BUREAU INTERNATIONAL TECHNIQUE
D'ASKARELS

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NIRÉF : Minutes of the Technical Meeting of the I.T.T. / ASKARELS

Frankfurt, 9th. February 1970 (Confidential and restricted).

PARTICIPANTS :

Farbenfabrik BAYER	: Mr. Dr. KNUST Mr. MARTIN Mr. Dr. WISSNER Mr. Dr. HOEHNE Mr. JOTTEN Mr. von der FORST.
CAFFARO	: Mr. MARCHETTI Mr. CASALE.
PRODELEC	: Mr. SMEND (part time) Mr. JAY Mr. STEINMULLER.
MONSANTO	: Mr. DAHLSTROM Mr. CAMERON Mr. VODDEN Mr. LIDGETT Mr. COLEMAN
SECRETARYSHIP	: Mr. GILLES Mr. PEERS.

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Meeting is opened at 4 p.m. by Mr. GILLES.

In view of the importance of the meeting he is requesting that a Chairman should be nominated. Following the wishes of the Assembly, Mr. H.P. DAHLSTROM, takes the chair.

The agenda of the meeting is changed in the following way :

1) Approval of the minutes of the previous meeting
2) Present situation of the Askarels problem.

The other items will be discussed at a next meeting.

APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING

No comments being made, this document is approved.

PRESENT SITUATION OF THE ASKARELS PROBLEM

The Chairman thanks the various delegations for the opportunity given to him and his Company to present their findings about the present situation in various countries.

A. General Statement by the Chairman

The so called contamination problem is growing in the U.S.A. as well as in the U.K.

The fact that other chemicals such as D.D.T. are scrutinized by the Authorities makes the Askarels problem even more important. Thousand of bids were killed, schrimps and shellfishes are contaminated. The press and some authorities have a tendancy to incriminate P.C.B. as traces have been found in their digestive system.

The problem is international. Producers must prove that they are not responsible. If they could not, the use of P.C.B. could be forbidden by law.

Thus they have to stick together, prove their case, educate the authorities, the universities and the public.

All companies should benefit from the common knowledge and prepare together a plan of action.

B. Statement by Mr. CAMERON

Mr. CAMERON is retracing the history of adverse publicity on P.C.B. as already stated in the minutes of the previous

meeting (1967 : Sweden, 1968 : Holland, 1969 : U.S.A. and U.K., 1970 : Finland).

By flip flop technique, he is reviewing the development of the situation :

1) original doubts, analytical uncertainties
2) comment progressively more critical
3) all end users must be considered
4) not restricted to specific geographical areas
5) world wide problems for all P.C.B. producers
6) emotional and political pressures increasing
7) must act unemotionnally, rationally and constructively
8) situation is potentially controlable
9) minimum user reaction thus far.

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The present situation may be summarized as follows : in U.S.A. and U.K., governmental authorities are involved and the producers are concerned by possible restrictive legislations.

In Norway, P.C.B. is classified with D.D.T. No known actions are under way in France, Germany, Italy or other countries.

A plan of action must be prepared. It must :

a) prevent as far as possible a release of P.C.B. into the environment
b) assess the pollution risks of the different grades
c) establish the degree of hazard arising of P.C.B.'s residues, etc...

Suggestions for joined action :

1) give all customers constructive advice on handling, processing and disposal of P.C.B.'s
2) exchange details of advice given to ensure consistent and uniform approach
3) agree text of warning label for drums and bulk containers
4) agree consistent and uniform attitude towards government authorities and news media
5) agree pollution risk of varying applications
6) technical collaboration.

C. Statement by Mr. VODDEN

Mr. VODDEN is explaining the following points :

1) P.C.B.'s in the environment (Chart N° 1)

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- Fish (herring tissues) 1 ppm (penta and hexa in fish fats)
- Sea-birds 100 ppm : Birds feeding on fishes containing P.C.B. have a high concentration of same in digestive system
- Terrestrial birds and mammals : insignificant (some very slight traces in milk)
- Seal blubber 50 ppm : the case is of the same magnitude of birds feeding from fishes.

The findings are debated. The conclusion from the test results in the various countries, confirmed by SHELL and UNILEVER, is that P.C.B. concentration is higher in closed seas and coastal waters than in open seas.

