

US EPA ARCHIVE DOCUMENT

**Technical Background Document Supporting  
the Evaluation of Contingent Management Options Under the  
October 1999 Re-proposal of the Hazardous Waste Identification Rule**

**I. BACKGROUND**

**A. Regulatory History of the Hazardous Waste Identification Rule**

On May 19, 1980, EPA finalized the regulations under Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act 42 U.S.C. §§6901 *et seq.* (“RCRA”). This set the framework for the standards governing the generation, management, and disposal of hazardous wastes. The regulations were originally proposed on December 18, 1978 and included most of the regulatory language which would become finalized. One specific change from the proposed to final rule, was the addition of the “mixture” and “derived-from rules”. Under the “mixture rule,” a solid waste combined with a listed hazardous waste is regulated as that listed hazardous waste (40 CFR Section 261.3(a)(2)(iii), (iv)). In the case of mixtures of solid waste and characteristic hazardous waste, the resulting mixture is regulated as a hazardous waste if it exhibits a characteristic. The “derived-from rule” states that any solid waste generated from the treatment, storage, or disposal of a listed hazardous waste, is also a hazardous waste (40 CFR Section 261.3(c)(2)(i)).

The “mixture and derived-from rules” were incorporated into the RCRA program in order to close a loophole in the regulations. EPA was concerned that without the “mixture rule”, generators would be able to evade RCRA Subtitle C regulation by combining their hazardous wastes with nonhazardous materials, to create a “new” waste which no longer met the listing description yet continued to be hazardous to the environment. Similarly, the “derived-from rule” was designed to prevent generators and treatment, storage or disposal facilities (TSDFs) from evading Subtitle C regulation, by minimally treating or processing hazardous wastes and then claiming that the residues were no longer hazardous.

Many industries challenged EPA’s authority to promulgate the rules, and in 1991, the Court of Appeals for the D.C. Circuit vacated the mixture and derived-from rule in *Shell Oil v. EPA*, 950 F.2d 741 (D.C. Cir. 1991). The basis for this decision was that EPA did not provide adequate public notice and opportunity for comment, as required by the Administrative Procedures Act. In response to this decision, EPA promulgated an emergency rule simultaneously removing and reinstating the “mixture and derived-from rules”, as interim final rules ( 57 Fed. Reg. 7628 (March 3, 1996)). At that time, EPA promulgated a “sunset provision”, which provided that the rule would remain in effect until April 28, 1993. Soon after, the Agency also proposed a rule containing various options for revising the “mixture and derived-from rules” (57 Fed. Reg. 21450 (May 20, 1992)). Two of these options, the 1992 proposal of the Concentration-Based Exemption

Criteria (CBEC) and the Expanded Characteristics Option (ECHO), formed the basis of the current HWIR.

In response to the 1992 proposal and the sunset provision, Congress included in EPA's fiscal year 1993 appropriations act, a provision which required EPA to promulgate revisions to the "mixture and derived-from rules" by October 1, 1994. (Pub. L. No. 102-389, 106 Stat.571 (Oct. 5, 1992). The act also revoked the sunset provision and provided that EPA could not promulgate any revisions before October 1, 1993. Subsequently, EPA published two Federal Register notices; one to withdraw the 1992 proposed rule and the other to remove the sunset provision from the regulations, leaving the "mixture and derived-from rules" in effect until EPA promulgates revisions.

In 1993, EPA chartered the HWIR Advisory Committee under the Federal Advisory Committee Act, to study the potential regulatory alternatives to the "mixture and derived-from rules." The committee was comprised of various stakeholders and was charged with developing solutions (to which the majority of parties could agree) to the regulatory issues posed by HWIR. The committee decided to split into two subcommittees; One subcommittee addressed the issues of the "mixture and derived-from rules" (HWIR Waste) and the other subcommittee addressed the status of the identification of soils contaminated with hazardous waste (HWIR Media). EPA later determined that the HWIR rulemaking efforts would be similarly separated, in that the HWIR Waste rulemaking would provide alternatives to the existing "mixture and derived-from rules" for "as generated" wastes, and the HWIR Media rulemaking would address contaminated media.

EPA did not meet the October 1, 1994, deadline established in the appropriations act, and several industry groups filed citizen suits against EPA for failing to issue the required statutory revisions to the "mixture and derived-from rules." Two of the citizen suits were consolidated, and a third was dismissed, with the plaintiffs being added as intervenors in the consolidated cases (*Environmental Technology Council v. Browner*, Nos. 94-2119 and 94-2436 (D.D.C.)). The U.S. District Court for the District of Columbia entered a consent decree resolving the consolidated cases on May 12, 1995. The consent decree (subsequently amended) the Agency to sign a proposal to amend the "mixture and derived-from rules" by November 13, 1995 and to take final action on the proposal by February 13, 1997. The HWIR Waste Notice of Proposed Rulemaking was published on December 21, 1995 (60 FR 66344).

Upon reviewing the comments on the proposed HWIR Waste rule and risk assessment supporting the proposal, EPA realized that it would be necessary to seek extension of the final rule deadline of February 13, 1997, in order to appropriately address the comments. On April 11, 1997, the district court entered an amendment to the consent decree, which requires EPA to sign a new proposed rule by October 31, 1999, and to take final action by April 30, 2001.

## B. EPA's Legal Authority for Using Contingent Management in Defining Hazardous Waste

EPA originally interpreted RCRA's definition of hazardous waste to focus on the inherent chemical composition of the waste and to assume that mismanagement would occur so that people or organisms would come into contact with the waste's constituents. See 45 FR 33113 (May 19, 1980). However, after more than a decade of experience with waste management, we now believe that it may no longer be accurate or necessary to assume that worst-case mismanagement will occur. In recent hazardous waste listing decisions, for example, EPA has identified some likely "mismanagement" scenarios that are reasonable for almost all wastewaters or non-wastewaters, and looked hard at available data to then determine if any of these are for some reason very unlikely for the specific wastes being considered, or if other scenarios are likely given available information about current waste management practices. As a further extension of that logic, we now believe it may be appropriate to find that, where mismanagement is not likely or has been adequately addressed by other programs, we need not classify a waste as hazardous and that there may be ways to recognize situations where the limitations on likely "mismanagement" are specific to a State, a type of waste, or a facility-specific condition on how a waste is managed.

We have interpreted the definition of "hazardous waste" in RCRA section 1004(5) to authorize this approach to classifying wastes as hazardous. Section 1004(5)(B) defines as "hazardous" any waste which may present a substantial present or potential hazard "when mismanaged." We read this provision to allow it to determine the circumstances under which a waste may present a hazard and to regulate the waste only when those conditions occur. Support for this reading can be found by contrasting section 1004(5)(B) with section 1004(5)(A), which defines certain inherently dangerous wastes as "hazardous" no matter how they are managed. The legislative history of Subtitle C of RCRA also appears to support this interpretation, stating that "the basic thrust of this hazardous waste title is to identify what wastes are hazardous in what quantities, qualities and concentrations, *and the methods of disposal which may make such wastes hazardous.*" H.Rep. No. 94-1491, 94th Cong., 2d Sess.6 (1976), reprinted in A Legislative History of the Solid Waste Disposal Act, as Amended, Congressional Research Service, Vol.1, 567 (1991) (emphasis added).

We also interpret section 3001(a) as providing flexibility to consider the need to regulate wastes as hazardous. Section 3001 requires EPA, in determining whether to list or otherwise identify a waste as hazardous waste, to consider the need for regulation. whether a waste "should" be subject to the requirements of Subtitle C. Hence, section 3001 authorizes us to determine that Subtitle C regulation is not appropriate where a waste is not likely to be managed in such a way that it will threaten human health or the environment. Moreover, regulation of such waste under Subtitle C would not appear "necessary to protect human health or the environment" under RCRA sections 3002(a), 3003(a) and 3004(a). As noted elsewhere in this proposal, the Agency interprets these provisions to give it broad flexibility in fashioning criteria to allow

hazardous wastes to exit the Subtitle C regulatory system. EPA's existing regulatory standards for listing hazardous wastes also allow consideration of a waste's potential for mismanagement. See Sec. 261.11(a)(3) (incorporating the language of RCRA section 1004(5)(B)) and Sec. 261.11(c)(3)(vii) (requiring EPA to consider plausible types of mismanagement). Where mismanagement of a waste is implausible, the listing regulations do not require us to classify a waste as hazardous.

