

MEMORANDUM

Date: May 26, 1981

Subject: Letter from S. S. Song dtd 5-14-81 EPA REG. NO. 239-741 Ortho Isotox Inc.
Caswell # 160, 93, 455 Spray

From: Cheryl A. Peterson
IRB/TSS

To: Tom Ellwanger
Fib/TSS

Registrant: Chevron Chemical Company, Ortho Div.
940 Hensley Street
Richmond, CA 94801

Active Ingredients:

Carbaryl (1-naphthyl N-methylcarbamate).....5%
Meta-Systox-R (S-(2-(ethylsulfinyl)ethyl)O,O-
dimethyl phosphorothioate).....5%
Kelthane (1,1-bis(p-chlorophenyl)-2,2,2-trichloroethanol)...2%
Aromatic Petroleum Derivative Solvent.....18%

Inert Ingredients.....70%

Background:

Several questions have been asked in this letter pertaining to one insecticide product and several herbicide products. The following are comments answering questions asked about the insecticide product.

Comments:

1. The product manager for this product is Jay Ellenberger (P:12), telephone no. 703-557-7024.
2. This product is registered as a concentrate for use on ornamentals, on lawns, around buildings, in parks and in picnic areas. It is not, relatively speaking, that acutely toxic to humans; the oral LD50 for rats of the concentrate being approximately 525 mg/kg. According to the 1979 Registry of Toxic Effects of Chemical Substances, an HCl carcinogenesis bioassay has been completed on the technical form of Kelthane, and was found to be positive for the mouse. The body of chemicals related to Kelthane (which include DDT) are being investigated for possible "...serious allergic manifestations as a cause of aplastic anemia." according to Clinical Toxicology of Commercial Substances (Gosselin et al., 1979). Carbaryl has recently been shown negative in a teratogenicity study on rhesus monkeys. The 1979 Registry... listed the carcinogenic determination for the technical carbaryl as "animal suspected".

3. Carbaryl is known to be very quickly absorbed by the skin. This trait is reflected in the product labeling which recommends use of protective clothing. Some of the inert ingredients in this product may produce substantial but temporary eye irritation which is represented on the product labeling by the recommendations for goggles or face shield during application.
4. Tolerances have been established on various food commodities for these three active ingredients (See CFR 40 Pts. 180.169, 180.163 & 180.330). Both carbaryl and metasystox have various vegetables listed. Kelthane has some fruits, berries and hay listed. Water soluble formulations of carbaryl show persistence in sandy loam soil from one week to one month. Metasystox R has a half-life of 19 days in silt loam soil. Data for persistence of kelthane is fragmentary. If a vegetable garden was planted on the downhill slope from a treated turf patch, the possibility for kelthane run-off and contamination of vegetables may exist; however, this possibility would appear remote since alcohols are generally very soluble in water. This characteristic would hasten the degradation process in the soil.
5. Carbaryl breaks down into an intermediate which may be toxic to various species. The major product is 1-naphthol; however, this is more of a problem of toxicity to marine and aquatic species. Degradation products of metasystox-R appear to be water soluble or bound to soil solids. Products of kelthane are not apparent in files.