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of the United Nations**

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**Rotterdam Convention on the Prior Informed
Consent Procedure for Certain Hazardous
Chemicals and Pesticides in International Trade
Chemical Review Committee**

Second meeting

Geneva, 13–17 February 2006

Item 5 (b) of the provisional agenda*

**Listing of chemicals in Annex III of the Rotterdam Convention:
Review of notifications of final regulatory action to ban
or severely restricted a chemical: Dibromochloropropane (DBCP)**

Dibromochloropropane (DBCP)

Note by the Secretariat

1. Under article 5 of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, when the Secretariat has received at least one notification from each of two prior informed consent (PIC) regions that contain the information required in Annex I to the Convention, it shall forward the notifications and accompanying documentation to the members of the Chemical Review Committee. The Committee shall review the documentation provided in such notifications and, in accordance with the criteria set out in Annex II, recommend to the Conference of the Parties whether the chemical in question should be included in Annex III and a decision guidance document drafted.

2. The Secretariat has received two notifications from two PIC regions relating to DBCP which meet the information requirements of Annex I (Asia – Thailand and North America – Canada). Summaries of those notifications were included in PIC Circular XIV of December 2001 and PIC Circular XXII of December 2005 respectively. The notifications as they were received from the notifying countries are annexed to the present note.

3. The supporting documentation provided by Canada and Thailand, where available, may be found in documents UNEP/FAO/RC/CRC.2/13/Add.1 and Add.2 respectively.

* UNEP/FAO/RC/CRC.2/1.

Annex



**FORM
FOR NOTIFICATION OF FINAL REGULATORY ACTION
TO BAN OR SEVERELY RESTRICT A CHEMICAL**

IMPORTANT: See instructions before filling in the form

COUNTRY: CANADA

PART I: PROPERTIES, IDENTIFICATION AND USES

1. IDENTITY OF CHEMICAL		
1.1	Common name	DBCP
1.2	Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists	1-chloro-2,3-dibromopropane (IUPAC)
1.3	Trade names and names of preparations	Amine Brush Killer Fumazone (a Soil Fumigant) Shell Nemagon 17.3% Granules Barn Spray Emulsifiable Concentrate Fumazone 70E Soil Fumigant Bramco Nemagon 10.3-E Soil Fumigant for Nematode Control Nemagon 25 Granular Soil Fumigant (Control of Nematodes) Nemagon 25% Granules Soil Fumigant Nemagon 130 Emulsifiable Concentrate Soil Fumigant Nemagon Emulsifiable Insecticide 25% Nemagon Granular Insecticide
1.4	Code numbers	
1.4.1	CAS number	96-12-8
1.4.2	Harmonized System customs code	Not Applicable/Available
1.4.3	Other numbers (specify the numbering system)	RTECS #: TX8750000 EINECS/ELINCS #: 202-479-3

PLEASE RETURN THE COMPLETED FORM TO:

Secretariat for the Rotterdam Convention Plant Protection Service Plant Production and Protection Division, FAO Viale delle Terme di Caracalla 00100 Rome, Italy Tel: (+39 06) 5705 3441 Fax: (+39 06) 5705 6347 E-mail: pic@fao.org	OR	Secretariat for the Rotterdam Convention UNEP Chemicals 11-13, Chemin des Anémones CH – 1219 Châtelaine, Geneva, Switzerland Tel: (+41 22) 917 8183 Fax: (+41 22) 797 3460 E-mail: pic@unep.ch
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1.5 Indication regarding previous notification on this chemical, if any	
1.5.1	<input type="checkbox"/> This is a first time notification of final regulatory action on this chemical.
1.5.2	<input type="checkbox"/> This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____
	<input checked="" type="checkbox"/> This notification replaces all previously submitted notifications on this chemical.
Date of issue of the previous notification: _____ February 9, 1996 _____	

1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	Hazard class
WHO	O-668 (obsolete)
IARC	2B - possibly carcinogenic to humans
Other classification systems	Hazard class
EU	Carc.Cat.2;Muta.Cat.2;Repr.Cat.1;T;Xn;R:52-53

1.7 Use or uses of the chemical	
1.7.1	<input checked="" type="checkbox"/> Pesticide
	Describe the uses of the chemical as a pesticide in your country: _____
	Historical uses include: - use in combination with 2,4,5-T: brush killer - as a soil fumigant for control of nematodes - as an insecticide - use in combination with diazinon: insecticide for use in barns
1.7.2	<input type="checkbox"/> Industrial
	Describe the industrial uses of the chemical in your country: _____