Three decisions by the U.S. Court of Appeals for the District of Columbia Circuit provide potential support for this approach to defining hazardous waste. In *Edison Electric Institute v. EPA*, 2 F.3d 438, (D.C. Cir. 1993) the court remanded EPA's RCRA Toxicity Characteristic ("TC") as applied to certain mineral processing wastes because the TC was based on modeling of disposal in a municipal solid waste landfill, yet EPA provided no evidence that such wastes were ever placed in municipal landfills or similar units. This suggests that the court might approve a decision to exempt a waste from Subtitle C regulation if EPA were to find that mismanagement was unlikely to occur. In the same decision the court upheld a temporary exemption from Subtitle C for petroleum-contaminated media because such materials are also subject to Underground Storage Tanks regulations under RCRA Subtitle I. The court considered the fact that the Subtitle I standards could prevent threats to human health and the environment to be an important factor supporting the exemption. *Id.* at 466. In *NRDC v. EPA*, 25 F.3d 1063 (D.C. Cir. 1994) the court upheld EPA's finding that alternative management standards for used oil promulgated under section 3014 of RCRA reduced the risks of mismanagement and eliminated the need to list used oil destined for recycling. (The court, however, did not consider arguments that taking management standards into account violated the statute because petitioners failed to raise that issue during the comment period.) Finally, in *Military Toxics Project v. EPA*, 146, F.3d 948 (D.C. Cir. 1998), the court upheld EPA's regulation of spent munitions which took into account existing Department of Defense and Department of Transportation regulations concerning the handling and transport of munitions.

## II. CONTINGENT MANAGEMENT OPTIONS PRESENTED IN EPA'S DECEMBER 1995 PROPOSED RULE

In its December 1995 proposed HWIR rule, EPA developed options for exempting from hazardous waste regulation low-risk wastes currently subject to RCRA Subtitle C regulations. EPA specifically proposed criteria that generators must satisfy in order to claim the benefits of the HWIR exemption. Under a proposed "base program," generators were to demonstrate that waste constituent concentrations did not exceed risk-based HWIR "exit levels". Under several proposed "contingent management options", EPA proposed concentration-based exemption criteria below which a listed hazardous waste would be exempt from Subtitle C compliance contingent upon meeting certain management requirements. This section of this technical background document provides an overview of the contingent management options presented in EPA's December 1995

proposed HWIR rule, describes proposed procedures for implementing the contingent management options, and addresses other implementation issues.

## A. Overview of Options Proposed in 1995

In the December 1995 proposed HWIR rule, EPA identified several different contingent management options for exempting low-risk wastes from Subtitle C compliance. Three options were tailored to a national approach, whereby a generator would be required to meet national exit levels based on the type of waste management unit and its associated engineering controls. Three other options were focused more on granting conditional exemptions to qualified State programs that could ensure certain management controls. For a summary of public comments on the 1995 proposed contingent management options, please see Appendix I of this document.

### 1. Proposed Options under the National Approach

Under a national approach, the contingent management program could be adopted by any State without consideration of State programs for nonhazardous waste. The contingent exit levels would differ according to the degree of management/disposal restrictions imposed as a condition of the exit. The possible options would include progressively more restrictive requirements, and allow progressively higher exit levels as disposal options are further restricted. The national options included:

#### a. Distinguish between Disposal in Land Application Units and Other Units

This option would establish one national set exit of levels for each constituent of concern and prohibit any waste containing any constituent above these exit levels from being disposed of in land application units. On review of the risk analysis results, the Agency determined that disposal in a land application unit is frequently the highest risk disposal option in both the multipath and groundwater modeling. Essentially, the Agency developed this approach relying on the multipathway exposure analysis, risk level of  $10^{-6}$  and HQ of 1, and using the base case uncontrolled management scenarios, but with land application units removed from the analysis. The Agency noted that exit concentrations would still be protective across a wide variety of conditions nationally, for all disposal in non-land application units.

The Agency proposed one national exit level for each constituent based on the next riskiest pathway, on condition that the waste was not disposed in land application units. EPA considered this to be the simplest approach to contingent management. It would be somewhat easier to enforce than the other options described below, since there would still be only one conditional exit level for each constituent.

#### b. Unit-Specific Exit Levels

Under this option, the Agency would establish a set of exit levels for each waste management unit, evaluated based on risks at unregulated units of that type. Units that would be evaluated at HQ 1 and  $1 \times 10^{-6}$  risk, would be land application units, waste piles, landfills, surface impoundments and tanks. Under this option, generators would be allowed to choose the type of non-Subtitle C waste management unit in which to manage their waste, and would be required to meet the unit-specific exit levels for all constituents in order to manage the waste in that unit. Testing and implementation requirements would be similar to the above option, however, the Agency noted that this option would increase the complexity of tracking wastes that met the varying concentration exit levels tied to specific allowable units.

#### c. Consideration of Additional Management Unit Design of Management Practices

Under this option, the Agency would use a somewhat modified multipathway exposure model to evaluate whether adding additional specific design or operating controls for particular unit types, would allow less conservative exit levels. These conditional exit concentrations could be promulgated on a unit-type basis, and could be used only by units employing the specified additional controls that would reduce the risk level to  $10^{-6}$ . Such an approach could be self-implementing for a facility owner/operator, and would not necessarily be tied into a permitting authority. As a variation on this approach, the Agency could take into account certain regional, local, or site-specific factors in establishing exit levels. These could include the effect of local rainfall, regional hydrogeology, or size of facility, on exit values. The Agency noted that because of the complexity of implementing this option, we would attempt to define very limited additional control(s) to limit exposures to  $10^{-6}$  level.

### 2. Proposed Options under the State Program Approach

State-based” contingent management refers to the transfer of jurisdiction over HWIR-exempt wastes from management under Subtitle C of RCRA by the Federal government, to management as a solid waste by the States under Subtitle D of RCRA. Under a State program approach, qualified State programs would be allowed to manage listed waste in their nonhazardous waste management program under certain conditions. When we proposed State-based contingent management options in 1995, the Agency recognized that State Subtitle D programs have improved substantially since the early days of RCRA and that most States are currently implementing successful solid waste management programs. Furthermore, transferring jurisdiction over HWIR wastes from the Federal to State jurisdiction under a State-based contingent management approach, would provide greater enforcement discretion to the States and eliminate the potential for overly stringent enforcement actions under RCRA’s major enforcement provision, Section 3008.

#### a. Major elements of State-Based Contingent Management Program

Under a State-Based Contingent Management program, a waste would be managed under an approved State's nonhazardous waste management program. More specifically, if a waste meets the exit criteria, the waste would be excluded from the definition of hazardous waste and would be re-classified as a solid waste. Management provisions are not set as a condition for the exclusion, rather wastes that are excluded from the definition of hazardous waste, must be managed in accordance with applicable solid waste regulations. As a solid waste, the waste would be managed under an approved State's nonhazardous waste management program. The following statements generally discuss the State-based contingent management approach.

- EPA would establish a risk-based cap (such as  $1 \times 10^{-6}$  cancer risk and a hazard quotient of 1 for non-carcinogens) that would be modeled to establish exit concentration levels that can be used by an approved State program. The stringency of the risk cap would be tied to the type of State program evaluation the Agency conducts on the State program.
- The Agency would define the type of State program evaluation it would conduct to assess whether the level of protection offered by the State program meets EPA's performance goals for a contingent management program for low risk wastes.

This evaluation could either be qualitative or quantitative. A qualitative approach would likely involve an examination of the technical standards and administrative requirements of an authorized State's program to ensure that the program is not broader or less stringent than the generic HWIR program. The State would then have to certify or demonstrate that the level of protection offered by the State program meets EPA's performance goals for a contingent management program for low risk wastes. A qualitative review would entail an examination of the technical standards and administrative requirements of a state. A quantitative review would require the States to conduct risk modeling to demonstrate that risks from the waste as disposed, would not exceed the  $1 \times 10^{-6}$  and HQ 1 risk targets of the base generic case.

- EPA could qualify an entire qualified State program (with States deficient in certain program areas being required to upgrade in order to adopt HWIR); a State program for conditional exit only for particular units for which the program qualifies; or a state program that narrowly develops appropriate contingent management for particular waste streams generated by key industries in the State.
- EPA would promulgate an exclusion for wastes containing constituents below exit levels, concentrations that would be considered "safe" in light of the current nonhazardous waste management program requirements.



Similarly, EPA could promulgate an exclusion for a specific type or form of waste, without specifying exit levels, following a determination that current requirements of State Subtitle D programs would ensure the safe management of such a waste type or form.