2) Levels of toxicity of P.C.B.'s (Chart N° II)

- Small mammals, rats, etc... : 100 ppm (in food) - non toxic (a)
  LD 50 (rats) - 4,15 ml/kgr
- Fish - rainbow trout, brown shrimp : 10 ppm in water - non toxic (b)
  LC 50 - 0.3 ppm
- Birds-leghorn chicks : 10 ppm - non toxic
  100 ppm - C_a metabolism interference (c).

N.B.- (a) This conclusion was reached after short time experiments long term experiments will show if this is still true.
(b) The study was made by U.K. official laboratories. Brown shrimps are less affected than by D.D.T. Gulf shrimps (U.S.A.) are very sensitive already at 0,05 ppm.
(c) Calcium metabolism in the birds is affected in such a way that birds eating contaminated fishes may lay eggs with thinner shells.

At 10 ppm conclusions are not definite. The problem seems to be located in the wild animal life but is not affecting the human beings.

3) Marine pollution : Principal routes (Chart N° III)

1. Direct effluent to sewers, drains and streams
2. Accidental spillage contaminating surface drains
3. Atmospheric pollution and fall-out
4. Contamination of streams and rivers through careless disposal of dry waste.

It has been estimated by a U.S. customer that about 2 millions lbs of PCB . is thrown away per year. Of this, + 1 1/2 m lbs are contaminating drain waters.

D. Statement of Mr. LIDGETT

By means of slides, Mr. LIDGETT explains the method of analysis used by his company : extraction, isolation of P.C.B. and analysing of what has been extracted.

Summary of slides :

1) preparation of the aquous samples
2) pretreatment of mud samples
3) AROCLOR 1242 graphic
4) n- hexane extract of aquous sample
5) n- hexane extract of mud sample
6) instrument requirements for P.C.B. analysis instrument model F. & M. 402
7) AROCLOR 1242 graphic in n- hexane
8) AROCLOR DICHLORO ISOMERS
9) AROCLOR analysis scott column.

Mr. LIDGETT announces that his company is ready to provide the details of this method to the other parties.

Mr. DAHLSTROM concludes that :

1) only highly chlorinated products have been founded up to now. However the question remains : why ?
2) what action are we going to take temporarily ?

What concerns the first point, Mr. VODDEN is raising the question : are highly polychlorinated diphenols more dangerous than low chlorinated ones. Studies are not underway since a long enough period and the residues found in the digestive system of the animal might only be a small percentage of what has been really absorbed. More should be found out.

The spillage of P.C.B. in the mud remains there for some time and flows only bit by bit in the waters. It is interesting to note that in U.S.A., 75 % is finally thrown away of the askarels used for transformers.

Regarding the second point, Mr. VODDEN tells that his company has a letter (will be communicated) ready to educate it's customers and attract the attention on the Askarels spillages : all uses must be taken into account (not forgetting overfilled tank-cars, residues in drums, etc...).

In U.S.A., there is a legal obligation to warn users of eventual dangers. In the U.K. a governmental report is prepared to be issued mid-march about the sea birds incident. Monsanto - as sole producer in U.K. - has already been approched by the T.V. (for later interview). They are conducting interviews with Governmental bodies to inform them. They are also trying to educate the press.

In order to obtain quicker and more detailed results, at a lesser cost, studies should be synchronized between the various companies.

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At this point, the various companies are explaining what they are doing individually.

BAYER : Mr. MARTIN states that they are controlling their plants as well as the environments and conducting some experiments on animals. This could be extended to customers but they are of the opinion that it is a little premature to broadcast the problems, the more that they are not under any pressure. Nevertheless they agree on a mutual program.

CAFFARO : for the time, says Mr. CASALE, there is no problem in Italy. Sales drives are only in their first stage and it would be a pity to undermine this action by adverse publicity. On technical point of view all the products are regenerated (10 %) or re sold to the customers (transformers).

PRODELEC : Mr. JAY states that the managment of Progil-Usine is informed of the problem. Nothing has been published in the Press. They are requesting their customers to regenerate more ; to burn the wastes instead of throwing them away.

Nothing has been published so far in the french press.

Mr. JAY is of the opinion that regeneration should be generalized.

Mr. SHEID is summarizing the discussion by saying that all producers must unite for better solutions of the big problems.

They are confronted with. It is recommending a common plan of action which is accepted by all present companies.

It is understood that it will remain in the limits of the technical B.I.T. Askarels, according to the wishes of Monsanto.

Tomorrow's technical meeting will straighten the program.

The meeting is closed at 7.45 p.m., the Chairman thanking the participants for their good work.

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