1.8 Properties	
1.8.1	Description of physico-chemical properties of the chemical
Physical state	Amber to dark brown liquid
Odour	Pungent, sharp smell; threshold 96.5 to 289.5 µg/m ³
Molecular weight	236.36
log K _{ow} /K _{oc}	2.43 to 2.96/40 to 149
BP/MP	164.5 to 196 °C/5 to 6 °C
Flash point	76.6 °C (open cup)
Vapour density	2.09 at 14 °C (air = 1)
Specific gravity	2.08 at 20/20 °C (water = 1)
Vapour pressure	0.8 mm Hg at 21 °C; 0.58 mm Hg at 20 °C
Solubility	1,230 mg/L water at 20 °C, miscible in aliphatic and aromatic hydrocarbons, oils, dichloropropane, isopropyl alcohol, and acetone
Henry's Law Constant	1.47×10 ⁻⁴ atm·m ³ /mole
REF: CHEMINFO, Canadian Centre for Occupational Health and Safety. 2000. CD library.	

1.8.2 Description of toxicological properties of the chemical

Carcinogenicity was indicated by preliminary feeding studies.

Reproductive effects include suspected sterility of industrial workers exposed to chemical

The following toxicity and screening values have been reported:

<u>Study Type</u>	<u>Value</u>
Rabbit (male) oral LD ₅₀ :	100 mg/kg
Mouse (female) oral LD ₅₀ :	260 mg/kg
Rat (male) oral LD ₅₀ :	170 mg/kg
Guinea pig (male) oral LD ₅₀ :	210 mg/kg
Rabbit (albino) dermal LD ₅₀ :	1,400 mg/kg
Mouse percutaneous LD ₅₀ :	123 mg/kg
Rat (Long-Evans) inhalation LC ₅₀ :	1,480 mg/m ³ /hr

<u>Screening Benchmarks</u>	<u>Value</u>
California EPA reference exposure level:	0.2 □g/m ³
U.S. EPA reference concentration	0.2 □g/m ³
California EPA inhalation cancer potency factor:	0.002 (□g/m ³) ⁻¹
California EPA oral cancer potency factor:	7 (mg/kg/day) ⁻¹

REF: CHEMINFO, Canadian Centre for Occupational Health and Safety. 2000. CD library.
Letter dated September 6, 1977 from Health and Welfare Canada to Agriculture Canada

1.8.3 Description of ecotoxicological properties of the chemical

If released to the atmosphere, DBCP will exist solely in the vapour phase. The dominant chemical loss process of DBCP in the air is by reaction with the hydroxyl radical forming 1,2-dibromopropanol, chlorobromopropanol, and 1-bromo-3-chloro-2-propane. The calculated half-life and lifetime of DBCP in the air are 23 to 37 days and 33 days, respectively, due to reaction with the hydroxyl radical. Most DBCP that enters into the surface water evaporates into the air within several days or a week. DBCP will slowly hydrolyze in water with a half-life of 38 years in surface water and 141 years in groundwater of neutral pH. Volatilization half-lives in a model river and a model lake were 14 hours and 9 days, respectively. Photodegradation and biodegradation in water are not significant transformation processes. DBCP does not adsorb to sediment. Some DBCP in soil will evaporate into the air or leach, while small amounts may stay in the soil for several years. Hydrolysis is significant in alkaline soil, but not in neutral or acidic soils. Biodegradation is possible, but will be slow relative to volatilization and leaching. Bioaccumulation is not expected to occur. Measured BCFs in carp range from 3.6 to 19.

The following toxicity values have been reported:

<u>Study Type</u>	<u>Value</u>
Mallard duck oral LD ₅₀ :	66.8 mg/kg
Ring-necked pheasant oral LD ₅₀ :	156 mg/kg

REF: CHEMINFO, Canadian Centre for Occupational Health and Safety. 2000. CD library.

PART II: FINAL REGULATORY ACTION

2. FINAL REGULATORY ACTION	
2.1	The chemical is: <input checked="" type="checkbox"/> banned OR <input type="checkbox"/> severely restricted
2.2	Information specific to the final regulatory action
2.2.1	Summary of the final regulatory action Registration suspended in 1977; no pest control uses allowed as of December 31, 1978
2.2.2	Reference to the regulatory document Not available
2.2.3	Date of entry into force of the final regulatory action January 1, 1978

2.3	Was the final regulatory action based on a risk or hazard evaluation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	If yes, give information on such evaluation
	Reference to the relevant documentation