- If a waste is not managed in compliance with the exemption conditions, the waste would not revert to Subtitle C control, rather the facility would be in violation of nonhazardous waste regulations. Thus, States would have the authority to bring about enforcement under Subtitle D.
- Authorized states would have the option to apply for authorization to adopt the provisions of this exclusion because this exclusion is less stringent than existing Federal regulations; States would not be required to adopt the program.

b. Specific State-based Contingent Management Approaches Proposed in 1995:

- Option 4 -- EPA would conduct a qualitative review of the technical standards and administrative requirements of a State Subtitle D program, and would use a  $10^{-4}$  and HQ 1 risk cap to establish exit levels. Under this option, the State would be required to submit to EPA information demonstrating how the technical standards and administrative requirements of its program would be protective of human health and the environment.
- Option 5 -- EPA would use a  $10^{-4}$  and HQ 1 risk cap to establish exit levels and would require that States conduct risk modeling to demonstrate that risks would not exceed a  $10^{-6}$  and HQ 1 risk targets. In this case, the State would be required to demonstrate to EPA how they would ensure, on a site-specific basis, that facilities disposing of conditionally exempt wastes meet a  $10^{-6}$  risk level.
- Option 6 -- EPA would allow either a qualitative or quantitative review of the State Subtitle D program, and would use a  $10^{-3}$  and HQ 10 risk cap to establish exit levels. Participation would be limited only to those States that are broadly qualified (i.e., that are qualified in all aspects of the program, for currently managed industrial nonhazardous waste).

**B. Implementation of HWIR 1995 Proposed Contingent Management Options**

In order to obtain and maintain an HWIR-exemption, EPA proposed that facilities meet a number of requirements, including notification and public participation requirements, sampling and testing

requirements, and recordkeeping requirements. The Agency proposed that these requirements be met to obtain and maintain the exemption. For contingently managed wastes, the Agency also proposed options regarding tracking requirements; point of exemption; defining a “qualifying unit” for contingently managed wastes; and enforcement.

### 1. Tracking Requirements

Subtitle C regulations require that TSDFs receiving hazardous wastes must sign and return a manifest documenting that the facility designated on the manifest in fact received the waste. In the December 1995 proposed HWIR rule, EPA proposed modifying the requirements for tracking exempted wastes to reflect the fact that wastes exiting under the exemption need not be disposed of in Subtitle C TSDFs, and could be accepted by nonhazardous waste facilities. EPA suggested several types of tracking forms for tracking the exempted wastes, including:

#### a. A modified manifest document

EPA proposed that the claimant of the exemption be responsible for ensuring that the manifest is returned and that it, or some other document, provides information showing: (1) that the facility designated on the manifest did, in fact, receive the waste and; (2) did place it in a landfill or a monofill (not a land application unit). The Agency acknowledges that it would be difficult to provide reasonable notice to all of the members of the diverse universe of nonhazardous waste facilities that they would now have to comply with Subtitle C-like responsibilities. Therefore, we proposed that the claimant be responsible for ensuring that the manifest-type document is returned, rather than placing the responsibility on the owners and operators of nonhazardous waste facilities that accept wastes exempted under this option.

#### b. A uniform, national tracking document similar to the current manifest

The Agency also requested comment on the concept of imposing conditions that require a uniform, national tracking document similar to the current uniform manifest to accompany the waste until it reaches its final destination. This document could inform transporters and other waste handlers, that the waste is an exempt hazardous waste that must be managed in a monofill or land disposal facility and loses its exemption, if it is managed in a land treatment unit.

#### c. In lieu of a standard tracking document, a billing document or a contractual agreement between the exemption claimant and the receiving facility

Under this option, the Agency recognized that billing documents might already provide the information necessary to track the proper disposal of the HWIR-exempt waste. In cases where billing documents provide insufficient information, EPA noted that claimants should generally be able to contract with the receiving facilities to obtain the necessary information. EPA would

require either the claimant of the receiving facility (or both) to maintain a copy of the agreement on-site and make it available to State or EPA inspectors. This document would include information on the type of waste the receiving facility would accept, the type of units it would use, and data on the volume and frequency of deliveries. EPA noted that we could also require exemption claimants and transporters to create and keep similar contracts. However, the Agency recognized that there is currently no Federal regulation that would allow transporters to require claimants to provide information on the exempted waste's origin and the regulatory limits on its disposal options.

## 2. Point of Exemption

EPA proposed two options for the point at which an exemption would become effective: (1) the conditional exemption would become effective when the waste was placed in a qualifying unit and (2) the conditional exemption would become effective upon generation. Under the first option, the waste would be considered hazardous and subject to full Subtitle C regulation, until it is placed in a monofill or landfill. Therefore, since all options apply until placement of the nonwastewaters in a unit, EPA proposed conditions that make the claimant responsible for obtaining a copy of the manifest to ensure the waste has reached its destination. The claimant would also have the burden of acquiring evidence from the receiving facility that the waste was placed in either a monofill or land disposal unit. This option would place additional burdens on generators and transporters compared to the alternative option, under which the conditional exemption would become effective upon generation.

Under the second option, where the exemption would become effective upon the waste meeting the appropriate concentration-based, exit levels, any tracking system established would be a condition that the claimant would have to meet to maintain the contingent management exemption.

## 3. Qualifying Unit

In the December 1995 proposed HWIR rule, EPA proposed that, to claim an exemption, wastes must be disposed of in a "qualifying unit." Based on the results of risk modeling, EPA limited qualifying units to include only landfills and monofills. In the preamble to the December 1995 proposed HWIR rule, EPA requested comment on whether other units could be considered "qualifying units" for contingent management exempt wastes. Additionally, EPA proposed to exclude waste placed in waste piles from being exempt from Subtitle C regulation because the Agency believed such an exclusion will provide better assurance that exempted wastes will not be mismanaged.

## 4. Enforcement

The HWIR 1995 proposal would allow certain low-risk wastes to be exempt from Subtitle C regulation, provided that all of the exemption criteria are met. Failure to comply with any of the requirements would subject the claimant to enforcement action for violating Subtitle C requirements. In an enforcement action, the burden would be on the claimant to establish eligibility for the exemption and compliance with the conditions necessary to maintain the exemption.

### **III. CONTINGENT MANAGEMENT OPTIONS EVALUATED FOR HWIR 1999 PROPOSAL**

The 1995 HWIR proposal set forth a number of regulatory options for exempting low risk wastes from RCRA Subtitle C hazardous waste regulation. 60 *Fed. Reg.* 66344, 66395-405 (Dec. 21, 1995). The Agency received an extensive amount of public comment on these options. In developing the 1999 HWIR proposal, the Agency further evaluated these options and streamlined them based both on stakeholder input, as well as further analysis on issues associated with each option.

#### **A. The National Contingent Management Proposal: Landfill-only**

Of the three national approaches that were proposed in 1995, the Agency determined that the landfill-only approach was most feasible option to consider for the 1999 HWIR exemption discussion. This approach is analogous to the first national contingent management option proposed in 1995.

The 1995 HWIR options included three approaches that required a generator to meet national exemption levels. After carefully evaluating these options and reviewing the input we received from our stakeholders, we determined that, except for the landfill-only national contingent management option (analogous to the first national contingent management option from 1995), it would not be feasible and/or desirable to develop and implement the other approaches at this time.

Under the second national contingent management option in the 1995 HWIR proposal, we considered establishing exemption levels for each type of waste management unit: landfill, waste pile, land application unit, tank, and surface impoundment. Upon further review, however, we determined that setting exemption levels for waste piles, land application units, tanks or surface impoundments was not a desirable option for several reasons.

First, waste piles are intermediate disposal destinations. It is not appropriate to exempt wastes based on exposures from just these units and no others, since the final disposition of the waste is most important for determining long-term risk. Second, we found in 1995 that the land application unit drove most of the non-liquid exemption levels and therefore, separate land application unit levels would be no different from levels established for the generic option. Similarly, a surface

impoundment option would be expected to be similar to levels for liquids established under the generic option, and we do not believe that separate exit levels are warranted. Given that the generic option has fewer requirements and similar exemption levels, we decided a contingent management option for land application units and surface impoundments would add unnecessary complexity to the rule.

Under the third national contingent management option, we considered setting exemption levels for waste management units with specific design or operating controls that would allow for less conservative exemption levels. Although specific public comment on the national contingent management options was limited, representatives from industry indicated a support for options that allowed the consideration of site-specific factors. Therefore, in addition to evaluating the approach of developing separate exemption levels for each type of waste management unit, we considered developing exemption levels based upon engineering controls in place at certain units.

However, when we evaluated the unit control option, we found it difficult to quantitatively attribute a set of risk protection levels to specific engineering and management controls, especially over a long period of time. We determined that although it might be feasible at a future time to adjust the HWIR model to account for unit controls, the time and resources involved in developing this option were too great, given the tight time-frame of the rule. Also, in order to enforce such an option, we would need to make complex judgements regarding whether the required unit controls were being used correctly. Such determinations would be more appropriately made under the oversight of a permitting authority, rather than as a condition of self-implementing exemption under HWIR.

