



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

DEC 18 1992

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

Subject: Metsulfuron Methyl, Tribenuron Methyl, Thifensulfuron Methyl, and Cyanazine. Registrant Response to DCI for Hexachlorobenzene and Pentachlorobenzene. DP Barcode D184683. MRID No. None. CBRS No. 10879.

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In response to a Data Call-In for analytical chemistry data on hexachlorobenzene (HCB) and pentachlorobenzene (PCB) in certain pesticides, DuPont Agricultural Products has responded with a waiver request for metsulfuron methyl (40CFR180.428), tribenuron methyl (40CFR180.451), thifensulfuron methyl (40CFR180.439), and cyanazine (40CFR180.307). The request includes a description of the manufacturing process of each of the chemicals and discussions of the lack of potential for HCB formation.

Conclusions

1. Hexachlorobenzene (HCB) and/or pentachlorobenzene (PCB) are/is unlikely to be created during the manufacture of metsulfuron methyl, tribenuron methyl, thifensulfuron methyl, and cyanazine. The reaction conditions presented are not amenable to HCB/PCB formation.
2. HCB and/or PCB may be present in the starting s-triazine used in the manufacture of metsulfuron methyl, tribenuron methyl,

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thifensulfuron methyl, and cyanazine. Therefore, the subject pesticides are subject to the DCI requirements, and a waiver is inappropriate.

3. A solvent used in the manufacture of thifensulfuron methyl may contain HCB or PCB at levels > 100 ppb. Therefore, this pesticide is subject to the DCI requirements, and a waiver is inappropriate.

4. DuPont must provide analytical data for HCB/PCB in technical metsulfuron methyl, tribenuron methyl, thifensulfuron methyl, and cyanazine. The analytical requirements are specified in the DCI.

#### Recommendation

CBRS recommends that the waiver request be denied and that DuPont be advised to proceed with the analysis of the subject pesticides for hexachlorobenzene (HCB) and pentachlorobenzene (PCB).

#### Detailed Considerations

Each of the subject pesticides contains a s-triazine ring. Pesticides containing s-triazine are a subject of the DCI because hexachlorobenzene has been reported by the manufacturer as an impurity in a certain s-triazine-containing herbicide. The origin of the HCB is uncertain, but it may be an impurity in cyanogen chloride or it may arise during the trimerization of cyanogen chloride to cyanuric chloride on activated carbon at 400° C (Survey of Industrial Processing Data: Task I-Hexachlorobenzene and Hexachlorobutadiene Pollution from Chlorocarbon Processes, Charles Mumma and Edward Lawless, MRI, EPA-560/3-75-003).

Each of the manufacturing processes detailed by the registrant (see Confidential Appendix A) utilizes a s-triazine that was most likely derived from cyanuric chloride. Therefore, the potential for the presence of HCB and PCB in the final pesticide as an impurity introduced with starting materials does exist. Also, the manufacture of thifensulfuron methyl uses a chlorinated aromatic solvent that might contain HCB/PCB at levels > 100 ppb. CBRS agrees with DuPont that the manufacturing processes for the specific pesticides are not likely to produce HCB or PCB, but HCB or PCB may be introduced as impurities in the starting materials used by DuPont and supplied by others. The waiver request is not justified. The technical grades of the subject pesticides must be analyzed for HCB and PCB, per the DCI.

Attachment: Confidential Appendix A  
 cc withOUT Attachment: Circ.  
 cc with Attachment: RF, HCB Subject File, S. Funk.

RDI: A. Rathman:12/15/92:M. Metzger:12/15/92:E. Zeger:12/16/92:  
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