2.4	Reasons for the final regulatory action
2.4.1	Is the reason for the final regulatory action relevant to the human health? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers <ul style="list-style-type: none"> • suspected carcinogenicity as a result of findings in preliminary feeding study • suspected sterility in industrial workers as a result of exposure <p>DBCP is a moderate central nervous system depressant and an eye, skin, and respiratory tract irritant. Acute overexposure to DBCP in humans by inhalation may cause central nervous system effects, with symptoms including drowsiness, narcosis, headaches, nausea, lightheadedness, weakness, and pulmonary congestion. Chronic inhalation exposure has been reported to cause kidney and liver effects in rats and mice. Chronic occupational exposure to DBCP caused decreased sperm counts in men, as well as more female than male children and infertility; however, no association between paternal exposure and birth defects, prematurity, mortality, or spontaneous abortions was noted. Testicular effects and decreased sperm count were observed in rabbits chronically exposed to DBCP by inhalation. No human data are available to evaluate carcinogenicity of DBCP to humans; however, rats and mice exposed by inhalation developed nasal tumours. DBCP is considered a probable human carcinogen by the U.S. EPA and a possible human carcinogen by IARC.</p>
	Reference to the relevant documentation letter of September 6, 1977 from Health and Welfare Canada to Agriculture Canada CHEMINFO, Canadian Centre for Occupational Health and Safety. 2000. CD library.
	Expected effect of the final regulatory action Chemical no longer registered for pest control use in Canada

2.4.2	Is the reason for the final regulatory action relevant to the environment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	If yes, give summary of the known hazards and risks to the environment		
	Reference to the relevant documentation		
	Expected effect of the final regulatory action		

2.5 Category or categories where the final regulatory action has been taken			
2.5.1	Final regulatory action has been taken for the chemical category	<input type="checkbox"/> Industrial	
	Use or uses prohibited by the final regulatory action		
	Use or uses that remain allowed		

2.5.2	Final regulatory action has been taken for the chemical category	<input checked="" type="checkbox"/> Pesticide	
	Formulation(s) and use or uses prohibited by the final regulatory action All formulations prohibited from import, sale or use.		
	Formulation(s) and use or uses that remain allowed None		

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.		
	Quantity per year (MT)	Year
Produced	0	1999
Imported	0	1999
Exported	0	1999
Used	0	1999

2.6 Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions	
Chemical considered obsolete by WHO, therefore regulatory action unlikely to have any impact	

2.7 Other relevant information that may cover:	
2.7.1	Assessment of socio-economic effects of the final regulatory action None
	2.7.2 Information on alternatives and their relative risks other chemicals registered for use as a soil fumigant to control nematodes include: metam 1,3-dichloropropene chloropicrin dazomet methyl isothiocyanate

2.7.3	Relevant additional information
	None

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	Pest Management Regulatory Agency, Health Canada
Address	2720 Riverside Drive Ottawa, Ontario K1A 0K9 Canada
Telephone	+1 613-736-3660
Telefax	+1 613-736-3659
E-mail address	Trish_MacQuarrie@hc-sc.gc.ca
Designated National Authority	
Institution	Pest Management Regulatory Agency, Health Canada
Address	2720 Riverside Drive Ottawa, Ontario K1A 0K9 Canada
Name of person in charge	Trish MacQuarrie
Position of person in charge	Director, Alternative Strategies and Regulatory Affairs Division
Telephone	+1 613-736-3660
Telefax	+1 613-736-3659
E-mail address	Trish_MacQuarrie@hc-sc.gc.ca

Date, signature of DNA and official seal: _____





FORM FOR NOTIFICATION OF FINAL REGULATORY ACTION TO BAN OR SEVERELY RESTRICT A CHEMICAL

IMPORTANT: See instructions before filling in the form

COUNTRY: Thailand

PART I : PROPERTIES, IDENTIFICATION AND USES

1. IDENTITY OF CHEMICAL		
1.1	Common name	DBCP
1.2	Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists	(1,2-dibromo-3-chloropropane)
1.3	Trade names and names of Preparations	Nemagon, Fumazone
1.4	Code numbers	
1.4.1	CAS number	CAS RN [96-12-8]
1.4.2	Harmonized System customs code	
1.4.3	Other numbers (specify the numbering system)	

1.5	Indication regarding previous notification on this chemical, if any	
1.5.1	<input checked="" type="checkbox"/>	This is a first time notification of final regulatory action on this chemical
1.5.2	<input type="checkbox"/>	This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____
	<input type="checkbox"/>	This notification replaces all previously submitted notifications on this chemical.
	Date of issue of the previous notification: _____	

PLEASE RETURN THE COMPLETED FORM TO:

Interim Secretariat for the Rotterdam Convention
Plant Protection Service
Plant Production and Protection Division, FAO
Viale delle Terme di Caracalla
00100 Rome, Italy

