INTERIM CHEMICAL REVIEW COMMITTEE
Third session
Geneva, 17 – 21 February 2002
Item 6 (a) of the provisional agenda *

INCLUSION OF CHEMICALS IN THE INTERIM PRIOR INFORMED CONSENT PROCEDURE - REVIEW OF NOTIFICATIONS OF FINAL REGULATORY ACTIONS TO BAN OR SEVERELY RESTRICT A CHEMICAL

Dinoterb

Note from the secretariat

1. Annexed to this note is additional documentation provided by the Designated National Authority of Thailand to the Chair of the Task Group of the Interim Chemical Review Committee, Mr. M. Debois, in support of their notification of final regulatory action on dinoterb.

* UNEP/FAO/PIC/ICRC3/1
Bruxelles, le 06/02/02
D(2002)

TELECOPIE

Destinataire: B. Murray/ G. Wyrmald
Secrétariat Convention de Rotterdam (FAO)

Expéditeur: Marc Debois
G-12 5/48

Nombre de pages: 1 + 14

Objet: ICRC – 3 / DNOC and Dinoterb

Message:

Bill, Gerold,

As coordinator for the Task Group on DNOC and Dinoterb, I received from Thailand additional information which was used by the Thai Committee to take the regulatory actions concerning the two active substances.

The information is of importance for the discussions of the Committee, so I ask you to make it available to the Committee, if possible before the meeting.

Best regards,

Marc Debois

PS: Could you please let me know if appropriate equipement will be available for power point presentation (also on Saturday 16)? Thanks.

Cc: R. Arndt : J. Foley (sans annexes)
Department of Agriculture
Chatuchak, Bangkok 10900, THAILAND
Tel.: (662) 5793579, 9405390
Fax.: 662-5614695

To: Mr. Julian Foley
Date: Feb. 02
Ref: 
Number of Pages: 15

Fax No.: 662-5614695
From: Dr. Nuansri Tayaputch
Director, Division of Agricultural Toxic Substances
Fax No.: (662) 5614695

Dear...

(COPY)

Department of Agriculture, Chatuchak, Bangkok 10900
Thailand
Tel: 66-2-5793577 Fax: 5614695
Dear Sir,

Subject: Rotterdam Convention - dinoterb and DNOC - ICRC 3 discussions.

Please refer to your facsimile message dated 22 January 2002. I'm attaching herewith the papers that Department of Agriculture submitted to the Hazardous Substances Committee. These papers are submitted as information papers for the committee to make decision whether the proposed chemicals should be banned or not.

Dr. Nuantri Tayaputch, Director of Agricultural Toxic Substances Division of our Department is a person I wish to recommend you to include in the consultation. She is preparing to get approval from the Ministry to attend the third ICRC.

With kind regards.

Yours sincerely,

Mr. Somsak Singholka
Director General
Department of Agriculture

Mr. Julian FOLEY,
C-3-Chemicals, BUS 2/55,
European Commission,
Directorate-General, Environment,
Rue de la Loi 200,
B-1049 Bruxelles/Wetstraat 200, B-1049 Brussel,
BELGIUM

รูปานนท์ นางพัฒน์กานนท์ 30 มกราคม 2545

06/02 '02 MER 10:49 [TX/RX N° 7600]
06/02 '02 MER 12:53 [TX/RX N° 8008]
### Criteria to Categorize the Type of Hazardous Substances According to Hazardous Substances Act (B.E. 2535)

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Toxicity</th>
<th>Exposure</th>
<th>Environmental Fate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Acute</td>
<td>Chronic</td>
<td>Special</td>
</tr>
<tr>
<td>11</td>
<td>dinoterb</td>
<td>Oral (mouse) : LD₅₀ 62 mg/kg (cats, 2y)</td>
<td>NOEL :</td>
<td>-</td>
</tr>
<tr>
<td>Import statistics (kg. a.i.)</td>
<td>Banned and restricted situation in other countries</td>
<td>Remarks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1. Belize: Dinoterb is a prohibited pesticide. It shall not be brought into or used in Belize. Its possible effects on the environment, plants, animals or human beings are considered to be too dangerous to justify its use (since 1983).

2. The United Kingdom: Revoke all agricultural uses because of the evidence showed to be carcinogenic and teratogenic (since 1986).

