1. Question: Does Inerteen have permanent effects on the human body? If so, what type of permanent damage and how long a period of time does it take for this to develop? If not, explain why, if possible.

The polychlorinated biphenyls in Inerteen can have permanent effects on the human body.

The length of time or period of exposure necessary to develop symptoms depends on the degree or amount of exposure. In general, a single exposure for a few minutes to atmospheric concentrations that cause irritation to the eyes and/or respiratory tract would not be expected to cause either the skin eruptions or demonstrable liver injury. The problem arises from repeated and prolonged exposure to atmospheric concentrations in excess of the accepted Threshold Limit Levels or repeated and prolonged skin contact.

The polychlorinated biphenyls have not been recognized as skin "irritants" in the same sense that caustic materials or many organic chemicals are irritants. Because of their "solvent" action in removing the natural fats and oils from the skin, leaching, drying and chapping, repeated and prolonged skin contact should be avoided.

When the polychlorinated biphenyls are mixed with other chlorinated hydrocarbons, the mixture may be classified as a skin irritant.

The potential toxic effects in humans from excessive exposure to polychlorinated biphenyls include injury to the liver and chloracne. In animals, the liver effect is demonstrated by increased liver weights and injury to cellular tissue. Although chloracne is difficult to evaluate in animals, in humans, this take the form of comedones (large blackheads with typical acute pustules) and may be an external symptom of over exposure preceding serious liver injury.

Animal data and human experience indicate that the toxic effects are similar whether exposure results from ingestion, inhalation of vapors, or absorption of the liquid material through the unbroken skin.

(See AIHA Hygienic Guide Series - "Chlorodiphenyls" attached.)

2. Question: Several hourly employees have mentioned recently that many chemicals such as Inerteen cause sterilization after prolonged use. Is this true?

There is no evidence that polychlorinated biphenyls cause "sterilization" in humans.

3. Question: Since Inerteen effects birds and other animals, if there is no real effects to human beings, how do you explain it to employees in such a way that they will understand why it can kill a bird and not a human?

There is a potential real effect to humans - including death - as discussed in the answer to Question 1.

Due to differences in metabolism of food (and food contaminants) in birds and humans (and particularly the difference in the reproduction process in birds and mammals - including humans), birds are particualrly sensitive to many chlorinated hydrocarbons including polychlorinated biphenyls.

4. Question: If an employee spills Inerteen on his clothing and later takes the clothing home to be wa ed with other clothes, will this have any effect on he or his family and should be carry his clothes home to be washed?

There should not be any effect on an employee or his family from home laundering of work clothing. If washed with other clothing, there may be residual odor of the chlorinated hydrocarbons in the clothing.

5. Question: Employees carry Inerteen home on the soles of their shoes and complain quite a bit about the effect Inerteen has on wearing out their shoes. Is this a serious problem? Will Inerteen in the soles and leather of shoes, over a long period of time, have an effect on the feet and skin since the shoe is the only protective equipment we wear on our feet and the Inerteen penetrates through the leather.

There should not be polychlorinated biphenyl on the floor for workmen to contaminate their shoes to carry home. The plasticizer or solvent action will destroy or shorten the life of the shoes. More importantly, the wearing of contaminated shoes could lead to absorption of the liquid through the soles of the feet as through any other unbroken skin surface.

6. Question: There is one employee in our plant who had no problem whatsoever with Inerteen years ago. After six years of using, now when he works in Inerteen (which is a part of his job) he develops a swelling on the inner bicep of his left arm, only in one location. Could this be from Inerteen or not? It goes away as soon as he gets out of the Inerteen. It is similar to the swelling after taking an injection.

MONS 092751

We do not believe there can be any association between "a swelling on the inner bicep" of the arm and exposure to polychlorinated biphenyls.

7. Question: Are there hand cleaning solvent materials that we should be using when working in Inerteen to coat our skin before working in it and to wash it off after we finish working in it? Please give your recommendation. Our employees working in Inerteen are not able to use gloves since it is an assembly area. Even if they could, the Inerteen would destroy the protective glove.

We assume the question refers to the use of "Barrier Creams" rather than a "hand cleaning solvent".

There are a number of barrier creams available to protect workers against water insoluble solvents. Probably the most effective include silicone "to provide an impenetrable shield". A problem with such creams is that they may offer a false sense of security.

Proper use includes a discipline which requires liberal application at the beginning of a work shift and after each washing of the hands during the work day.