## **B. State Contingent Management Approaches**

As mentioned above, the Agency first considered the feasibility of establishing a State-based contingent management program for certain HWIR-exempt wastes, while developing the 1995 HWIR proposal. See 60 Fed. Reg. at 66398-99. In developing the 1999 HWIR proposal, the Agency further evaluated options developing a State-based contingent management program for certain HWIR-exempt wastes. We also reviewed input we received from our stakeholders, including public comment and the results of a case study on contingent management performed by the State Association of State Solid Waste Management Officials (ASTSWMO). Based on this analysis, we determined that we were not prepared to propose a State-based contingent management option.

In terms of input from the States, we learned that the States recognize that relying upon State programs could be a more workable alternative for the regulated community than a national approach (in terms of less conservative exemption levels for example). However, they expressed concern about resource implications, should they be required to independently develop exit criteria. The States would have to perform risk assessments, which are resource intensive and

require specialized expertise. From an implementation perspective, they would prefer for EPA to develop exit levels for the States to implement and enforce within their Subtitle D versus Subtitle C programs. ( See Overview: State-Based Contingent Management Case Study Project, Discussion Draft for April 1-2, 1998, Joint ASTSWMO Task Force Meeting, March 9, 1998).

The limited input we received from Industry on the option of State-based contingent management, indicated that they would support a State-based option if it would allow for a site specific approach to performing risk assessments. However, most States do not have the resources to support site specific modeling.

Furthermore, the transfer of jurisdiction over HWIR exempt wastes from the Federal to the State governments would entail some type of EPA review of the quality of State Subtitle D programs. One State association indicated that it would be inappropriate for EPA to evaluate State Subtitle D programs, as part of authorizing states to use the contingent management options.

Finally, although interstate transport issues will arise regardless of whether we go forward with a generic and/or a contingent management regulatory option, under a State-based approach, a variety of disposal standards could result across the States. States and the regulated community would have to devote additional resources to ensure that waste streams generated and exiting under contingent management standards in neighboring States meet applicable transportation and disposal standards in the receiving States. A representative of the waste management industry expressed this concern over the implications a State-based approach might have on interstate transport.

### **C. Implementation of Landfill-only Exemption Contingent Management Option**

The landfill-only HWIR conditional exemption would include all the same implementation requirements as the generic HWIR exemption, including waste sampling and analysis plans, notification, follow-up testing and recordkeeping and reporting. Additionally, for this conditional exemption, the facility owner/operator would have to meet the following requirements:

#### **1. Disposal of the Waste in a Landfill**

The waste must be disposed of in a landfill. This “qualifying unit” is a land-based unit where non-liquid wastes are placed for permanent disposal, and is not a land application unit (where wastes are incorporated into the soil). This landfill would not need to be a hazardous waste landfill, but nonhazardous landfills are still regulated under existing State requirements, which would help ensure that it is protective of human health and the environment.

#### **2. The Waste Must Not Be Placed on the Land Prior to Disposal**

EPA is concerned about the temporary placement of these wastes in waste piles or such intermediate land-based destinations, because exemption levels for the landfill-only option (unlike levels for the generic option) would not consider such risks. The Agency is particularly concerned about the potential of significant releases of particulates to air, as well as releases through erosion and runoff, since these pathways are either not modeled or significantly reduced for the landfill scenario.

### 3. The Waste Must Be Tracked to Ensure it Reaches the Designated Landfill

The facility owner/operator would have to track the arrival of the HWIR exempt waste at a landfill, and keep records of the shipments. Since the exemption levels for the landfill-only HWIR exemption would be based on the disposal of this waste in a landfill, we want to ensure that the waste is, in fact, disposed at such a destination in a timely manner. The Agency is asking for public comment on the following three options for tracking:

#### a. Return Notification

Under this option, you would directly notify the designated landfill of the shipment of the landfill-only HWIR-exempt waste. Specifically, this notification would include the date of shipment, the carrier(s) used, the destination facility, and volume and general description of the waste. This notification does not need to accompany the waste since, you notify the disposal facility directly.

You should receive a certification from the landfill operator that the waste arrived. You would have to keep a copy of this certification for three years. If you have not received a certification that the waste shipment arrived at the landfill 45 days after the date of the shipment, then you would have to report this to the overseeing agency. If the waste has not reached the landfill within 60 days after the date of shipment, then on the 61<sup>st</sup> day, the waste would not be exempt from RCRA Subtitle C, and would have to be handled according to RCRA Subtitle C requirements. At this point, you as the generator, still bear responsibility of having generated a hazardous waste.

#### b. Use Existing Hazardous Waste Manifest System

Under this option, we would rely on the existing manifest system to track the conditionally exempt HWIR waste. The uniform hazardous waste manifest (40 CFR 262.20 and 49 CFR 172.205) is prepared and signed by the waste generator and accompanies the waste shipment as it moves among the waste carriers, until it reaches the designated facility that is permitted to receive the waste. The receiving

facility would be required to sign the manifest and return it to the hazardous waste generator. The generator, carrier(s) and receiving facility, would be required to retain copies of the signed manifests for three years. This cradle-to-grave tracking system is intended to ensure that hazardous waste is properly managed and allow generators and their overseeing agencies the ability to track their hazardous wastes.

However, we are concerned that requiring nonhazardous materials transporters and waste management facilities to comply with manifest requirements, could create considerable burden for nonhazardous facilities that become subject to these requirements. Furthermore, in many States, regulations prohibit Subtitle D facilities from receiving manifested wastes, and current federal regulations prohibit Subtitle D facilities from receiving manifested wastes, and current federal regulations limit the use of the manifest to handlers that have EPA RCRA identification numbers.

On the other hand, we are planning in a separate action, to propose revisions to the Uniform Hazardous Waste Manifest regulations, in response to many requests for a streamlined, up-to date, and less burdensome hazardous waste tracking system. Under these planned revisions to the existing manifest system, we are developing a standard manifest form with fewer State optional boxes, and are working on provisions that would allow for the complete automation of manifest paperwork. Therefore, we recognize that the revisions to the existing tracking system may be a less burdensome alternative than creating an entirely new tracking system for HWIR exempt wastes.

c. Rely on Department of Transportation Shipping Papers

Under the third option, we are considering using Department of Transportation (DOT) shipping papers (49 CFR Subpart C) to track the waste. Under this option, the shipping papers would need to include additional information, including the date of the shipment, the carrier used, and the destination facility. The generator would be required to provide the transporter with a copy of the shipping papers, which would identify the destination facility. The initial transporter, and any subsequent transporters, would be required to return to you a copy of each shipping paper, with a notation indicating the identification of the disposal facility (and/or the subsequent transporter). There would be no record keeping requirements placed upon the transporter or disposal facility, however, you would be required to keep copies of these records for three years.

However, the representatives from DOT were uncomfortable with this option for a number of reasons. First, although it serves to reduce burden on the landfill owner/operator, it increases the burden on the transporter in terms of having to



send copies to generators with each change of custody. In addition some wastes would fall out of DOT's jurisdiction without manifest coverage. DOT regulates "hazardous materials," and waste accompanied by a hazardous waste manifest are automatically defined as a hazardous material. If the manifest is no longer required, then some wastes would no longer meet the definition of a hazardous material. Therefore, we believe that the benefits provided by this option may be outweighed by the complexity of implementation.

## 5. Storage Limit

The Agency is considering prohibiting storage of the HWIR waste for longer than one year. To ensure that the HWIR waste exempted under the landfill-only option is eventually disposed in a landfill, we are requesting comment on whether to restrict storage time of these wastes to one year. You would only be allowed to store the waste in non-land-based units, such as tanks, containers or containment buildings. This storage requirement would be similar to one imposed on restricted wastes under the Land Disposal Restrictions program (40 CFR 268.50). 40 CFR 268.50(b) allows waste handlers to store restricted wastes for up to one year, unless EPA demonstrates that such storage is not solely for the purpose of accumulation for proper recovery, treatment, or disposal.

## 6. Enforcement of the HWIR Exemption

In developing the HWIR exemption, the Agency is seeking to appropriately balance enforcement responses according on the severity of the violation, by distinguishing between "conditions" and "requirements" of an exemption. A condition is an obligation you or your waste must meet in order for your waste to become and to remain exempt from hazardous waste regulations. If a condition is not fulfilled, then the waste is hazardous and subject to RCRA Subtitle C requirements. A requirement is an obligation whose violation would not affect the exempt status of the HWIR waste.

We are considering three conditions for meeting the generic HWIR waste exemption 1) meeting the appropriate HWIR exemption levels; 2) testing and retesting of the waste, which documents that exemption levels have been met; and 3) notification to the overseeing agency that the waste is being managed as exempt. The landfill-only alternative would have four conditions: 1) meeting the appropriate HWIR exemption levels; 2) testing and retesting of the waste, which documents that exemption levels have been met; 3) notification to the overseeing agency that the waste is being managed as exempt; and 4) waste arrival at the landfill facility within the 60 day time period.

