In response to the commenters claims that the Agency ignored spills or leaks from tanks, failed to consider wildlife impacts, establish safety margins to account for the lack of inhalation health-based standards or consider the multiple sources of contaminants, the Agency disagrees with each of the commenter's assertions. When assessing management of waste in surface impoundments, EPA included spills and overflows in the calculations. These were not accidental or catastrophic releases, but rather based on probabilities of overflows and spills. In the case of tanks, accidental release scenarios or catastrophic release scenarios were not considered as a potential basis for listing. Wastewater treatment tanks are excluded from RCRA permitting provisions (40 CFR 264.1(g)(6) and 265.1(c)(10)), and the product storage tank are excluded under 40 CFR 261.4(c). Therefore, RCRA currently does not impose containment standards. However, the EPA Administrator has authority under RCRA section 7003 to bring suit on behalf of the United States as may be necessary to stop any imminent and substantial endangerment to health or the environment.

EPA performed a screening analysis of the potential impacts on terrestrial species. However, the Agency is still developing methodologies for characterizing risk to terrestrial wildlife and endangered species, and believes that the analysis presented in the risk background document (F-94-CPLP-S0003) needs to be further refined.

The Agency calculated risks for each exposure pathway of significance and considered the potential cumulative risks of multiple exposures to the same toxic contaminates via multiple pathways. The Agency acknowledges that there may be other exposures resulting from such pathways as facility air emissions or consumer product use, and has attempted to quantify only those risks associated with solid waste management.

The organic wastes from the production of dithiocarbamates were found by the Agency to be composed largely of solvents regulated by the F003 and F005 hazardous waste listings. While F003 is only listed because of the characteristic of flammability, the Agency acknowledges that additional toxicity concerns have since been reported in a number of scientific studies. However, these solvents were not found to present significant risks when managed in tanks or from residual incinerator emissions. The Agency concludes that the existing regulation of F003 wastes within the context of the

carbamate industry are protective of human health and the environment and that a separate listing designation would be redundant.

## B. Listing Exemptions

## 1. K157 Exemption

Many commenters supported the K157 exemption as proposed because they felt it provided operational flexibility, incentives for waste minimization and an opportunity to overcome some of the difficulties created by managing listed wastes under the current rules. Some commenters also wanted clarification on the point of application of the exemption (i.e., where in the treatment process the determination is made as to whether or not the exemption level is achieved). Several felt that the compliance point should be downstream of strippers and other treatment systems. Several commenters also requested that compliance with the exemption be demonstrated using analytical testing.

The Agency feels that the appropriate compliance point for application of the K157 exemption is the point of generation prior to aggregation with other carbamate and non-carbamate waste streams. The Agency feels that if the point of exemption were after aggregation of the listed wastes with other wastes it would provide some incentive to selectively mix wastewater streams to meet the exemption criteria. By applying the concentration limit at the point of generation, it is likely that only the wastewaters that meet the criteria will be exempted. In addition, if the compliance point is moved to the exit of steam strippers and incinerators, storage tank and other treatment unit emissions would no longer be considered in the exemption determination.

With regard to testing, the Agency does not preclude the direct measurement of the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine using quantitative analytical methods to demonstrate the exemption requirements are met. However, the Agency concludes that end-of-pipe analytical demonstrations alone do not prove compliance with the exemption criteria. All waste treatment emissions must be considered. For example, an end-of-pipe test prior to mixing with other sources provides a rapid determination of the concentration of constituents in the wastewater being disposed. However, this single point-of-compliance does not demonstrate that constituents were not evaporated to the environment. A mass

balance demonstration requires the facility to account for all of the materials introduced to the process showing amounts reacted, treated, recycled, and disposed. The accuracy of the mass balance approach is largely dependent on the process material records and accurate flow measurements during the production week. It is incumbent upon those claiming the exemption to provide documentation supporting the claim.

One commenter, however, believes

One commenter, however, believes that K157 waste should not be allowed an exemption because they believe the wastes exhibited one or more hazardous waste characteristics requiring listing, that air emission risk was well documented, and that because carbamate facilities are largely all RCRA permitted facilities, Agency resources would not be taxed by a change in the current exemption of wastewater treatment tanks from RCRA permitting and hence RCRA air emission controls.

The Agency disagrees. To implement hazardous waste management the Agency has put into place a two tiered system of characteristic and listed wastes. As discussed above, the D.C. Circuit Court recently found that EPA has the discretion to make a reasoned judgement as to under which system a waste should be managed. In the case of K157, the Agency believes that the same models used to calculate air emissions risks can also be used to determine a concentration at which this risk pathway has been abated such that unrestricted wastewater treatment could proceed. Thus, the Agency believes that the K157 exemption is warranted for those wastes that do not exceed the exemption limits. The Agency views any change to the current wastewater treatment unit exemption to be beyond the narrow scope of this hazardous waste listing determination. The Agency will further evaluate the regulatory status of wastewater treatment tanks in development of the Phase Four Land Disposal Restrictions Rule.

One commenter believes that EPA's method for determining the concentration of the constituents of concern may have ignored the benefit offered from various control devices for the volatile constituents. The commenter agrees that uncontrolled volatilized constituents should be included in the calculations; however, the commenter believes that the use of appropriate control devices for volatile constituents to capture or destroy the constituent should be part of the mass balance determination of regulatory status (i.e., whether or not the waste is exempt or not). As a result the commenter believes that the exemption should be amended to state that only