, treatment, or disposal. For periods less than or equal to one year, the burden of demonstrating whether or not a facility is in compliance with the storage provisions is on the Agency.

Q: Can an owner/operator of a hazardous waste treatment, storage, or disposal facility store restricted waste in land-based units?

A: No. Under the storage prohibitions, these facilities may only store restricted wastes in containers and tanks provided that each container or tank is clearly marked to identify its content and the date the hazardous waste entered storage.

Q: Following the 2-year variance that applies to solvent-containing wastewaters, will Land Disposal Restrictions supersede requirements effective under the National Pollution Discharge Elimination System (NPDES)?

A: No, NPDES permit requirements will not be superseded by the land disposal restrictions. Compliance with land disposal restriction requirements does not relieve facility owners of the obligation to comply with all other Federal, State, and local environmental requirements, including the requirements of the Clean Water Act.

Q: Is there a directory which lists facilities able to handle wastes subject to the November 7, 1986 final rule?

A: Yes. EPA's "Directory of Commerical Hazardous Waste Treatment and Recycling Facilities" (December 1985) provides a listing of commercial hazardous waste management facilities, along with information on the type of commercial services offered, and types of wastes managed. It, however, does not constitute a list of approved facilities. It is available through the National Technical Information Service (NTIS) as PB86 #178431/AS or may be obtained by telephoning the RCRA hotline at 800-424-9346 (202-382-3000 in the Washington, D.C. metropolitan area).

Q: What options are available to a waste generator if a disposal facility which was previously used suddenly refuses to accept wastes for disposal?

A: The waste generator will need to attempt to locate an alternative treatment, recovery, or disposal facility to manage his waste in accordance with the applicable hazardous waste management standards. If storage of waste will exceed 90 days (for a large quantity generator), the generator may either request an extension to the 90-day period pursuant to 40 CFR 262.34(b), or if necessary, apply for facility interim status. Where applicable, the generator may also apply for a case-by-case extension of the effective date.

Q: What is the focus of the Agency's National Enforcement Strategy for the Land Disposal Restrictions?

A: The focus for 1987 will be on inspection. All disposal facilities are inspected annually. All treatment and storage facilities are required to be inspected every other year. Thus, all disposal facilities and one-half of all treatment and storage facilities will be inspected for compliance with the Land Disposal Restrictions. Generators will also be inspected; the Agency will be checking to see that wastes are being sent to the proper facilities, and that the necessary recordkeeping is kept. The Agency plans to increase generator inspections so that 25% of all generators are inspected annually.

Q: Can a new treatment process be employed under interim status?

A: Yes, a new treatment process can be introduced at an interim status facility as long as the conditions of §270.72 are met. Prior to such change, the facility must submit a revised Part A application and a justification for the change to EPA for approval. EPA may approve the change if the facility has demonstrated that it is necessary to comply with Federal, State, or local requirements. However, the extent of changes to an interim status facility is limited in that capital expenditures may not exceed 50% of the cost of a new facility.

APPENDIX - ADDRESSES AND TELEPHONE NUMBERS OF EPA REGIONAL OFFICES

Region I
Environmental Protection Agency
John F. Kennedy Federal Building
Room 2203
Boston, MA 02203
617-565-3715

Region II
Environmental Protection Agency
26 Federal Plaza
New York, NY 10278
212-264-2525

Region III
Environmental Protection Agency
841 Chestnut Street
Philadelphia, PA 19107
215-597-9800

Region IV
Environmental Protection Agency
345 Courtland Street, NE
Atlanta, GA 30365
404-347-4727

Region V
Environmental Protection Agency
230 South Dearborn Street
Chicago, IL 60604
312-353-2000

Region VI
Environmental Protection Agency
1201 Elm Street
Dallas, TX 75270
214-767-2600

Region VII
Environmental Protection Agency
726 Minnesota Avenue
Kansas City, KS 66101
913-236-2800

Region VIII
Environmental Protection Agency
One Denver Place
Suite 1300
Denver, CO 80202
303-293-1603

Region IX
Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105
415-974-8071

Region X
Environmental Protection Agency
1200 Sixth Avenue
Seattle, WA 98101
206-442-5810