Failure to meet any of these conditions would have the effect of subjecting the waste to regulation under RCRA Subtitle C. For example, under the landfill-only alternative, if a waste no longer met the exemption levels, or if the overseeing agency was not properly notified, or if the

required testing was not performed, or if the waste did not arrive at the designated landfill within 60 days of shipment, then the waste stream would be considered hazardous and subject to all provisions of RCRA Subtitle C.

The HWIR tracking requirements would only apply to waste exempted under the landfill-only alternative. HWIR waste tracking requirements would be imposed on both generators and landfill operators. HWIR waste generators would have to notify the designated landfill of the shipment of conditionally exempt HWIR waste. The landfill operators receiving the waste must certify in writing to the generator confirming that the waste arrived at the landfill. The HWIR generator would be required to keep copies of these records for three years from the shipment date, and we are also requesting comment on whether landfill operator must also keep copies of these records.

These tracking requirements would be under the authority of Sections 3007 and 2002 of RCRA, and therefore, are not conditions of the exemption. Section 3007 gives us the authority to compel anyone who generates, stores, treats, transports, disposes of, or otherwise handles or has handled, hazardous wastes to “furnish information related to such wastes” and make such information available to the government for the purposes of...enforcing the provisions of this chapter.” Section 2002 gives the Administrator the authority to promulgate such regulations as are necessary to carry out the functions of the statute. Failure to comply with these tracking requirements would not affect the exempt status of the waste, but could result in an enforcement action under Section 3008 of RCRA, which allows for civil penalties of up to “\$27,500 for each day of noncompliance and injunctive relief.

Although the paperwork that tracks the arrival of the waste shipment at the landfill would be a requirement, the arrival of the waste at the landfill within 60 days would be a condition. Thus if the waste arrived at the landfill within 60 days, but the landfill did not send back the certification of arrival, the waste would maintain its exempt status, but the landfill would be subject to a RCRA Section 3008 enforcement action. If the waste did not arrive at the landfill within 60 days of shipment, it would lose its exempt status and would be subject to all RCRA Subtitle C requirements.

#### **D. State Adoption as it Relates to Interstate Transport Issues**

As explained in the 1995 HWIR proposal, because the HWIR exemption would establish less stringent requirements than those in existing Federal regulations, “authorized States are not required to modify their programs to adopt regulations consistent with and equivalent to” the HWIR rule (60 *FR* 66411). For most regulatory exemptions developed by EPA, States would not be required to “pick up” the exemption, rather they would have the option of adopting or not adopting the exemption. Thus, the possibility exists that subsequent to promulgation of the final HWIR rule, there will be State-to-State inconsistency in the regulatory controls applicable to HWIR-exempt wastes. Specifically, hazardous wastes would be eligible for exemptions from

Subtitle C requirements in States that adopt the HWIR exemption (“HWIR States”), but would remain fully subject to Subtitle C requirements in States that do not adopt the exemption (“non-HWIR States”). In addition, there may be inconsistencies among the States that do adopt the HWIR exemption, but do so with variations in implementation conditions or other aspects of the rule.

Accordingly, EPA’s adoption of any HWIR exemption will raise issues relating to the interstate transport of HWIR-exempt wastes that will need to be addressed. For example, in the case study conducted by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) on HWIR contingent management approaches (see Docket for full report), the States stressed that it would be inappropriate for non-HWIR States to receive any HWIR-exempted waste. Most commenters to the 1995 HWIR proposal limited their remarks to inconsistency as an important HWIR issues, but offered little in the way of specific guidance or suggestions for resolving the issue.

The interstate issues resolve around (a) the use of tracking documents for HWIR-exempt waste, (b) the use of hazardous waste transporters for HWIR-exempt waste, and (c) the possibility of rekindling State-to-State tensions over the management of HWIR-exempt wastes.

a. How will the Manifest or Other Tracking Documents be used for Interstate Shipments of HWIR-exempt Wastes, particularly for Shipments Through Non-HWIR States?

Although, EPA proposed in 1995, to allow non-Subtitle C facilities to be designated on the manifest as receiving facilities for HWIR-exempted wastes, the manifest requirements still raise a number of potential issues with respect to interstate transportation of such wastes:

1. Where a generator is located in a HWIR State and seeks to ship its HWIR-exempted waste to a Subtitle D facility in a non-HWIR State, to what extent, if any, would the manifest requirements apply to that shipment? The non-HWIR State might be able to prohibit the disposal of the waste in a Subtitle D facility located in that State in any event, thereby rendering moot any manifest-related issues. Would a manifest be required only once the shipment entered into the non-HWIR State?
2. How would the manifest requirements apply in the reverse scenario (i.e., where a generator is located in a non-HWIR State and seeks to ship its hazardous waste to a Subtitle D facility in an HWIR State?) Would a manifest no longer be required once the shipment entered the non-HWIR State? If so, would the generator still be responsible for obtaining a signed copy of the manifest from the transporter and the designated facility? If so, what mechanisms could accomplish that?

3. Where a generator is located in a HWIR State and seeks to ship its waste to another HWIR State, and the shipment must pass through a non-HWIR State, would a manifest be required solely for the non-HWIR State portion of the shipment?
4. There may be unintended negative consequences from allowing a manifest to be used for shipments of HWIR-exempted wastes. For example, certain State mechanisms for collecting fees and information on hazardous waste management activities are tied to data obtained from manifests. To the extent EPA allows use of the manifest for shipment of nonhazardous wastes, those data may not accurately reflect hazardous waste volumes and shipments.

To address some of the concerns raised above, in addition to including a tracking proposal relying upon the manifest, we are also considering alternatives that would not involve transporters.

- b. Must Licensed Hazardous Waste Transporters be Used to Ship HWIR-exempt Wastes Through Non-HWIR States?

Closely related to the manifest issues discussed above, are the questions raised by the use of licensed hazardous waste haulers for interstate transportation of HWIR-exempted wastes. In general, a transporter may not transport hazardous wastes without having received an EPA identification number (40 CFR 263.11) and may not accept hazardous waste from a generator unless the waste is accompanied by a signed manifest (40 CFR 263.20). The likelihood of interstate transportation of HWIR-exempted wastes raises the following issues:

1. Where a generator located in an HWIR State seeks to ship its HWIR-exempt waste to a Subtitle D facility in a non-HWIR State, would the non-HWIR State portion of the shipment have to be performed by a hazardous waste hauler?
2. Where a generator located in an HWIR State seeks to ship its HWIR-exempt waste to a Subtitle D facility in an HWIR State, and the shipment must pass through a non-HWIR State, would the non-HWIR State portion have to be performed by a hazardous waste hauler?

- C. Will Inconsistent State HWIR-related Requirements Create Friction Among States?

The possibility of inconsistent hazardous waste identification rules and standards among the States raises the specter of rekindling the interstate tension over hazardous waste management that characterized the late 1980s and early 1990s. During that period, there was a widespread perception among the States with substantial hazardous waste treatment capacity that they had become the “dumping ground” for hazardous waste generated in States lacking such capacity. One of the unfortunate results of this perception, were the numerous attempts by capacity-rich

States to ban or restrict the “import” of hazardous wastes from other States, often under the guise of imposing more stringent requirements under RCRA.

Most of those import restrictions were determined by the courts to impose unconstitutional restraints on interstate commerce. The courts generally ruled that because the restrictions were based solely upon the origin of the out-of-state waste, rather than anything about such wastes that was inherently different or more hazardous than wastes generated within the State, the State could not regulate in-state and out-of-state generated wastes differently.

With the promulgation of an HWIR exemption, however, States could once again seek to restrict the management within their borders of HWIR-exempt wastes generated in other states. States could be emboldened to pursue such restrictions (despite the earlier court rulings) to the extent that the manner in which the States adopt an HWIR exemption rule results in significant inconsistencies in the regulation of hazardous wastes. For example, a State might argue that it may properly prohibit the Subtitle D disposal of wastes that were generated in another State and that were exempted pursuant to the less stringent management exit levels.

## VI. CONCLUSION

The 1995 HWIR proposal set forth a number of options for exempting low risk wastes from RCRA Subtitle C hazardous waste regulation. In the 1999 HWIR discussion, only two options are presented compared to six options presented in the 1995 HWIR proposal. According to the “base program” as presented in the 1995 HWIR proposal, generators would be required to demonstrate that constituent concentrations within a waste did not exceed risk-based HWIR exemption levels. The generic option of the 1999 HWIR discussion is conceptually the same as the base program from 1995. Several contingent management options were proposed in the 1995 HWIR, under which generators would have been required to meet alternate exemption levels, provided that they met additional waste management requirements. In the 1999 HWIR exemption discussion, the second option, referred to as the landfill-only option, is similar to one of the contingent management options proposed in 1995 (i.e., contingent management option 1, disposal in a landfill or monofill).

