POSSIBLE CUSTOMER QUESTIONS ON PCBs

PUBLICITY

Question 1

What articles have appeared on the PCB problem? Will you send me copies?

Answer:

In the U. S., articles have appeared in the following:

(E. V. John please complete.)

Yes, I will arrange to get you copies of the ones you want.

(Should we give each regional manager several copies of each article to be xeroxed and sent out as needed?)

Question 2

Were Monsanto's Aroclors specifically mentioned in these articles? If so, which ones?

Answer:

(E. V. John)

Question 3

What did the articles on the PCB problem say?

Answer:

(E. V. John. What summary do you suggest we give?)

LEGISLATION

Question 1

Are there any Federal/State/local laws under which the use or discharge of Aroclors could be prohibited?

Answer:

(P. S. Park. Can you handle, please.)

Question 2

Could the Government ban PCBs like they've done DDT?

Answer:

(P. S. Park)

Question 3

Is the DDT and the PCB problem related?

Answer:

We are not a manufacturer of DDT or other chlorinated hydrocarbon pesticide and, therefore, have no knowledge of the seriousness of the charges against DDT other than what has been so widely publicized on TV, in the press and in technical journals. To the extent that both DDT and PCB are chlorinated hydrocarbons, then there is a similarity. They are sufficiently different in their chemical structures, however, that it would be entirely wrong to assume that both behave in the same way in the environment. There is another and more

obvious difference. DDT and other chlorinated hydrocarbon pesticides were specifically designed for a job that obviously leads to their being scattered in widespread fashion across the countryside. Rain, birds, wind, insects further scatter these pesticides in an uncontrollable manner. PCBs are not used in this fashion and Monsanto has never sought to promote this. This, we believe, is an important distinction that should not be overlooked if DDT and PCB are linked as a common pollutant of the environment.

Question 4

Could it be PCB that's causing the environmental problems and not DDT?

Answer:

We believe that present-day GLC and mass spectrometric techniques are sufficiently accurate to be able to differentiate between DDT, related pesticides, their metabolites and PCB. [redacted]

Question 5

What authority do State and local governments have in banning/controlling the use of PCBs?

Answer:

(P. S. Park)

EFFLUENT AND ITS CONTROL

Question 1

How do I dispose of Aroclor 1254/1260, etc. effluent from my plant?

Answer:

We would suggest collecting all process effluent, equipment washings, tank or drum washings and then regularly taking to the nearest toxic materials dump. You may also be able to use a sanitary land-fill if permits are issued for this in your locality. We don't recommend feeding this material to local sewage treatment plants or taking out to sea in drums for dumping. These methods do not solve the problem of contamination. We are working on the disposal of these materials by incineration and biodegradation. Our work in these areas has not yet reached the stage where we can offer practical suggestions. It is of interest to note, however, that research is underway to find catalysts to make DDT self-destructive. The possibility exists that we could find catalysts that would destroy PCBs in settling tanks constructed to catch all your effluents.

Question 2

Can I test my effluent to see if my effluent has no Aroclor 1254, etc.?

Answer:

Yes. Analytical equipment is available that can do this if the proper technique is used. The basis of the method is GLC or gas liquid chromatography. Are you or anyone in your company familiar with this? Do you have GLC equipment? If you do, we can send you a description of

a method that could identify PCB. If not, there may be a good analytical testing laboratory in the vicinity where you could send samples and rely on the results if you want to test your effluent.

Question 3

What is a "safe" PCB level for effluent leaving my plant?

Answer:

(E. Wheeler. Can you give "practical" levels.)

As our letter points out, parts per million (ppm) and parts per billion (ppb) have been mentioned in the published articles. There is still a lot of doubt as to how absolute any quoted values are. To bring this into the realms of reality, this definition of ppm and ppb may help clarify things.

To give you a concrete example

[redacted] the escape of one-two gallons per day could lead to samples in a stream beside the plant showing 10-50 ppb on analysis.

Question 4

"Sure some of my Aroclor escapes, but I bet it's only one gallon a day. I don't see why I have to worry. Do you?"

Answer:

(P. S. Park. What should our salesman's reaction be to this customer's observation?)

Question 5

You must have quite a control problem at your plants - I would think Monsanto's Aroclor plants are the major polluters - how are you handling control?

Answer:

(P. S. Park/W. B. Papageorge/E. Wheeler. What do you say?)

Question 6

How does Monsanto think [redacted] Aroclors can get into the environment and cause so much pollution?

Answer:

(P. S. Park/E. Wheeler)

Question 7

If I analyze my effluent stream and find ppb there, how do I know it didn't come from air-borne contamination or was present in the process water that I pump from the XYZ river into my plant?

Answer:

(E. Wheeler)

Question 8

You seem to think from the tone of your letter that the source of pollution is from effluent disposal into streams. In my process, Aroclor 1254, 1260, etc. vapors escape. What precautions can I take to prevent (a) employee problems and (b) escape of vapors into the atmosphere?

Answer:

(E. Wheeler)

TOXICITY

Question 1

If PCB is a danger to fish and birds, how about humans?

Answer:

(E. Wheeler)

Question 2

How does PCB affect marine, aquatic and wildlife environments?

Answer:

(E. Wheeler)

Question 3

Are Aroclor 1254/1260, etc. more toxic than other Aroclors? Why?

