

Monsanto

FROM
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DATE: October 31, 1983

SUBJECT: PCB Incineration - Brazil

REFERENCE:

TO: David Wood - Sao Paulo

cc: E. E. Hendrikse
F. E. Kearney
W. B. Papageorge

In answer to your inquiry, I've looked at the engineering specs for the Brazil incinerator.

A comparison of the specs of the Brazil S-160 incinerator vs. the U.S. EPA standards indicates that this unit is unsatisfactory for PCB incineration for a variety of reasons. However, the major factors that lead to rejection of the Brazil incinerator for PCBs are the operating residence time and temperature designed into the unit.

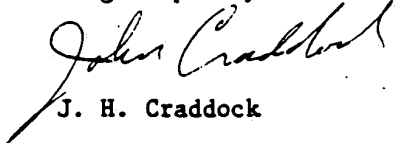
	<u>U.S. EPA Standard</u>	<u>Brazil Incinerator</u>
Residence Time	1.5 sec.	1.5 sec.
Temperature	1600°C (±100°C) @ 2% excess O ₂ in stack gas	870-980°C

At the milder operating temperatures of the Brazil unit, total destruction of PCBs and other toxic combustion by-products such as dioxin would not be achievable.

The U.S. EPA and California State EPA both strongly recommend use of cement kilns (1) and lime kilns (2) as suitable for PCB destruction. Modifications to inject liquid PCBs into kiln fuel can be made cost effectively. I believe Brazil has a number of both kinds of these units in the country.

Other negative points for the S-160 unit are low capacity, lack of monitoring devices and fail safe equipment which would be fairly expensive to remedy.

One point to keep in mind is that upgrading of the S-160 incinerator to be able to handle MAP's alachlor wastes has been proposed. This could be a future project; at this time I don't know if and how this would change the critical operating parameters. In your discussions you should keep this in mind. I personally don't think the modifications would increase both temperature and residence time enough to meet EPA PCB incineration specs and at the same time will consume more of the design capacity.


J. H. Craddock

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