3. Hungary: The product has been withdrawn because it has been substituted by other products which are more effective and safer (since 1979).
Dinoterb

Dinitrophenol

Nomenclature
Dinoterb
Common name dinoterb (US), E-ISO; d'noterbe ((iii) F-ISO)
IUPAC name 2-(tert-butyl-4,6-dinitrophenol)
Chemical Abstracts name 2-(1,1-dimethylethyl)-4,6-dinitrophenol
CAS RN [1420-07-1] EEC no. 215-8-3-0 Development codes LS63 133
(Rhône-Poulenc); P 1100 (Murphy)

Dinoterb-ammonium
CAS RN [6365-03-9]

Dinoterb acetate
CAS RN [2204-27-1]

Physical Chemistry
Dinoterb
Mol. Wt. 240.2 M.f. C_{10}H_{12}N_{2}O_{5} Form Pale yellow solid with a phenol-like
(pH 5, 20 °C). In cyclohexanone, ethyl acetate, dimethyl sulfoxide c. 200 (all in
g/kg). In alcohols, glycols, aliphatic hydrocarbons c. 100 (all in g/kg). Soluble in
aqueous alkalis with the formation of salts. Stability Stable below the melting
point. Decomposes above 220-230°C. Stable at least 34 d at pH 5-9 (22 °C).

Dinoterb-ammonium
Mol. wt. 257.2 M.f. C_{10}H_{15}N_{3}O_{5}

Dinoterb-diolamine
Mol. wt. 345.4 M.f. C_{14}H_{17}N_{3}O_{7} Solubility in water 32.8 g/l.

Dinoterb acetate
Mol. wt. 282.3 M.f. C_{12}H_{14}N_{2}O_{6}

Commercialisation
History Herbicide reported by G. A. Emery et al. (Proc. Conf. EWRC/COLUAM,
Herb. Conf. COLUAM, 4th, 1967, p. 196). Introduced by Pépro (now a subsidiary
of Rhône-Poulenc Agrochimie) and by Murphy Chemical Ltd (who no longer
manufacture or market it). Patent FR 1475686; FR 1532332; GB 1126658;
US 3565601 all to Pépro Manufacturers Rhône-Poulenc
APPLICATIONS
Biochemistry Oxidative phosphorylation uncoupler. Mode of action Selective non-systemic herbicide with contact action. Uses Control of annual broad-leaved weeds post-emergence in cereals, maize, alfalfa, and beet; and pre-emergence in peas and beans. Also used for destruction of potato haulms. Formulation types SL, EC. Mixtures (dinitarb +) isoproturon; mecoprop. Selected tradenames ‘Herbogil’ (Rhone-Poulenc)

ANALYSIS
Product analysis by gc of a derivative (ChmAC Handbuch, 1983, 1B, 1797). Residues by gc, details available from Rhone-Poulenc Agrochimie.

MAMMALIAN TOXICOLOGY

DINTEARB
Oral Acute oral LD₅₀ for rats 62, mice 25, rabbits 20 mg/kg. Skin and eye Acute percutaneous LD₅₀ for guinea pigs 150 mg/kg. NOEL (2 y) for rats 0.375 mg/kg diet. Toxicity classes WHO (a1) 1b EC risk (R61): T (also R24/25): X1 (R36); (R41); (salts and esters are (R61)); T (also R23/24/25)

ECOTOXICOLOGY
DINTEARB
Fish LC₅₀ (96 h) for rainbow trout 0.0034 mg/l. Bees Toxic to bees.

ENVIRONMENTAL FATE
Animals in rats, following oral administration, 98% is excreted in the faeces and urine within 7 days.
CHEMICAL IDENTITY -- DINOBRAE

CAS Registry Number: 1420-07-1

Synonyms: 2,4-Dinitro-6-tert-Butylphenol; 2-(4,1-Dimethylallyl)-4,6-Dinitrophenol; 2,4-Dinitrophenol; 2-tert-Butyl-4,6-Dinitrophenol; Dinoterba; DNITDR; Herbogil; Phenol, 2-(4,1-Dimethylallyl)-4,6-Dinitro-; Phenol, 2-tert-Butyl-4,6-Dinitro-; Ulipan Forte; Voramine Chreme

Chemical Formula: C18H12N2O5

Molecular Weight: 240.24

SECTION II -- REGULATORY INFORMATION

CERCLA (SARA) 1986:

Toxicity Value Used for Rating Under Section 302: LD50 oral (mouse) 25 mg/kg (*NICSII/NIEHS 1985)

TQ: 500/10,000 (pounds)