Answer:

(E. Wheeler)

DIFFERENCES BETWEEN AROCLORS

Question 1*

In your letter, you state that Aroclor® 5060, 5442 and 5460 are not PCBs. What are they?

Answer:

They are chlorinated terphenyls.

Question 2*

What's the difference between a chlorinated biphenyl and a terphenyl?

Answer:

A terphenyl has three benzenes linked together and biphenyl only two. They are, therefore, similar but different, just as naphthalene is different from benzene.

Question 3*

Why should PCB be an environmental contaminant and chlorinated terphenyls not?

Answer:

I don't think there is any positive answer on this and I can't give you any theories. However, I would emphasize that not all PCBs appear to be contaminants. Those such as Aroclor 1221, 1232 and 1242 haven't been identified in marine, aquatic and wildlife environments. Chlorinated terphenyls - at least those made by Monsanto - have not been identified in the environment either.

Question 4

Since you sell other PCBs beside Aroclor 1254 and 1260, why are they not found in the environment?

Answer:

One reason could be that they biodegrade and hence never build up to a level where they can be labelled persistent contaminants. Therefore, although you would find it in an effluent stream if you analyzed it just after you poured PCB into it, its absence when a river, for example, is analyzed downstream at a later date would indicate degradation by bacterial organisms.

We are actively working on this aspect of biodegradability in our laboratories at this time. Results of this type of work don't come to hand quickly but our preliminary work on PCBs of less than 54% chlorine looks promising.

Question 5

In your letter, you make no mention of Aroclor® 1262 and 1268. What is their status?

Answer:

and water insol.

It could be that their semi-solid/solid nature means they are far, far less likely to become "mobile" contaminants. It could be that their structural differences from Aroclor 1254 and 1260 are responsible for the apparent lack of a problem. In any event, they have not been identified by scientists in the environment and - believe me - a lot of scientists seem to be looking for PCBs.

Question 6*

Both Aroclor 5460 and 1260 contain 60% chlorine. Why is one a problem (1260) but apparently not the other (5460)?

Answer:

Combine Question 2 and Question 3 for the answer.

Question 7*

Does this PCB problem mean that you have discontinued efforts to get Aroclor 5460 approved by FDA?

Answer:

No.

Question 8*

Is the reason for not resubmitting your petition to the FDA for approval of Aroclor 5460 due to this PCB publicity?

Answer:

No.

Question

MONS 094907

What's the problem then?

Answer:

We are bringing a new solid Aroclor plant on-stream in the next two-three months. We want to make sure it produces the same quality Aroclor 5460 we used in our feeding

studies for the FDA. Once we're sure that's O.K. - and we feel it will be - then we'll get the petition moving again but FDA clearances do take time.

Question 9*

Does this PCB publicity mean that FDA approval of Aroclor 5460 is not going to be obtained?

Answer:

We have no reason to think the two things are related. Aroclor 5460 is not chemically a PCB . The delay resulted from the need to set up certain analytical methods to satisfy FDA. This involved analytical instrumentation and is being completed now. It is my understanding we plan to resubmit our petition although I personally don't know the exact date.



CONTAINERS

Question 1

Joe Doe buys all my used Aroclor drums without me having to wash them. I get $3.00 a piece. I can't afford to wash them out. Even if I did, what would I do with the washings? What should I do? Should I tell Joe Doe? Will Monsanto take them back or pay me $3.00 plus my costs to take them to a dump?

Answer:

(P. S. Park)

Question 2

I wash out my used drums before selling/re-using them. What should I do? How do I know the drums are PCB-free?

Answer:

APPLICATIONS

Question 1*

Could Aroclor 1254/1260 escape from my sealant/adhesive/coating whatever into the environment?

Answer:

This will depend entirely on the final use to which your product is put.

Question 2*

My product X contains Aroclor 1254/1260. What should I tell my customer?

Answer:

Without knowing what your customer does with product X, this is hard to answer. (We would say that it would not seem wise to use Aroclor 1254 or 1260 for keeping dust down on the roads, for use in dental sealing compounds or as carriers for pesticides.)*

*Only if you suspect or are told this is what the application is.

Question 3

Does Monsanto intend to continue manufacture of Aroclor 1254/1260, etc.

Answer:

I have been given no indication otherwise. MONS 094910

Question 4*

Should I look for replacement products for Aroclor 1254/ 1260, etc.?

Answer:

I think only you can decide this. How easy would this be for you? Do you have any other replacement product in mind?

Question 5*

Does Monsanto have replacement products for Aroclor 1254 and 1260?

Answer:

As you know, we have over eighty plasticizers in our line and there's quite a bit of product interplay so it is possible that there is another product in our line that might replace them. What resin do you use? Perhaps we could look at these resin/plasticizer Selector Charts in the back of the Blue Book. I've got it with me.

Question 6*

Is Monsanto working on replacements for Aroclor 1254 and 1260?

Answer: MONS 094911

These research fellows are always busy on things like that. To some people Aroclor 1254 and 1260 have drawbacks - quite apart from present publicity on PCB. Aroclor 1254 is fairly volatile. Aroclor 1260 is very viscous and difficult to handle. For polysulfide sealants, for example, the technical people in St. Louis have just sent us data on products that will behave better than Aroclor 1254 in polysulfide sealants. Maybe there's something here for you to look at. Let's go over it.