of which are solely used for the production of carbamates, are within the scope of the listing.

Wastes from the use of carbamate products are not generated from the production of carbamates and, therefore, are not within the scope of the proposed listings. Also, wastewaters from the formulation of carbamate products into consumer products (i.e., the production of end use pesticide products) are not subject of the K156–K161 listings. The K listings regulate only wastes from the manufacture of the chemical ingredients.

5. Requests for Additions to the Listings

One commenter believed that the following wastes which EPA proposed not be listed should in fact be listed as hazardous:

Wastewater treatment sludges. The commenter believed that the wastewater treatment sludges from the production of carbamate and carbamoyl oximes contain high contaminant concentrations that warrant regulation. Specifically the commenter believed that concentrations of methylamine, trimethylamine and bis(2ethylhexyl)phthalate, naphthalene, and 4-methylphenol were sufficiently high to warrant regulation of the sludges. The commenter believed that the risk modeling was flawed in that its exposure pathway assumptions understated the risks in the groundwater pathway and in the modeling techniques used.

Spent carbon. The commenter believes that chloroform is not the only constituent of concern in the spent carbons from the production of carbamates and states that the one sample taken by the Agency contained significant concentrations of methylene chloride, ethyl benzene and carbofuran. The commenter also believes that they should be listed because the listing criteria require EPA to list a waste as hazardous if it routinely exhibits a hazardous waste characteristic.

Wastewaters. The commenter believes that the Agency only considered mismanagement in tanks to result in only an air emission exposure pathway. The commenter believed that the Agency ignored spills or releases from tanks to surface waters or groundwater, and did not consider impacts to birds and other wildlife on direct contact with the wastewater, did not establish margins of safety to take into account lack of inhalation health-based standards, or take into account multiple sources of contaminants at carbamate facilities. They also believe that the surface impoundment should be considered a plausible management

scenario because they are used at some carbamate facilities, and may be used in the future at new facilities. As well they believe that wastewaters from the production of thiocarbamates contain EPTC (Eptam) at greater than 100 times the health based level. They also state that process wastewaters from the production of dithiocarbamates contain levels of carbon disulfide that exceed applicable health standards and that scrubber waters prom the production of dithiocarbamates contain piperidine at significant concentrations.

Organic Wastes from Dithiocarbamate Production. The commenter disputes that fact that all of the organic wastes from Dithiocarbamate production are adequately managed as hazardous, because the F003 listing is not based on toxicity. The commenter maintains that these wastes should be listed as hazardous.

The Agency disagrees with the commenter on each the points raised. For wastewater treatment sludges, spent carbons, thiocarbamate and dithiocarbamate wastewaters, and dithiocarbamate organic wastes the Agency did not project significant human health or environmental risks as currently managed. EPA notes that the commenter did not provide accompanying exposure assessment and risk levels in their comment package. They merely state that high concentrations warrant regulation.

For wastewater treatment sludges, the Agency considered as plausible mismanagement the current management practices of management in tanks and subsequent disposal in landfills. No significant risks were attributable to these management scenarios. In the assessment of landfill management, model leachate concentrations were matched to analytical TCLP leachate concentrations. It is reasonable to calibrate model outputs to experimental measurements of actual leaching potential obtained using the Agency's Toxicity Characteristic Leaching Procedure (TCLP, 40 CFR 262, Appendix II), because these experimental measurements may more accurately predict the waste's leaching potential. This procedure was designed to approximate the leaching of wastes co-disposed with municipal wastes, therefore the Agency has utilized these experimental measurements in lieu of model projections of the leachate composition.

Based on the Agency's assessment, spent carbons from carbamate production where found to be characteristically hazardous as D022 (chloroform) and the risk assessment

was dominated by risks attributed to chloroform. Absent the presence of chloroform, this waste would not satisfy the criteria for listing. While the commenter believes that all wastes which exhibit a characteristic should be listed, to implement hazardous waste management the Agency has put into place a two tiered system of characteristic and listed wastes. The U.S. Court of Appeals for the District of Columbia Circuit recently found in Natural Resources Defense Council v. EPA, 25 F.3d 1063 (District of Columbia Circuit 1994), that EPA is not compelled by its regulations to list a waste as hazardous because it exhibits a characteristic. The court found that EPA has the discretion to make a reasoned judgment as to under which system a waste should be managed. In this case, EPA has no information indicating that the current hazardous waste regulation of these spent carbons are inadequate. The Agency finds no need for redundant regulation, because risks are directly controlled by existing regulation.

In the case of wastewaters from thiocarbamate and dithiocarbamate production, the Agency determined that 'plausible mismanagement'' would be continued management in existing treatment systems comprised of tanks. The Agency does not view abandonment of existing treatment systems for unlined surface impoundments as "plausible." The Agency believes that since the carbamate manufactures have already made a considerable investment in wastewater treatment systems using tanks, they will continue to use them. Furthermore, the Agency also believes permitting authorities are strongly biased against the permitting of new surface impoundments, due to the potential for such units to contaminate groundwater resources. This bias considerably lessens the likelihood of future surface impoundments.

In the current management scenario of tanks, the Agency does not project significant risks, and does not view the replacement of these tanks with other treatment units as plausible. The Agency was able to survey all U.S. producers of carbamates and could only identify the use of surface impoundments as polishing ponds after aggressive biological treatment in tanks. EPA's analysis indicated that the carbamate industry is unlikely to experience rapid and significant expansion and thus the development of significant new manufacturing sites and increased waste disposal is low. The EPA has, therefore, not listed these wastes as hazardous.