CERCLA (SARA) Section 311 (statutory, for notification under SARA Section 302(a)(2))

Section 313 Listed (Yes or No): No

SECTION III -- PHYSICAL/CHEMICAL CHARACTERISTICS

Physical State: Solid

Boiling Point: Not Found

Specific Gravity (H2O=1): Not Found

Vapor Pressure (mmHg): Not Found

Melting Point: 255F, 126C (*Warthing 1979)

Vacuum Density (AIR=1): Not Found

Evaporation Rate (Butyl acetate=1): Not Found

Solubility in Water: Practically insoluble (*Warthing 1979)

Appearance and Odor: Yellow solid (*Warthing 1979)

SECTION III -- HEALTH HAZARD DATA

OSHA PEL: Not Found

ACGIH TLV: Not Found

IDLH: Not Found
Other Limits Recommended: Not Found

Skin: Yes (Non-Specific -- Dinitro-o-Cresol) (ACGIH 1980, p. 152-153)
Ingestion: Yes (Non-Specific -- Dinitro-o-Cresol) (ACGIH 1980, p. 152-153)

Health Hazards (Acute, Delayed, and Chronic): This compound is toxic by all routes of exposure. The dangerous single oral dose of dinitro-o-cresol, a structurally similar compound (*Rumack 1975 to Present), is estimated to be about 20 mg/kg (Hayes 1982, p. 469).

Medical Conditions Generally Aggravated by Exposure: Not Found

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA.

Flash Point (Method Used): Not Found
Flash Point: Not Found
Flammable Limits:
LEL: Not Found
UEL: Not Found

Extinguishing Methods: (Non-Specific -- Dinitro-o-Cresol) Use dry chemical, carbon dioxide, water spray, or foam for small fires, and water spray, fog, or foam for large fires. Move containers from fire area if possible (DOT 1994, Guide 53).


Unusual Fire and Explosion Hazards: When heated to decomposition it emits toxic nitrogen oxide fumes (Sax 1994, p. 1160).

NFPA Flammability Rating: Not Found

SECTION V -- REACTIVITY DATA

Stability: Unstable: Not Found
Stable: Not Found

Conditions to Avoid: Not Found

Incompatibility (Materials to Avoid): Not Found

Hazardous Decomposition or Byproducts: When heated to decomposition it emits toxic nitrogen oxide fumes (Sax 1994, p. 1160).

Hazardous Polymerization: May Occur: Not Found
May Not Occur: Not Found

Conditions to Avoid: Not Found

SECTION VI -- USE INFORMATION

This compound is a herbicide (Fenk Chemicals Handbook 1984, p. C92) and a rodenticide (*Isubura and Kato 1974).

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE
(Steps to be Taken in Case Material is Released or Spilled)

06/02 '02 MER 10:41 [TX/RX N° 7869]

06/02 '02 MER 12:53 [TX/RX N° 9008]
Avoid inhalation (see Section III above). (Non-Specific -- Dinitro-o-Cresol)
Do not touch spilled material; stop source of spill or leak if it can be
done without risk. Take up small spills with sand or other noncombustible
absorbent material and place into containers for later disposal. Small
dry spills; with clean shovel place material into clean, dry container and
cover. Remove from spill area for later removal. Bide far ahead of spill
for later disposal (DOT 1984, Guide 53).

SECTION VIII -- PROTECTIVE EQUIPMENT FOR EMERGENCY SITUATIONS

For emergency situations, wear a positive pressure, pressure-demand,
full facepiece self-contained breathing apparatus (SCBA) or pressure-
demand supplied air respirator with escape SCBA, and a fully-encapsulating,
chemical resistant suit. See the introductory information section at the
beginning of the profiles for additional information.

SECTION IX -- EMERGENCY TREATMENT INFORMATION

Signs and Symptoms of Exposure: Symptoms of poisoning are similar to
other dinitrophenols ("Rumack 1275 to Present") and may include nausea,
gastric distress, restlessness, sensation of heat, flushed skin, sweating,
thirst, deep and rapid breathing, rapid heart rate, fever, and lack of
oxygen to tissues (blueness of skin) (Neyes 1982, p. 469).

Emergency and First Aid Procedures: (Non-Specific -- Dinitro-o-Cresol)
Move victim to fresh air; call emergency medical care. Remove and isolate
contaminated clothes and clothing at the site. In case of contact with
material, immediately flush skin or eyes with running water for at least 15
minutes (DOT 1984, Guide 53).