

and resource intensive for both industry and EPA.

The Agency believes that a simpler exemption process is necessary to reduce the over-regulation of low risk hazardous waste while, at the same time, reducing the time and resource burden on industry and government. This revised exemption process would also reduce the burden on the delisting program which will continue under current regulations. To meet these goals, the Agency is proposing the current action that would establish a single set of exit levels for constituents found in listed hazardous waste. This action would cover wastes as-generated, derived-from wastes, including BDAT treatment residuals, mixtures with solid wastes, and environmental media that contain hazardous wastes.

D. Assessment of Potential Costs and Benefits

1. Introduction and Summary

The U.S. Environmental Protection Agency (EPA) has prepared an *Assessment of The Potential Costs and Benefits (Assessment)* to accompany today's proposed rulemaking action. This action will establish concentration-based exemption criteria for certain hazardous wastes, creating a mechanism to exclude from Subtitle C regulation those listed industrial process wastes that the Agency believes are clearly not of Federal regulatory concern. Today's proposed rule addresses low hazard wastes, mixtures, treatment residuals, and media that contain hazardous wastes.

The Agency anticipates that the proposed rule will provide cost savings to selected generators and managers of low hazard wastes. Under the preferred option, annual nationwide treatment and disposal cost savings for exempted wastes may be as high as \$75 million. Annual cost savings for a single facility may be as high as \$5.03 million. Potential cost reductions beyond treatment and disposal savings may be associated with waste minimization incentives, avoided treatment costs for wastes remaining within Subtitle C, and administrative cost savings.

Exemption of eligible wastes from Subtitle C management requirements is projected to have negligible effects on human health and the environment. The proposed exemption levels are based on detailed analysis of numerous possible routes of exposure. These exemption levels are designed to be protective of both human health and ecological systems when exempted wastes are managed under Subtitle D, including state regulated waste disposal systems.

The Agency has also evaluated other impacts of the proposed rule. These include: Environmental justice, unfunded mandates, regulatory takings, and waste minimization incentives. Environmental justice concerns associated with today's proposed action may be in the form of economic benefits and/or human health effects. Today's proposal implements no enforceable requirements on states. Federal unfunded mandates, therefore, are not relevant to today's proposed rulemaking. Regulatory takings under today's proposed rulemaking will not approach land or productive value impacts discussed in past House and Senate Bills presented on this issue. This rulemaking provides opportunities for generators to implement waste minimization procedures to gain additional savings.

The complete document, *Assessment of The Potential Costs and Benefits of The Hazardous Waste Identification Rule for Industrial Process Wastes, as Proposed (Assessment)*, is available in the docket established for this proposed rule. This document details the data, methodology, findings, regulatory issues, and analytical limitations associated with this *Assessment*. The rapid evolution of this action resulted in continuous technical modifications throughout the development of this proposal. An Addendum to the *Assessment* document that details final quantity and cost savings estimates is included in the docket materials. Findings presented in this preamble present final estimates.

A summary of the *Assessment* methodology and findings is presented below. The analysis conducted for this Notice of Proposed Rulemaking is to be considered preliminary. The Agency welcomes review and comment of this document and urges the submission of data in support of any comment or response.

2. Regulatory Options

The Agency's *Assessment*, conducted in support of today's action, addresses the costs, benefits, and other potential impacts of the preferred option. The *Assessment* also examines various other regulatory options based on exit levels that are both more and less stringent. Findings presented in this preamble discuss the preferred option and one primary alternative. A full discussion of findings associated with various alternative regulatory options is presented in the *Assessment* and Addendum.

a. Preferred (Proposed) Option

Under the preferred option, exit criteria are established for approximately 400 constituents, allowing hazardous wastes (including waste mixed with or derived-from listed wastes) to exit Subtitle C if the concentration of all constituents is less than or equal to the exemption criteria. The exit levels apply to all listed wastes, regardless of origin.

Exit levels for most constituents are based on risks posed to human health and the environment. The Agency's goal is to ensure, through Federal or State management requirements, that humans are not exposed to carcinogens in concentrations that will increase the statistical risk of cancer by more than one-in-one-million (1×10^{-6}). For non-carcinogens, the Agency's goal is to ensure that humans are not exposed to concentrations where the hazard quotient exceeds one (1). The Agency feels that, above this level, selected populations may experience carcinogenic effects at a 10^{-6} risk level and non-carcinogenic effects at a hazard quotient greater than one (1).

To determine the concentrations at which exempt wastes would not pose human health risks in excess of these target levels, EPA conducted a "Multipathway" Analysis that included ecological exposure pathways. In addition, EPA considered the effects of direct exposure to contaminants in groundwater. The analyses consider several types of waste management units. For non-wastewaters these unit types include landfills, land application units, waste piles, and ash monofills. For wastewaters management units included tanks and surface impoundments.

The concentrations from all other pathways were compared to the groundwater concentrations in determining the exit level. The more stringent of the multipathway or groundwater numbers was chosen as the exit level. Exit levels for some constituents are based on surrogates, or Exemption Quantitation Criteria (EQCs). MCLs were not used in the development of exit levels analyzed for this option. The Agency believes that levels established under this process will ensure protection of human health and the environment. These exit levels are presented in the regulatory language for this proposed rulemaking.

b. Other Options

In developing the preferred option, the Agency compared the proposed rule to several alternative regulatory options. These are discussed in the full