Monsanto

FROM (NAME & LOCATION) C. F. Buckley - Krummrich

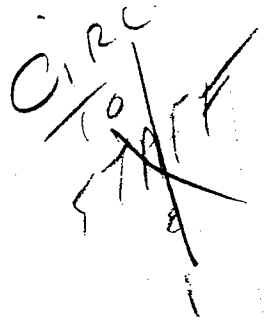
DATE : February 11, 1971

SUBJECT : SUBSTITUTION OF AROCLOR

REFERENCE :

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Recently I have been asked several questions about the substitution of other therminols and pydrauls for those containing Aroclor. The answers have general interest and are listed below. Also attached is a note on the reasons for making these changes:

QUESTION 1:

If we change to Therminol 66, do we still need to curb and sump the area to prevent loss to sewer?

ANSWER:

Ideally all manufacturing processes should be so protected in order to contain spills, etc. That is, we should provide the production departments with the tools they need to limit stream pollution. However, to curb and sump all existing installations immediately is economically unfeasible. We, therefore, recommend that new installations are adequately protected in this way and that every opportunity is taken to incorporate such protection when repairs or modifications are made. However, there is no urgent need to install curbs where none presently exist unless required for other pollution control projects.

QUESTION 2:

Must waste Therminol 66 be drummed off or pumped to a waste trailer?

ANSWER:

Yes. However, it can be sent to the sanitary landfill.

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QUESTION 3:

The substitute Pydraul, A200B, contains chlorinated hydrocarbons and may possibly cause environmental problems in the same way as Aroclor. Are we substituting one problem for another?

ANSWER:

This is a possibility and we should take stringent precautions to prevent loss. Deliberate draining of material to the sewer is obviously unacceptable but accidental losses are bound to occur. Our immediate need is to avoid losing material which can be identified as polychlorinated biphenyl in the WGK effluent and thereby precipitate injunctive action against us. Therefore, this substitution satisfies our immediate needs but, as yet, we have insufficient information on its behavior in the environment to be certain that no problems will ever arise from its use.

In summary, we need to constantly improve our control over all the materials that we handle while keeping expenditures within practical limits. At the same time we must reserve sufficient financial and engineering resources to be able to attack problems such as mercury and PCB effectively when they arise.

C. F. Buckley.

pd
Attachment

C. F. Buckley

DSW 389131

PROHIBITION OF USE OF AROCLOR OR OTHER FLUIDS CONTAINING PCB AT WGK

Because polychlorinated biphenyl compounds (PCB) persist in the environment, it is the policy of the W. G. Krummrich Plant not to use Aroclor, or any other fluid containing PCB, for any purpose within the plant other than as a coolant in electrical transformers. The manufacture of Aroclor in Department 246 will continue. It is recognized that the manufacturing process has a greater potential for loss than exists in the areas where Aroclor is used as a heat transfer medium or as a hydraulic fluid.

However, we are in the process of protecting the entire manufacturing area by sumps, etc,, and, ultimately, all the waste water from the department will be treated to remove PCB down to our goal of 10 ppb. In addition, air pollution control devices are being installed to prevent loss to atmosphere.

If Aroclor were to be used for any purpose at WGK outside the Aroclor manufacturing area, the same stringent precautions to prevent loss, coupled with treatment of air and water waste streams, would be necessary to avoid exceeding the plant goal. It is believed that its use in electrical transformers within the plant is acceptable and that losses can be adequately controlled from the minor amount of handling involved. However, use as a heat transfer fluid involves a much wider area and many more items of equipment, thus complete protection by sumps and treatment of all waste streams leaving the department would be required for each department using it. Even with this control, the total loss of PCB from the Krummrich

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PROHIBITION OF USE OF AROCLOR OR OTHER FLUIDS CONTAINING PCB AT WGK (continued)

Plant would be increased for each additional use. Adequate removal of PCB at the waste treatment plant is prohibitively expensive because of the volume of waste involved and, furthermore, the technology has not been fully developed.

Because it is the sole manufacturer of Aroclor in the U.S.A., the W.G.K. Plant must completely control loss during manufacture and cannot afford the risk of adding to this loss by permitting other than transformer use within the plant boundary.

The manufacture of the more persistent PCBs by Monsanto is being discontinued which means that, with stringent control, the amounts remaining in the environment may eventually diminish. However, no PCB (1242 for example) may be considered to be biodegradable in the sense that most organic wastes are biodegradable. 1242 is merely a little less persistent than the more highly chlorinated products.

Therefore, the W.G.K. Plant has decided to ban the use of PCBs in the plant outside Department 246, except for transformers. Alternates must be found for all present uses of fluids containing PCB.

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