toxicity is of concern. The Agency's benchmark for inclusion of a waste on 40 CFR § 261.33(e) is the oral LD50 for a rat of 50 mg/kg (see 40 CFR 261.11(a)(2)). The Agency has data that shows oral LD $_{50}$  values of 64–119 mg/kg for female rat and 72–156 mg/kg for male rat. Based on these criteria the Agency is finalizing the listing of bendiocarb as U278.

## H. U Listings

The criteria for designation of Acutely Hazardous Wastes found at 40 CFR 261.11(a)(2). While the listing criteria for these acutely hazardous wastes is clearly defined, commenters noted and requested a clear delineation of toxicological criteria for listing wastes as toxic under § 261.33(f).

While acute toxicity may be expressed in terms of numeric toxicological end points, such as oral LD50, inhalation LC50, and dermal LC50, the Agency does not have numeric criteria for listing commercial chemical products as toxic. However, the factors the Agency looks to in listing these materials are described in 40 CFR 261.11(a)(3). The Agency considered these factors including the toxicity of the various chemicals, in analyzing the potential to harm human and the environment. Based on this analysis, the Agency believes these discarded commercial chemical products meet the criteria expressed in § 261.11(a)(3) for listing a material as a hazardous waste. For further explanation, interested parties should refer to the background documents in the docket for this rulemaking. (See ADDRESSES section.)

In the case of carbamate, carbamoyl oxime, thiocarbamate, and dithiocarbamate chemicals, each class of compounds exhibits significant aquatic toxicity. Largely, the Agency's decision to list additional carbamate products was driven by available aquatic toxicity studies indicating LC50 values less than 50 mg/L. Because of the solubility, persistence, mobility, and toxicity of these classes of chemicals, the Agency concludes that they present a significant risk to the environment if mismanaged.

Several commenters believe that the generic listings for carbamates, carbamoyl oximes, thiocarbamates, and dithiocarbamates are vague, overly broad, and ambiguous. They believe the generic listings capture substances that are not hazardous and cause unnecessary burdens on manufacturers, distributors, and end users. The commenters also believe that the generic categories are inconsistent with current Department of Transportation (DOT) hazardous materials listings and should be modified to be consistent with these

regulations. They felt that these listings would include a variety of compounds for which EPA has not established health or environmental hazards, are not hazardous constituents on Appendix VIII and are not proposed for inclusion on Appendix VIII. The commenters also believe that EPA is obligated to evaluate each chemical and waste stream individually to determine whether they meet the listing criteria and thus should not list generic wastes.

The Agency believes that the definition of each chemical group as amended is very clear and consistent with chemical nomenclature, such that generators of these wastes will be able to determine easily whether they manufacture a specific carbamate. Thus, the Agency does not believe that the definitions are ambiguous. The Agency understands that the generic categories designated as N.O.S are not identical to the categories in DOT regulations. The DOT regulations refer only to carbamate pesticides and thiocarbamate pesticides. The Agency does not feel that DOT regulation preclude a broader definition for the purposes of hazardous waste listing. However as previously stated, the Agency believes that generic N.O.S. categories as proposed may be overly broad and will defer finalizing the generic listing descriptions until alternative listing descriptions have

## I. Toxicity Information

Several commenters believe that EPA did not have adequate toxicity information to perform its risk assessment and believe that EPA's use of surrogates in determining toxicity of compounds is inappropriate. The commenter also believes EPA had insufficient risk data to promulgate the U listings. As well, commenters discovered differences between published toxicity information and that presented by the Agency in the proposed notice.

been proposed and commented on.

The Agency has reevaluated the toxicity data for each waste proposed for addition to 40 CFR § 261.33(f). As noted by commenters, several compounds had limited toxicological data. After review of the available toxicological data, 12 compounds are not considered to have adequate toxicological or predicted values in the record to finalize these 12 listings at this time. See section IV.C. The Agency is deferring final action on the 12 compounds, and may repose these substances at a later date.

## J. Risk Assessment

The Agency received numerous comments on the risk assessment. Some commenters believe that the risk

assessment was extremely conservative, while other commenters believe that the risks from carbamate wastes were understated. The Agency has chosen to address the general concerns on both of these positions with regard to the risk assessment in this preamble. Detailed responses to specific comments on the appropriateness of model parameters, modeling assumptions, and exposure scenarios are provided in the Response to Comments Background Document that is available in the docket associated with this rulemaking.

## 1. Comments Asserting That the Risk Assessment Understates Risk

Several commenters felt that the Agency's risk assessment substantially understated the risk posed by improper management of carbamate wastes because (1) some of the modeling parameters and data inputs are highly uncertain and (2) exposures from spills and other accidental releases were not considered.

The Agency believes that it's modeling approach addresses all of the most significant exposures to wastes from this industry. As described in the background document to this rule (F–CPLP–S0003) the risk assessment procedure for selecting modeling parameters and assumptions is designed to ensure that the high end of the distribution of the exposed population is protected.

With respect to spills and other accidental releases, the Agency did include spills and overflows from surface impoundments based on probabilities of these occurrences. For wastes managed in tanks and surface impoundments, the Agency did not evaluate the potential impacts of a single catastrophic release to nearby soil and surface waters. The Agency believes that the probability of these types of potential exposure events occurring are extremely low and are less determinative in the listing determination than the more likely exposure scenarios evaluated.

One commenter stated that EPA should not rely as much on information which is specific to the industry (such as waste disposal practices and location of facilities) in its risk assessment. Instead, according to this commenter, the Agency should conduct a more generic risk assessment which would consider a wider range of potential disposal practices and site parameters.

The Agency used a combination of generic risk assessment scenarios and information specific to this industry in characterizing risks for this listing determination. The Agency believes that the use of industry specific information