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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

IL8/30

COMMISSION EUROPÉENNE
DG DEVELOPPEMENT

Politique de Développement et Questions sectorielles
Environnement et Développement rural

Bruxelles, le 06/02/02
D(2002)

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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 Thaï 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

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)

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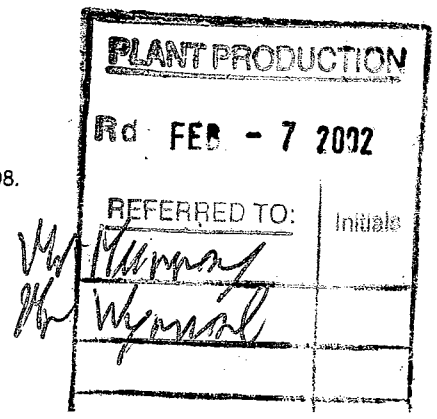

FROM : FAX NO. : Dec. 17 1999 06:03AM P1

Department of Agriculture
Chatuchak, Bangkok 10900, THAILAND
Tel.: (662) 5793579, 9405390
Fax.: 662-5614695

To : Mr. Julian FOLEY, **Date :** 6 Feb. 02

..... **Ref :** .....

..... **Number of Pages** 15

Fax No : 322 - 295 6117

From : Dr. Nuansri Tayaputch

Director, Division of Agricultural Toxic Substances

Fax No. : (662) 5614695

Dear .....

P1

(COPY)

No. AC 0912/ ٧٧٩

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. Nuansri 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,
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Criteria to Categorize the Type of Hazardous Substances According to Hazardous Substances Act (B.E. 2535)

No.	Name	Toxicity			Exposur			Environmental Fate		
		Acute	Chronic	Special	Occupational H.	User	Non-user	Persistence	Bioaccumulation	Non-target
11	dinoterb	Oral (mouse) : LD_{50} 62 mg/kg Percutaneous (guinea-pig) : LD_{50} 150 mg/kg	NOEL : (rat, 2y) 0.375 mg/kg diet	-	-	-	-	-	98 % is excreted in the faeces and urine within 7 days	- toxic to bees

Chemma/baanwila ble34/sam

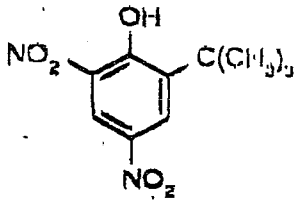
P.10

Import statistics (kg. a.i).								Banned and restricted situation in other countries	Remarks
1982	1983	1984	1985	1986	1987	1988	1989-1998		
-	-	-	-	-	-	-	No import	1. Belize Binoterb 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 1985) 2. The United Kingdom Revoke all agricultural uses because of the evidences showed to be carcinogenic and fetalogenic (since 1988) 3. Hungary The product has been withdrawn because it has been substituted by other products which are more effective and safer (since 1979)	

dinoterb

Herbicide

dinitrophenol



NOMENCLATURE

dinoterb

Common name dinoterb (BSI, E-ISO); dinoterbe ((m) 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. 215-813-8 Development codes LS63 133 (Rhône-Poulenc); P 1100 (Murphy)

dinoterb-ammonium
CAS RN *[6365-83-9]*

dinoterb acetate
CAS RN *[3204-27-1]*

PHYSICAL CHEMISTRY

dinoterb

Mol. wt. 240.2 M.f. $C_{10}H_{12}N_2O_5$ 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 °C. Stable at least 14 d at pH 5–9 (22 °C).

dinoterb-ammonium
Mol. wt. 257.2 M.f. $C_{10}H_{15}N_3O_5$

dinoterb-diolamine
Mol. wt. 345.4 M.f. $C_{14}H_{23}N_3O_7$ Solubility in water 32.0 g/l.

dinoterb acetate
Mol. wt. 282.3 M.f. $C_{12}H_{14}N_2O_6$

COMMERCIALISATION

History Herbicide reported by G. A. Emery et al. (*Proc. Conf. EWRC/COLUMA, 2nd*, 1965, p. 41 for acetate) and by P. Poignant & P. Crisinel (*C. R. Journ. Etud. Herbic. Conf. COLUMA, 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 *(dinoterb +)* isoproturon; mecoprop. Selected tradenames 'Herbagil' (Rhône-Poulenc)

ANALYSIS

Product analysis by glc of a derivative (*CIPAC Handbook*, 1983, 1B, 1797). Residues by glc, details available from Rhône-Poulenc Agrochimie.