Although the generic and landfill-only option are similar to options presented in the 1995 HWIR proposal, there are some inherent differences in the way the risk assessment is being performed. For the 1999 HWIR exemption discussion, an integrated, multimedia, multipathway and multi receptor model is being developed rather than modeling each exposure pathway separately, as in the 1995 risk assessment. In addition, the 1999 HWIR risk modeling looks at landfills for all pathways rather than only the groundwater pathway, as done in the 1995 HWIR proposal.

Aside from modeling changes, EPA is also considering some changes to the implementation requirements. In the 1999 HWIR exemption discussion, generators are responsible for all chemicals traditionally of concern to the RCRA program (and included in the proposed 40 CFR 261 Appendix X), but would only have to test for chemicals "reasonably expected" to be present in their waste. The generic option has three categories of wastes (liquids, semi-solids, and solids) rather than two categories proposed in 1995 (wastewaters and nonwastewaters). Finally, for the landfill-only option, tracking requirements are included to ensure that the waste arrives at its intended destination.

The generic option would be expected to have more stringent exit levels, but would allow the generator to manage the waste as any other nonhazardous industrial waste. The landfill-only option is expected to have less conservative exit levels, but would require that the waste be disposed in a Subtitle D (non-hazardous waste) landfill only. Conditions and requirements of the 1999 HWIR exemption would both have to be satisfied; however, meeting a condition is essential for the waste to become and remain exempt from hazardous waste regulations. If a condition is not fulfilled, then the waste remains hazardous and subject to RCRA Subtitle C requirements. Meeting a requirement is contingent upon fulfilling the terms of the condition. For example, failure to comply with tracking requirements (which only applies to waste exempted under the landfill-only alternative), would not affect the exempt status of the waste, but could result in an enforcement action under Section 3008 of RCRA, which allows for civil penalties.

## V. APPENDIX

### Appendix 1. Stakeholder Feedback on the December 1995 Proposed HWIR Rule

The Agency received many comments from stakeholders in response to the December 1995 proposed HWIR rule. This section of this technical background document provides a summary of the public comments that EPA received pertaining to the contingent management options, and the implementation procedures and conditions proposed in the 1995 proposed rule.

#### A. Overview of Public Comments Received on Contingent Management Options

The Agency received 75 comments on the contingent management options proposed in the December 1995 proposed HWIR rule. Commenters included: 3 Federal agencies; 10 State governmental agencies; 20 representatives from private industry; 26 industry associations; 6 utility companies; 5 waste management companies; 3 waste management associations, and 2 consulting firms.

To simplify review and discussion of the issues raised by HWIR stakeholders, public comments have been classified into the following three topic categories according to the primary issue raised in the comments:

- General comments about EPA's proposed contingent management approach
- EPA's legal authority to pursue a contingent management approach
- Contingent management options.

#### 1. General Comments About EPA's Proposed Contingent Management Approach

Seventy-five stakeholders provided comments on the issue of contingent management. Sixty-six of the seventy-five commenters supported the proposed contingent management approach in general, but some of these commenters expressed concerns about the proposed options. The commenters in support of the contingent management approach included: 3 Federal agencies; 5 State government agencies<sup>1</sup>; 19 private industries; 27 industry associations; 6 utility companies; 5 waste

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<sup>1</sup> The state agencies expressing support for the contingent management approach included: Michigan Department of Environmental Quality (DEQ); Minnesota Pollution Control Agency; New York DEQ, Oregon DEQ; and the Pennsylvania Department of Environmental Protection.

management companies; and 1 waste management association. Commonly cited reasons for supporting the contingent management approach included:

- The concept is a common sense approach that offers the regulated community flexibility in meeting regulatory requirements, avoiding the “one-size-fits-all” solution
- The approach significantly broadens regulatory relief to industry
- The approach could encourage the upgrading of Subtitle D capacity for both industrial and municipal facilities, particularly in States that have immature industrial nonhazardous waste programs
- The approach is more representative of actual risks posed in the real world than the generic HWIR exemption
- Higher exit levels might reduce the need to use exit levels based on analytical limitations in place of true, risk-based levels; this would potentially provide relief for mixed wastes which are particularly vulnerable to matrix interferences.

Reservations cited by some supporters of the contingent management approach proposed by EPA included the following:

- The most common reservation expressed by commenters is that the risk assessment methodology employed by EPA is flawed, and the value of any particular contingent management option will be dependent upon the scientific validity of the underlying models
- Because HWIR exit levels are proposed in concentration form, the proposal would provide an economic incentive for generators to use more water in order to meet the proposed total concentration exit levels
- The proposed contingent management options will not likely provide regulatory relief
- All of the proposed contingent management options require EPA to conduct additional modeling, which may result in the Agency becoming a bottleneck to the process
- Many of the contingent management approaches presented in the proposed HWIR rule appear to be little more than slightly less expensive testing protocols.



Recommendations provided by supporters of the contingent management approach included:

- EPA should consider including contingent management provisions in the Subtitle C program, especially for wastes that are capable of prudent on-site disposal
- EPA should move forward to develop HWIR contingent management options that will provide relief from the unduly broad scope of the “mixture and derived-from” rules
- EPA should focus on incorporating ecological risk assessment into contingent management options that allow for site-specific assessments
- EPA should seek to provide maximum opportunity for consideration of site-specific information and should provide guidance on the types of factors for which site-specific information for defaults is appropriate
- EPA should set proposed exit levels on a mass-based criterion (i.e., pounds per product output) to facilitate pollution prevention efforts and ensure that facilities do not dilute their waste in order to claim an HWIR exemption
- EPA should expand its contingent management approach to address mixed waste generated and managed under the National Regulatory Commission (NRC) or NRC-agreement State controls.
- For low concentration wastewaters, EPA should consider extending the industrial wastewater exclusion so that it applies to wastewaters within a wastewater collection/treatment system prior to discharge
- The Agency should establish only the criteria upon which a modeling effort would be based and then allow generators with the most incentive to perform the modeling to establish their “exit levels” subject to review by the regulating body.

While the majority of the commenters supported the proposed contingent management approach, nine commenters opposed it. Opponents of the contingent management approach included 5 State government agencies<sup>2</sup>, 1 industry, 1 consulting firm, 1 waste management company, and 1 waste

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<sup>2</sup> The State agencies that submitted comments opposing the contingent management approach included: Alabama Department of Environmental Management; Idaho DEQ; Kentucky Department of Natural Resources and Environmental Protection;

management association. Commenters cited the following reasons for opposing the contingent management approach:

- The proposed contingent management options will provide no practical relief to wastes regulated under the Subtitle C program
- Exit levels should only be dependent on the characteristics of the wastes, not on a State's Subtitle D program
- EPA has not presented support for the statement that some industries have improved their waste management practices
- The concept of contingent management "originates from a presumptive designation of a material as a hazardous waste"
- The proposed HWIR rule does adequately address the potential impact that wastes exiting Subtitle C control may have on the nonhazardous waste management facilities; therefore, these wastes may pose unacceptable risks to human health and the environment
- EPA relies on its claim that States adequately regulate industrial wastes. However, most States do not currently require that industrial waste impoundments and landfills have liners, groundwater monitoring, daily cover, air emission controls, or other management standards. The inconsistencies and inadequacies that currently exist with these management standards make this portion of the rule unacceptable
- State programs are currently underfunded and understaffed and are unlikely to adopt contingent management options without assistance (i.e., Federal funding)
- The proposed contingent management approach adds a level of complexity to an already complicated rule without providing significant regulatory relief.

Recommendations provided to the Agency by commenters opposed to the contingent management approach included:

- EPA should not consider higher exit levels for management in certain situations and must maintain a level playing field for hazardous waste exit levels throughout the nation

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Maine Department of Environmental Protection; and the Utah DEQ.

- The Agency should simplify conditional exemptions to the greatest degree possible.

## 2. EPA's Legal Authority to Implement a Contingent Management Approach

In the 1995 proposed HWIR rule, EPA requested comment on whether the Agency has the proper authority to implement a contingent management approach. In making previous hazardous waste determinations, EPA assumed that mismanagement of a waste would occur resulting in people or organisms coming into contact with the waste. However, EPA now believes that it is not required to assume mismanagement of a waste in all cases. Rather, EPA believes it can interpret the definition of hazardous waste in RCRA Section 1004(5)(B) to allow the Agency to determine circumstances under which a waste may present a hazard and regulate the waste only under those conditions.