OR

Interim Secretariat for the Rotterdam Convention
UNEP Chemicals

11 - 13, Chemin des Anémones
CH - 1219 Châtelaine, Geneva, Switzerland

Tel: (+39 06) 5705 3441
Fax: (+39 06) 5705 6347
E-mail: pic@fao.org

Pesticide Manual 6 (p. 164)

Tel: (+4122) 917 8183
Fax: (+4122) 797 3460
E-mail: pic@unep.ch

1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	Hazard class
WHO (Technical Product)	Class III
Other classification systems	Hazard class

1.7 Use or uses of the chemical	
1.7.1	<input checked="" type="checkbox"/> Pesticide
	Describe the uses of the chemical as a pesticide in your country: Nematicide . This pesticide has never been imported for use in Thailand.
1.7.2	<input type="checkbox"/> Industrial
	Describe the industrial uses of the chemical in your country:

1.8 Properties	
1.8.1	Description of physico-chemical properties of the chemical
	See the Pesticide Manual, 6 th edition, page 164.

1.8.2	Description of toxicological properties of the chemical
See the Pesticide Manual, 6 th edition, page 164.	
1.8.3	Description of ecotoxicological properties of the chemical
See the Pesticide Manual, 6 th edition, page 164.	

PART II: FINAL REGULATORY ACTION

2.	FINAL REGULATORY ACTION
2.1	The chemical is: <input checked="" type="checkbox"/> banned OR <input type="checkbox"/> severely restricted
2.2	Information specific to the final regulatory action
2.2.1	Summary of the final regulatory action
Banned for import, production, having in possession and use as an agricultural pesticide.	
2.2.2	Reference to the regulatory document
Notification of Ministry of Industry dated 20 March 2000, published in the Royal Gazette volume no. 117, section 43 Ng, dated 8 May 2000.	
2.2.3	Date of entry into force of the final regulatory action
9 May 2000.	

2.3	Was the final regulatory action based on a risk or hazard evaluation?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	If yes, give information on such evaluation		
	DBCP has been classified as a pesticide that has been associated with cancer in humans (Group 2B).		
	Reference to the relevant documentation		
	IARC Monographs, Volumes 1 - 58		

2.4	Reasons for the final- regulatory action		
2.4.1	Is the reason for the final regulatory action relevant to the human health?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers		
	Possible carcinogenic to humans.		
	Reference to the relevant documentation		
	IARC Monographs Volume 1 - 58		
	Expected effect of the final regulatory action		
	Reduce introduction of carcinogenic agent into the country.		

2.4.2	Is the reason for the final regulatory action relevant to the environment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	If yes, give summary of the known hazards and risks to the environment	
	Reference to the relevant documentation	
	Expected effect of the final regulatory action	

2.5	Category or categories where the final regulatory action has been taken	
2.5.1	Final regulatory action has been taken for the chemical category	<input type="checkbox"/> Industrial
	Use or uses prohibited by the final regulatory action	
	Use or uses that remain allowed	

2.5.2	Final regulatory action has been taken for the chemical category	<input checked="" type="checkbox"/> Pesticide		
	<table border="1"> <tr> <td>Formulation(s) and use or uses prohibited by the final regulatory action</td> </tr> <tr> <td>All formulations and uses were prohibited by the final regulatory action.</td> </tr> </table>		Formulation(s) and use or uses prohibited by the final regulatory action	All formulations and uses were prohibited by the final regulatory action.
Formulation(s) and use or uses prohibited by the final regulatory action				
All formulations and uses were prohibited by the final regulatory action.				
	<table border="1"> <tr> <td>Formulation(s) and use or uses that remain allowed</td> </tr> <tr> <td>None</td> </tr> </table>		Formulation(s) and use or uses that remain allowed	None
Formulation(s) and use or uses that remain allowed				
None				

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.		
	Quantity per year (MT)	Year
Produced	-	-
Imported	-	-
Exported	-	-
Used	-	-

2.6	Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions


2.7 Other relevant information that may cover:	
2.7.1	Assessment of socio-economic effects of the final regulatory action

2.7.2	Information on alternatives and their relative risks	
2.7.3	Relevant additional information	

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	Department of Agriculture
Address	50 Phaholyothin Rd., Chatuchak, Bangkok 10900 Thailand.
Telephone	66-2-5790586
Telefax	66-2-5615024
E-mail address	anantad@doa.go.th
Designated National Authority	
Institution	Department of Agriculture
Address	50 Phaholyothin Rd., Chatuchak, Bangkok 10900 Thailand.
Name of person in charge	Dr. Ananta Dalodom
Position of person in charge	Director-General
Telephone	66 - 2 - 5790586
Telefax	66 - 2 - 5615024
E-mail address	anantad@doa.go.th

Date, signature of DNA and official seal: x


 Mr. Ananta Dalodom
 Director-General

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