Monsanto

MAY 5 1969

FROM (NAME & LOCATION): A. F. PIER - GENERAL OFFICES, 4-8179

DATE : MAY 1, 1969

SUBJECT : DISPOSAL OF CHLORINATED WASTES

REFERENCE :

TO : MR. R. M. KOUNTZ

cc: D. ARMSTRONG - WGK
H. S. BERGEN
C. G. HOFFMAN
R. H. JOSLIN/P. F. CUNNINGHAM
W. A. KUHN
D. A. OLSON
W. R. RICHARD

As you requested, I have looked into disposing of scrap Aroclor which is too badly contaminated for reprocessing. The possible methods of disposal are:

Incineration by others
Incineration by Monsanto
Landfill
Deep well injection

Incineration by Others

Through C. G. Hoffman of our Delaware River Plant, I have located two prospects in the east for incineration of scrap Aroclor. Both have, or will have, scrubbing equipment to remove the HCl formed from the flue gas.

The first prospect is the

Baron Chemical Company
666 Boesel Avenue
Manville, N. J. 08835
201-722-5071
Manager: Bill Dolan

This company has disposed of chlorinated wastes from the Delaware River in the past. Mr. Dolan will give me a verbal quote on May 2.

Mr. Hoffman has been negotiating with the following company for the future disposal of benzyl chloride wastes:

Rollins-Purle, Inc.
10 W. Baltimore Avenue
Lansdowne, Pa. 19050
MA 2-5005

Rollins-Purle is planning to install equipment for handling chlorinated wastes, but does not expect to put it in operation until the end of 1969. Their price for material delivered in tank trucks will be:

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IN-10 REV. 11 65

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More than 5,000 gals/week - 5¢/gal

Less than 5,000 gals/week - 6¢/gal

(Material is approximately 9 lbs/gal.)

Several chemical companies are operating incinerator-scrubbers purchased from the Thermal Research and Engineering Company:

Dupont	-	Kearny's Point, N.J. Pennsgrove, N. J. Louisville, Ky.
Dow		
Union Carbide	-	Bound Brook, N. J.
Marbonne	-	Gary, Indiana
IBM	-	Endicott, N. Y.

I do not know whether any of these companies would be interested in contracting to burn waste Aroclor.

The John Zink Company has a test incinerator-scrubber at:

4401 S. Peoria Avenue
Tulsa, Oklahoma
(Mr. McGill)

The unit has a capacity of 10 gpm. Mr. McGill indicated they might contract to burn the scrap Aroclor on a one-time basis, but would not be interested in getting into the waste disposal business permanently.

Incineration by Monsanto

Chlorinated wastes are produced at our Delaware River, Krummrich, and Anniston Plants. An incinerator at any of these locations could be sized to handle the scrap Aroclor. Mr. Hoffman has estimated the capital and operating cost for an incinerator at Delaware River as follows:

Incinerator capacity	1,500 lbs/hr
Average lb/day incinerated (including scrap Aroclor)	20,000
Capital	$165,000
Operating Cost	$ 86,000/yr 1.2¢/lb

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There are two idle incinerators at our Pensacola Plant. However, these incinerators are not well suited for burning chlorinated wastes since they do not have scrubbers or stacks.

Union Carbide can supply equipment to incinerate chlorinated organic liquids and to absorb and recover the HCl formed. A unit to handle 1,500 lbs/hr would cost about $600,000 installed. The acid produced would be 15%, which is considerably more dilute than the commercial grade (20° Be or 32%). Strong acid cannot be produced in the absorber because the incoming gas is low in HCl (6%) and high in inerts. By comparison, the gas entering the HCl absorber at WGK is 85% HCl. The high inert loading would eliminate the possibility of absorbing the HCl from the incinerator in the existing absorbers at Delaware River, WGK, or Anniston.

Landfill

Mr. Hoffman has obtained an estimate of 12¢/gal in tank truck lots for landfill disposal at:

Scientific Chemical Treatment Co.
P. O. Box 385
Carlstadt, N. J. 07072
939-0467
Herbert Case, Manager

Deep Well Injection

If the scrap Aroclor is low in solids, it could be disposed of by deep well injection. There are injection wells at Pensacola and Chocolate Bayou. There are no injection wells at Monsanto's eastern plants.

A sample of Aroclor 1242 has been sent to Thermal Research and Engineering to confirm that it is suitable for incineration in their equipment.

Let me know if you need any further information.

A. F. Pier

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/mc

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