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PCB Colorado

COORS CONTAINER COMPANY

M E M O R A N D U M

June 29, 1977

TO: All Supervisors

FROM: Safety Services

SUBJECT: Polychlorinated Biphenyl (PCB)

As I am sure that most of you are aware, on Monday, June 27, 1977 an electrical transformer on the roof of Bldg. 20 ruptured, spilling approximately 150 gallons of insulating fluid (PBC), most of which penetrated the roof and collected in the Endline area.

The extensive efforts to contain this fluid have given rise to numerous rumors about the fluid's toxicity, ranging from radioactive to carcinogenic or cancer causing properties. Below, I have listed some facts about PBC with the hopes that this information will be conveyed to your employees and that a rational approach to the problem can be taken.

Polychlorinated biphenyls (PCBs) are mixtures of the chemical compounds formed by the chemical bond of two benzene molecules into a biphenyl molecule with varying numbers of chlorine atoms attached to the biphenyl molecule. PCBs are among the most stable organic compounds known and exhibit other properties that render them useful as dielectric and heat transfer fluids. PCBs are currently used primarily in capacitors and transformers. They are also used in investment casting waxes and in the cooling systems of mining machinery.

Of the roughly 1.25 billion pounds of PCBs introduced into commerce in the United States since 1929, only 55 million pounds have been destroyed by incineration or by degradation in the environment. 290 million pounds are under varying degrees of control in landfills and dumps, and 150 million pounds are free in the environment. 758 million pounds are currently in service.

PCB has two distinct actions on the body. First, it is a skin irritant and is capable of causing an acne like condition known as chloracne. Second, after repeated contact over a long period of time PCB is capable of causing liver damage. The most serious threat to the liver is via ingestion, however, PCB can also be absorbed thru the skin. The vapors of PCB can be harmful, but only when heated to a very high temperature, and then it is mainly the acid gases which are released which cause the concern. There is a smell associated with PCB, but this is due to the solvent in which the PCB is dissolved and not the PCB itself. This solvent is trichlorobenzene and is no more toxic than Chlorothene Nu. PCB, is currently being investigated as a potential carcinogen, but it must

be emphasized that carcinogenic activity tests involve large quantities of the material administered over a long period of time and definitely should not be applied to limited exposures such as ours.

The above characteristics of PCB led to the removal of employees contaminated clothing and the insistance upon thorough washing of exposed skin surfaces. On the other hand, the extensive efforts to contain the PCB, such as removal of the drain pipes etc., were based on PCB's toxicity to aquatic life and ability to contaminate water supplies. Containment efforts were successful and we are confident that no water was contaminated as a result of the spill.

As stated in the opening paragraph, there are approximately 150 million pounds of PCB presently free in the environment. PCB has entered our food chain via dairy products etc. probably as a result of pesticide applications and the hazard of this material should not be taken lightly, however, I am convinced that our situation was handled properly and that there is no need for alarm among our employees.

If there are any questions concerning the above, please do not hesitate to contact me.

Doug Ward, Supervisor
Safety Services

DW/jk