MAMMALIAN TOXICOLOGY

dinoterb

Oral Acute oral LD_{50} for rats 62, mice 25, rabbits 28 mg/kg. Skin and eye Acute percutaneous LD_{50} for guinea pigs 150 mg/kg. NOEL (2 y) for rats 0.375 mg/kg diet. Toxicity class WHO (a.i.) Ib EC risk (R61): T (also R24/25): Xi (R36); (R44); (salts and esters are (R61)); T (also R23/24/25)

ECOTOXICOLOGY

dinoterb

Fish LC_{50} (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.

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CAS Registry Number: 1420-07-1

EPA CHEMICAL PROFILE

Date: October 31, 1985
Revision: November 30, 1987

CHEMICAL IDENTITY -- DINOTERB

CAS Registry Number: 1420-07-1

Synonyms: 2,4-Dinitro-6-tert-Butylphenol; 2-(1,1-Dimethylethyl)-4,6-Dinitrophenol; 2-tert-Butyl-4,6-Dinitrophenol; Dinoterbe; DNTBP; Herbogil; Phenol, 2-(1,1-Dimethylethyl)-4,6-Dinitro-; Phenol, 2-tert-Butyl-4,6-Dinitro-; Phenol, o-t-Butyl-4,6-Dinitro-; Shirpan Forte; Vexaline Creme

Chemical Formula: C10H12N2O5

Molecular Weight: 240.24

SECTION I -- REGULATORY INFORMATION

CERCLA (SARA) 1986:

Toxicity Value Used for Listing Under Section 302: LD50 oral (mouse) 25 mg/kg (*NIOSH/RTECS 1985)

TPQ: 500/10,000 (pounds)

RQ: 1 (pounds)
(statutory, for notification under SARA Section 304(a)(2))

Section 313 Listed (Yes or No): No

SECTION II -- PHYSICAL/CHEMICAL CHARACTERISTICS

Physical State: Solid

Boiling Point: Not Found

Specific Gravity (H2O=1): Not Found

Vapor Pressure (mmHg): Not Found

Melting Point: 259F, 126C (*Worthing 1979)

Vapor Density (AIR=1): Not Found

Evaporation Rate (Butyl acetate=1): Not Found

Solubility in Water: Practically insoluble (*Worthing 1979).

Appearance and Odor: Yellow solid (*Worthing 1979).

SECTION III -- HEALTH HAZARD DATA

OSHA PEL: Not Found

ACGIH TLV: Not Found

IDLH: Not Found

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Other Limits Recommended: Not Found

Routes of Entry: Inhalation: Yes (Non-Specific -- Dinitro-o-Cresol) (ACGIH 1980, p. 152-153)
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 29 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
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 container from fire area if possible (DOT 1984, Guide 53).

Special Fire Fighting Procedures: (Non-Specific -- Dinitro-o-cresol) Isolate hazard area, stay upwind, and keep out of low areas. Wear self-contained breathing apparatus and full protective clothing (DOT 1984, Guide 53).

Unusual Fire and Explosion Hazards: When heated to decomposition it emits toxic nitrogen oxide fumes (Sax 1984, 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 1984, 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 (Farm Chemicals Handbook 1984, p. C82) and a rodenticide (*Tsuruga and Kato 1974).

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

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. Dike 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 1975 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) (Mayes 1982, p. 169).

Emergency and First Aid Procedures: (Non-Specific -- Dinitro-o-Cresol) Move victim to fresh air; call emergency medical care. Remove and isolate contaminated shoes 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).