Twelve stakeholders responded to the Agency's request for comments concerning EPA's legal authority to implement a contingent management program. Ten of the twelve commenters believed that EPA has the proper authority under RCRA to adopt management-based conditional exemptions, while two commenters indicated that RCRA does not authorize EPA to implement a contingent management program. The ten commenters who agree with the Agency's interpretation of RCRA as explained in the December 1995 proposed HWIR rule included:

- 5 industry associations -- American Iron and Steel Institute, American Petroleum Institute (API), Chemical Manufacturers Association (CMA), the National Auto Radiator Service Association, and National Coil Coaters Association;
- A State agency -- Oregon DEQ;
- A representative of private industry -- Eli Lilly and Company;
- A utility company -- PacifiCorp
- A waste management association -- Business Recycling Coalition; and
- A waste management company -- Browning-Ferris Industries (BFI).

The 10 stakeholders that believe EPA has the proper legal authority to implement a contingent management approach argued that RCRA statutory language, case law, and previously promulgated EPA regulations support the Agency's authority to implement contingent management programs. In addition to the two court cases and the sections of RCRA mentioned in the preamble to the December 1995 proposed HWIR rule, commenters cited other instances in

which the Agency considers waste management when making hazardous waste determinations, including:

- Scrap metals intended for recycling are not hazardous wastes (40 CFR Section 261.6(a)(3)(ii))
- Materials that are recycled under specified conditions, such as “closed loop” recycling, are not hazardous wastes (40 CFR Section 261.2(e), 40 CFR Section 261.4(a)(8))
- Trivalent chromium that is managed in non-oxidizing environments is not a hazardous waste (40 CFR Section 261.4(b)(6))
- Certain residues generated from processing electric arc furnace dust (K061) in specified ways that are disposed of in Subtitle D units are not hazardous waste (40 CFR Section 261.3(c)(2)(ii)(C))
- Precious metals that fail the TCLP are subject to limited regulation because EPA found that these materials are typically carefully managed and recovered (40 CFR Section 266.70).

The two commenters who indicated that RCRA does not authorize EPA to implement a contingent management program included agencies from the State of Idaho (i.e., Department of Health and Welfare and the Department of Environmental Quality) and a waste management association (i.e., Environmental Technology Council). These commenters disagreed with EPA’s interpretation of RCRA, arguing:

- The definition of “hazardous waste” set forth under RCRA Section 1004(5) is premised on the idea that whether a waste is hazardous depends upon its physical characteristics (i.e., quantity, concentration, or physical, chemical or infectious characteristics) without regard to how the waste is managed
- RCRA Section 1004(5) also requires that EPA regulate such wastes as “hazardous” if the waste “may...pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.” Thus, for the purpose of determining that a waste is a “hazardous waste” under RCRA, EPA must consider whether the waste poses a hazard when it is improperly managed
- The statutory language in RCRA Sections 3002(a), 3003(a) and 3004(a) does not provide EPA with a basis for expanding the scope of criteria it may consider in determining the risk a waste poses; those criteria are set forth in Section 3001(a)

- EPA lacks substantial evidence in the record for its legal “reinterpretation” of RCRA. The Agency claims that States adequately regulate industrial wastes. However, Environmental Information, Ltd. conducted a 50-state survey of industrial waste standards and concluded “that surface impoundments frequently lack the basic engineering controls, including liners, and regulatory scrutiny to prevent cross-media contamination.” Furthermore, “many State standards are applied in only a small fraction of cases”
- EPA does not have any factual support for its assertion that exited wastes will be adequately controlled under State Subtitle D authorities. The CERCLIS database contains over 50,000 sites where the majority of damage incidents can be attributed to inadequate control of industrial waste management.

### 3. Contingent Management Options

In its December 1995 proposed HWIR rule, EPA presented six contingent management options. Three options were tailored to a national approach, whereby the program could be adopted by any State without consideration of State programs for nonhazardous waste. Three other options were focused more on granting conditional exemptions to qualified State programs that could ensure certain management controls. These six options include:

- Option 1 -- EPA would set exit levels and remove land application units from the modeling. Generators could dispose of wastes in any type of unit except a land application unit.
- Option 2 -- EPA would set exit levels for each type of waste management unit. Generators would choose the type of waste management unit, and would be required to meet the exit levels established for that unit.
- Option 3 -- EPA would set exit levels for waste management units with specific design or operating controls. A variation of this approach could entail taking into account certain regional, local, or site-specific factors (e.g., local rainfall, regional hydrogeology, facility size).
- Option 4 -- EPA would conduct a qualitative review of the technical standards and administrative requirements of a State Subtitle D program, and would use a 1E-4 and HQ 1 risk cap.
- Option 5 -- EPA would use a 1E-4 and HQ 1 risk cap and would require that States conduct risk modeling to demonstrate that risks would not exceed a 1E-6 and HQ 1 risk targets.

Option 6 -- EPA would allow either a qualitative or quantitative review of the State Subtitle D program, and would use a 1E-3 and HQ 10 risk cap.

Twenty-nine stakeholders expressed their opinions about the various contingent management options EPA presented in the proposed HWIR rule. Commenters included:

- 8 representatives from private industry -- ASARCO, Amoco, BCP Chemicals, BP Exploration and Oil, Dow Chemical, General Electric, Jetseal, and Mobil;
- 8 industry associations -- American Auto Manufacturers Association, American Forest and Paper Association, American Industry Health Council, American Institute of Chemical Engineers, API, Association of American Railroads, Basic Acrylic Monomer Manufacturing, and Color Pigments Association;
- 5 waste management companies -- Beazer East, Inc., BFI, Safety-Kleen, Systech Environmental, and WMX Technologies;
- 2 consulting firms -- Caufield Enterprises and Lockheed Martin;
- 4 State government agencies -- Alabama DEM, Colorado DPHE, Kentucky NREP, and Michigan DEQ;
- 1 Federal agency -- U.S. Small Business Administration; and
- 1 waste management association -- Hazardous Waste Management Association.

Examples of the stakeholder feedback EPA received regarding the contingent management options are summarized below:

- Five stakeholders, including three State agencies, oppose all contingent management options citing reasons, such as: the approach would place an extra burden on State agencies to implement the program without receiving additional Federal funding to do so; the complexity of the options would confuse the regulated community resulting in increasing the number of enforcement actions; and the options do not provide significant relief due to the extensive, on-going analysis, recordkeeping and reporting requirements.
- Three stakeholders support a combination of Options 2 and 5 because Option 2 would provide for conservative, national exit levels based on generic assumptions while Option 5 would provide the opportunity for generators to seek less restrictive exit levels based on site-specific risk assessment approved by the overseeing State agency.

- Two stakeholders support Option 2 because it would be relatively easy to implement and would provide regulatory relief.
- Four stakeholders believe EPA should consider site-specific factors in establishing exit levels.
- Two commenters expressed concern that a state-based program may result in extreme differences between State programs, which would significantly impact the interstate transfer of exited wastes across state lines.
- Four stakeholders proposed other alternatives, including allowing for management of exited wastes in combustion units and in Class I injection wells.

## **B. Overview of Public Comments Received on Implementing a Contingent Management Approach**

This section of this technical background document provides a summary of the comments submitted to EPA in response to preamble Section X (Implementation of Conditional Exemption Option 1) of the December 1995 proposed HWIR rule. The Agency received 53 comments pertaining to this section of the proposed HWIR rule. Commenters included: 4 Federal agencies; 9 State government agencies; 16 representatives from private industry; 11 industry associations; 2 utility companies; 5 waste management companies; 3 waste management associations; a consulting firm; and 2 commenters from other organizations.

The comment summaries are organized into the following subsections:

- Notification and Public Participation Requirements
- Waste Sample Collection and Testing
- Recordkeeping Requirements
- Tracking Requirements
- Point of Exemption
- Qualifying Unit
- Enforcement

### **1. Notification and Public Participation Requirements**

The State of Illinois Environmental Protection Agency (IEPA) submitted the only comment pertaining to notification requirements under a contingent management approach. The IEPA

supported all proposed notification requirements. However, IEPA expressed that the identification of the disposal facility should only be required under the conditional exemption options.

Six commenters expressed their opinions of the Agency's proposed public participation requirements for contingent management exemptions. These commenters represented a State agency, one Federal agency, two industrial facilities, an industry association, and a waste management association. Five commenters opposed the public participation requirements in the December 1995 proposed HWIR rule because they believe these requirements impose unnecessary burdens on the regulated community while offering no significant benefit to the public. The one commenter who favored the proposed approach indicated that the public participation requirements provide ample protection to the public.

## 2. Waste Sample Collection and Testing

The Agency received one comment regarding the sampling and testing requirements for contingent management exemptions issued in the December 1995 proposed HWIR rule. The New Mexico HRB indicated that the sampling and testing requirements for the proposed "base" exemption in Section 261.36(b)(1) should be the same requirements for the contingent management exemption.

