Monsanto

FROM (NAME & LOCATION) H. J. Day - G. O.

DATE December 9, 1968

SUBJECT Aroclor/Biphenyl

REFERENCE

cc H. S. Bergen
N. L. Sample
H. W. Tippee
Hill Williams - Anniston
2 Extra

TO : W. A. Kuhn

A short while back you asked that someone put the whole picture on Aroclor/Biphenyl together as it relates to a possible Biphenyl production interruption.

Boiling this down to simple terms is not easy, but here's a try.

POSSIBLE CAUSES OF MAJOR BIPHENYL PRODUCTION LOSS

Description	Equivalent Duration of Loss (Biphenyl Plant Wks.)
1. Tubular Unit Fire Box Explosion	7
2. Explosion Fire/Benzene Strip Col.	9
3. Rapid Preheater Bundle Failure	6
4. Destruction of Furnace Tubes	7
5. Loss of Biphenyl Column Trays	4

Normal Inventories Available

Biphenyl Supply (in M lbs.)

At WGK	0.8
At Anniston	1.5
At Wood Treating	1.4
Loaded Cars	0.5
Flaked in Whse.	0.5
	4.7 M lbs.

Based on 1969 sales and use for Biphenyl, this constitutes a 25-day supply.

Cont'd.

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Liq. Aroclors Supply (in M lbs.)

At Anniston	3.5
At WGK	2.5
	6.0

Based on 1969 sales and use for Aroclors this constitutes a 25-day supply.

Therefore, if we carry normal inventories as above, the following coverage is available:

	For Biphenyl Sales	For Aroclor Sales
Biphenyl	3½	3½
Aroclors	--	3½
	3½ wks.	7 wks.

Only one major cause of Biphenyl production loss materially exceeds this Aroclor coverage, i.e., Explosion Fire/Benzene Strip Col. which would put Biphenyl out for an equivalent of 9 wks.

We are short 2 wks. Aroclor coverage to give protection for all possible causes of Biphenyl outage.

Decisions to be made and some recommendations:

1. Carry a much larger stock of flake for sales. This would allow an immediate cessation of flaking in case of an incident and reservation of all molten Biphenyl for Aroclors. Another million pounds here would add almost a week to the 7 or cover both sales and part of the Aroclors.

2. Carry more than a normal stock of Aroclors, Pydraul's, etc. in drums. (Minimums could all be manually adjusted upward. All bulk tanks must carry a working outage.)

3. Assume the probability of a #2 loss is so slight that present inventories are ample.

4. Secure a 2.5 M lb. Biphenyl storage tank.

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5. No thought in all this has been given to the storage of Santowax R. We use 1.5 M lbs./mo. Storage is available for only about 700,000 lbs. Aroclor 5460 and HB-40 production could go on for only 2 weeks at the best!

My own feeling is that we combine the thoughts in ideas #1, 2, 3 and 5. I would consider we could approach 9 wks. coverage this way. No. 5 definitely needs consideration.

I welcome a discussion with you and Howard Bergen.

H. J. Day

HJD/sjw

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