U392 Butylate

- Carbaryl U279
- U372 Carbendazim
- U367 Carbofuran phenol
- Copper dimethyldithiocarbamate U393
- U386 Cycloate
- U366 Dazomet
- U395 Diethylene glycol, dicarbamate
- U403 Disulfiram
- U390 EPTC
- U407 Ethyl Ziram
- U396 Ferbam
- 3-Iodo-2-propynyl n-butylcarbamate U375
- U384 Metam Sodium
- U365 Molinate
- U391 Pebulate
- U383 Potassium dimethyl dithiocarbamate Potassium n-hydroxymethyl-n-U378
- methyldithiocarbamate U377 Potassium n-methyldithiocarbamate
- U373 Propham
- U411 Propoxur
- U387 Prosulfocarb
- U376 Selenium, tetrakis
- (dimethyldithiocarbamate)
- U379
- Sodium dibutyldithiocarbamate
- U381 Sodium diethyldithiocarbamate
- U382 Sodium dimethyldithiocarbamate
- U277 Sulfallate
- U402 Tetrabutylthiuram disulfide
- U401 Tetramethylthiuram monosulfide
- ThiodicarĎ U410
- U409 Thiophanate-methyl
- U389 Triallate
- Triethylamine U404
- U385 Vernolate

For background information on waste characterization data, data gathering efforts, and applicable technologies, see the Best Demonstrated Available Technology (BDAT) Background Document for Newly Listed or Identified Wastes from the Production of Carbamates and Organobromines.

## 1. Proposed Treatment Standards

The Agency has promulgated the listing of the wastes from the carbamate industry specified above. The final listing was signed by the administrator on January 31, 1995, and published in the Federal Register on February 9, 1995. EPA is today proposing concentration-based treatment standards for these wastes. The concentration limits for the regulated constituents are based on both existing and newly proposed UTS (59 FR 47982, September 19, 1994). UTS standards have already been promulgated for 21 of the constituents of concern for these waste codes (16 organic constituents and 5 metals). These standards were promulgated in the LDR Phase II final rule and are based on the following technologies: (1) Incineration was the primary basis for organic constituents in nonwastewaters; (2) biological treatment or carbon absorption was the basis for organics in wastewaters; (3) high temperature metal recovery and stabilization were the basis for metals in

nonwastewaters; and (4) chemical precipitation was the basis for metals in wastewaters. These treatment standards were developed by examining essentially all the BDAT treatment data the Agency had at the time.

The Agency is proposing new UTS for 42 constituents associated with carbamate wastes. 40 of these constituents are chemicals produced by this industry which may be grouped into the following categories: carbamates and carbamate intermediates, carbamoyl oximes, thiocarbamates, and dithiocarbamates. Please refer to the Background Document for definitions of these chemical groups and the categorization of these 40 chemicals. The other 2 constituents for which new UTS are being proposed (triethylamine, and ophenylene diamine) are not carbamate products, but are hazardous constituents present at levels of regulatory concern in carbamate wastes. Note that although specific dithiocarbamate chemicals have been added to Appendix VII and VIII, the basis for listing K161, and the waste descriptions of P196, P205, U277, U366, U376-379, U381-384, U393, U396, U400-U403, and U407, the regulated constituent for these chemicals and codes is specified as "Dithiocarbamates (total)", because the analytical method for dithiocarbamates does not distinguish among specific dithiocarbamate constituents.

The Agency is proposing to base the UTS for the carbamate, carbamate intermediate, carbamoyl oxime, dithiocarbamate, and thiocarbamate constituents in wastewaters on data developed by the Office of Water for the development of effluent guidelines, and data from treatability studies performed by RREL. Wastewater standards for carbamate and carbamoyl oxime constituents are based on data from alkaline hydrolysis, with the exception of thiodicarb which is based on biological treatment. Wastewater standards for thiocarbamates are based on GAC adsorption, while wastewater standards for dithiocarbamates are based on ozone/UV light oxidation. In cases where data were not available for a specific constituent, the standard has been transferred from the constituent with the most similar chemical structure and properties.

The Agency is proposing to base the UTS for the carbamate, carbamate intermediate, carbamoyl oxime, thiocarbamate, and dithiocarbamate constituents in nonwastewaters on analytical detection limits compiled from sampling and analysis reports prepared to support the proposed listing for these wastes. Although data from the

treatment of these constituents in nonwastewater matrices is not currently available, the thermal destruction technologies currently employed to treat these nonwastewaters can routinely achieve destruction to levels below the detection limit.

In addition, the Agency is proposing UTS standards for triethylamine based on data transferred from the treatment of methapyrilene. The treatment standards for methapyrilene are 0.081 mg/l for wastewaters and 1.5 mg/kg for nonwastewaters. Methapyrilene was selected as the basis for this data transfer because it is the only tertiary amine for which UTS standards have been promulgated.

Finally, the Agency is proposing UTS standards for o-phenylenediamine based on analytical detection limits compiled from sampling and analysis reports prepared to support the proposed listing for these wastes. For the treatment standards being proposed today for waste codes K156-161, P127, P128, P185, P188-192, P194, P196-199, P201-205, U271, U277, U279, U280, U364-367, U372, U373, U375-379, U381-387, U389-396, U400-404, U407, U409-411, see § 268.40 table—Treatment Standards for Hazardous Wastes in the proposed amendments to the regulatory language.

## 2. Request for Comments

In the LDR Phase II rule establishing UTS, the Agency was able to make modifications to the proposal, where commenters submitted data. The Agency strongly encourages parties affected by these proposed standards to submit any available treatment data for these newly regulated constituents; if such data become available, the Agency will make appropriate adjustments to these proposed standards. The Agency is soliciting comments, technical descriptions, and performance data regarding the characterization and treatability of these wastes and the achievability of these proposed standards. EPA is especially interested in any information regarding the feasibility of product recovery for these wastes, any available treatment data for the new constituents being added to the list of UTS, detection limits for these constituents in treatment residues, and suggestions for specified methods which could be alternatives to the concentration based standards proposed today.

Because standards for organics are based on treatment of organic constituents to non-detect levels, EPA solicits comment on the use of constituent specific detection levels used during the testing of these wastes for purposes of the listing