## 3. Recordkeeping Requirements

Three commenters responded to the Agency's request for comment on recordkeeping retention periods. Two commenters (New Mexico HRB and Southern CA Edison) supported EPA's proposed three-year retention period, stating it should be consistent with other retention requirements. However, the Missouri DNR recommends a five-year record retention period because a three-year retention period is inadequate for inspection and enforcement purposes.

## 4. Tracking Requirements

In the December 1995 proposed HWIR rule, EPA proposed various options for modifying the manifest regulations to reflect the fact that exited wastes do not have to be disposed of in treatment, storage and disposal facilities subject to Subtitle C requirements. Twenty-seven commenters submitted comments regarding the tracking conditions proposed in the December 1995 proposed HWIR rule. The commenters represented 8 industry associations, 7 private industries, 3 State government agencies, 2 Federal agencies, 3 waste management companies, 2 waste management associations, 1 utility company, and 1 consulting firm.

Fifteen of the 27 commenters agreed with EPA's proposal that it should be the claimant's responsibility to demonstrate that the exited wastes were disposed of properly, but the commenters did not agree on how the claimant should make such a demonstration. Nineteen of the 27



commenters indicated that EPA should not require that disposal facilities accepting conditionally exempt wastes be subject to hazardous waste manifest requirements, while 3 of the commenters recommended that EPA require a hazardous waste manifest for tracking exited wastes. Nine of the 27 commenters were in favor of a uniform tracking document similar to the hazardous waste manifest document for tracking exited wastes. Such tracking documents could include bills of lading, invoices, or other documents already in use. However, 7 commenters were against implementing a uniform tracking system. Some commenters indicated that it is not necessary to create a new tracking system because bills of lading and other shipping documents should be sufficient to ensure proper disposal. Additionally, 7 commenters were in favor of requiring a contractual agreement, while 2 commenters indicated their opposition to requiring a contractual agreement.

#### 5. Point of Exemption

In its December 1995 proposed HWIR rule, the Agency proposed two options for when the contingent management exemptions should become effective. Under Option 1A, generators could consider their wastes exempt at the time the waste is placed in a qualifying unit. Under Option 1B, wastes would be considered exempt at the point at which they met the HWIR exit criteria (i.e., at the point of generation).

EPA received 42 comments concerning this issue. Thirty-six of the 42 commenters either expressed support for Option 1B or expressed opposition to Option 1A. These commenters represented 13 private industries, 11 industry associations, 3 waste management companies, 4 State government agencies, 2 Federal agencies, 1 utility company, 1 waste management association, and 1 consulting firm. Stakeholders supporting Option 1B (i.e., at the point of generation) indicate that this option would be easier to implement than Option 1A and would provide regulatory relief. Similarly, those opposed to Option 1A (i.e., opposed to the point of exemption being when the waste is placed in a qualifying unit) indicate that this option is unnecessarily burdensome because it would require exempted wastes to be regulated under Subtitle C until placement in an appropriate unit and it would eliminate any benefits provided by the exemption.

Six of the 42 commenters either expressed support for Option 1A or opposition to Option 1B. These commenters represented 3 State government agencies, 1 agency of the Federal government, 1 waste management company, and 1 waste management association. The stakeholders who supported Option 1A or opposed Option 1B indicated that exempting the waste when it is placed in a qualifying unit would provide the maximum amount of oversight and protection by ensuring wastes that are properly managed until they meet the condition on which the exemption is based.

Related to the two options proposed for the point of exemption is the issue of waste accumulation provisions for off-site and on-site disposal facilities. Four of the 42 commenters submitted

comments pertaining to waste accumulation provisions for on-site disposal facilities. Three of the 4 commenters recommended that EPA allow generators to store contingent management exempt non-wastewaters on-site for up to one year. Another commenter recommended that the Agency allow generators to store such wastes on-site for up to 180 days.

Two commenters addressed waste accumulation provisions for off-site disposal facilities. DOE opposed EPA's proposal to allow off-site disposal facilities to store contingent management exempt wastes for up to 10 days without becoming a Subtitle C treatment, storage and disposal facility. DOE argued that 10 days is insufficient and recommends at least a 30-day accumulation period to allow time for sample collection and analysis, where required, and to allow for unforeseen events. However, the Kentucky NREP indicated that these facilities should be given no more than 10 days to store contingent management exempt wastes before becoming subject to Subtitle C storage requirements. The Kentucky NREP noted a preference for an accumulation period of less than 72 hours.

#### 6. Qualifying Unit

In the 1995 HWIR proposal, EPA proposed that, in order to claim an exemption, wastes must be disposed of in a "qualifying unit." EPA limited qualifying units to include only landfills and monofills based on the results of multipathway and groundwater modeling.

Fifteen commenters submitted comments to EPA addressing the issue of qualifying units. Five of these commenters addressed the definition of qualifying units. These commenters represented 1 Federal agency, 1 State agency, 1 waste management association, 1 Congressman, and C. L. Brassow and Associates (characterized as "other type of organization"). Each commenter proposed alternative definitions for terms such as "qualifying unit" or "land application unit." Two stakeholders recommended changes to the proposed definition of "qualifying unit" to clarify that a qualifying unit is not intended to be subject to Subtitle C regulations. Other commenters recommended that EPA adopt a different definition for "qualifying unit" to ensure that all pathways for constituents to leave the unit are addressed.

Four commenters responded to EPA's request for comment regarding whether waste placed in waste piles, either temporarily or permanently, should be eligible for the exemption. Two commenters (Ohio EPA and Kentucky NREP) supported EPA's proposed exclusion of waste placed in waste piles due to the greater risks associated with waste piles, while two other commenters opposed such an exclusion. The commenters opposed to the exclusion (i.e., DoD and Boeing) indicated that EPA should allow temporary placement of conditionally exempt wastes in waste piles for up to one year, as long as the waste eventually is disposed of in a qualifying unit.

In response to EPA's request for comment regarding whether other waste management units should be considered qualifying units, 11 commenters expressed their views. These commenters

represented 3 private industries, 2 State government agencies, 2 industry associations, 1 Federal agency, 1 utility company, 1 consulting firm, and 1 organization characterized as “other” (C.L. Brassow and Associates). Six stakeholders indicated that EPA should include other units, such as combustion units and underground injection wells, as qualifying units. Three commenters recommended that the Agency provide more supporting information before restricting the definition of “qualifying unit” to landfills and monofills, and two stakeholders supported EPA’s proposal to limit qualifying units to landfills and monofills.

## 7. Enforcement

EPA proposed that failure to comply with any of the conditions for the exemption would mean that the wastes are not exempt from Subtitle C and the claimant would be subject to immediate enforcement action for violation of Subtitle C requirements. Ten commenters expressed their concerns regarding the proposed enforcement approach. These commenters represented 5 industry associations, 2 Federal agencies, 1 State agency, 1 private industry, and 1 waste management company.

Nine of the 10 commenters opposed EPA’s proposed approach due to concerns that any violation, regardless of the risk posed, would cause the facility to be subject to immediate enforcement action for violation of Subtitle C requirements. Such strict enforcement policy would prevent waste generators from using the exemptions and cause nonhazardous waste disposal facilities to reject exempt wastes.

The Kentucky NREP recommended that EPA carefully consider and explain the consequences for the generator who selects a management method that causes his waste to exit Subtitle C control when that management method at a later date fails to maintain exit criteria status. According to the NREP, it appears that EPA expects States to enforce hazardous waste requirements against companies that followed the regulatory requirements but have the misfortune of selecting a facility that failed to maintain exit criteria standards.

Related to enforcement actions is a requirement EPA included in the December 1995 proposed HWIR. Under the proposal, EPA would require that the burden of satisfying all conditions for the exemption falls on the claimant. Eight commenters expressed their concerns about the claimant’s duty to ensure compliance with all conditions associated with the conditional exemptions. Four commenters indicated that it would be useful if the Agency established evidentiary standards as guidance for satisfying the management condition. These commenters included 2 Federal agencies (i.e., DOE and DoD), 1 State agency (i.e., Ohio EPA), and 1 utility company (i.e., Southern CA Edison).

Two commenters (i.e., DoD and DOE) felt that additional substantive or procedural conditions or requirements should not be imposed on claimants to ensure the contingent management exemption waste is actually managed in a qualifying unit.

Three commenters (i.e., Westinghouse Electric, Dow Chemical, and Occidental Chemical) supported EPA's proposed approach that the claimant must ensure that conditionally exempt wastes are disposed of in qualifying units. However, the Kentucky NREP believes that the burden of meeting the contingent management standard should be imposed on the management facility rather than the generator because this requirement would provide a strong incentive for disposal facilities to be extremely careful about the type of waste they accept and ensure that wastes truly meet the exit criteria.