REPORT OF ARTHUR STEELE

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Scientific Examination and Evaluation of Chemical Accident in Franklin, Roosevelt, August 4, YR-5

Introduction

Scientific examination and evaluation were requested of a chemical container to determine the cause of an accident during which a user of the container splashed chemical onto his person. Mr. David Wilson was pouring from a 5-gallon container of Dinitro herbicide into a 1-gallon pail. As Mr. Wilson was tipping the can to pour the chemical, the bottom of the can slipped and chemical splashed onto various parts of his body. The 5-gallon can had a flexible spout on the top of the can. There was no reported leaking around the spout.

Examination and Evaluation

Examination of the involved components conclusively establishes that the splashing of the chemical onto Mr. Wilson was a result of the design of the spout. The use of the flexible spout on a 5-gallon container of hazardous liquid chemicals renders the container unreasonably dangerous to reasonably foreseeable slippage of the container during pouring.

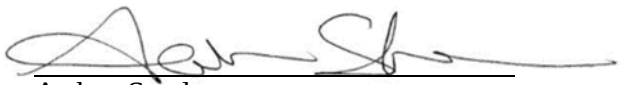
The environment of use of a product must be considered before design of the product is completed. Foreseeable hazards should be designed out of the product, if possible. If hazards cannot be designed out, they should be guarded against. If guards are not feasible, then adequate warnings and instructions should be used.

It was to be expected that the herbicide would be used by farmers in the field and foreseeable that portions of the liquid herbicide would have to be transferred from the container in which it was sold to other containers for transfer to spraying equipment. There are potential hazards associated with spilling or splashing the liquid chemical on one's person.

To design out these hazards associated with transferring the chemical, the shape of the container could be designed differently to broaden the base, thereby creating a more stable surface and alleviating the risk of accidental tipping of the container during transfer of the chemical. Another design change that would have alleviated the risk of injury would be to use a rubber bulb siphon. An appropriately designed siphon and tube would have eliminated the need to tip

the container at all. Finally, yet another alternative means would be to place a spigot near the bottom of the can.

Considering the environment of use of the chemical container, the reasonably foreseeable hazards associated with spilling and splashing the chemical during transfer operations, and the ready availability of alternative designs known in the art to eliminate the hazards, the design of the container was unreasonably dangerous to the normal and foreseeable use to which it was being put at the time of Mr. Wilson's accident. The appropriate design hierarchy is first to design hazards out of the product, second, to design additional safety features to guard against hazards, and third, to warn and instruct. The use of warnings or instructions in place of designing out the hazard or designing in additional safety features is in my opinion negligence and renders the design defective.



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