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

First meeting

Geneva, 11–18 February 2005

Item 7 (m) of the provisional agenda*

**Inclusion of chemicals in Annex III of the Rotterdam Convention:
Review of notifications of final regulatory actions to ban
or severely restrict a chemical: Chrysotile asbestos**

Chrysotile asbestos: supporting documentation from Chile

Note by the secretariat

The secretariat has the honour to provide, in the annex to the present note, the supporting documentation received from Chile in support of its notification of final regulatory action on chrysotile asbestos. This documentation was considered by the interim Chemical Review Committee at its third session.

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

Annex

TECHNICAL REPORT FOR THE PROPOSED DECREE PROHIBITING THE USE OF ASBESTOS IN CERTAIN PRODUCTS

Background

In 1999, the Environmental Health Division - taking into account the known risk to workers' health of exposure to asbestos fibres, the promulgation in Chile of International Labour Organization (ILO) Convention 162, the concerns of former employees of companies which used to make products containing asbestos and have presented with asbestosis and mesotheliomas, the conclusions and proposals of the Ministry of Housing and Urban Affairs Committee studying the use of asbestos in construction - decided to form a technical group to formulate draft regulations on asbestos.

After compiling bibliographical sources and after technical discussions with asbestos cement panelling producers and studying the technical feasibility of replacing asbestos, the group concluded that the use of asbestos in construction materials must be prohibited and that its other uses must be severely restricted and subject to health authorization.

Health effects

All types of asbestos are hazardous to health to varying degrees depending on the form of exposure (it has been shown that the risk is from inhalation), the class of asbestos (blue asbestos is the most toxic), the size of the fibres, fibre concentration and interaction with other factors (tobacco smoking potentiates the effects).

Asbestos causes three diseases:

- Asbestosis: Asbestosis is a chronic, diffuse, interstitial pulmonary fibrosis whose seriousness varies with the duration and intensity of exposure. In its initial stages, the disease is asymptomatic; in advanced cases, however, the affected worker presents signs and symptoms of chronic respiratory insufficiency;
- Bronchopulmonary cancer: Lung cancer related to asbestos cannot be clinically differentiated from other forms of cancer of the lung. A higher incidence of adenocarcinoma has been recorded amongst workers exposed to asbestos;
- Mesothelioma: Mesothelioma is a malign tumour of the pleura or peritoneum associated exclusively with asbestos exposure. In both cases, the progress of the disease is rapid, with death usually occurring within a year of the first symptoms appearing.

Asbestos use in Chile

Chile is not a producer of asbestos, so it must be imported in order to manufacture construction materials and brake and clutch linings; other uses do exist, but the quantities used are smaller.

The construction products currently being manufactured in Chile are of the following types:

1. Asbestos cement pipes for drain and sewer pipes and water pipes and conduits for gases and other liquids. Asbestos content varies between 8 per cent and 20 per cent by weight;
2. Asbestos-cement sheeting, flat and corrugated, for roof and side cladding in dwellings. Contains between 8 per cent and 10 per cent asbestos;
3. Tiles for roof cladding, with characteristics similar to corrugated sheeting;

4. Preformed products such as water tanks, sanitation fittings, window-boxes, architectural sun-screens and so on. Asbestos content 10 per cent approx.

At-risk population

The foreign literature and analysis of domestic cases of asbestosis and mesothelioma indicate that those at greatest risk are workers who handle asbestos fibres for various uses.

In Chile, this means in particular those workers who have been exposed to fibres from the manufacture of construction materials.

No epidemiological precedents are known which show that there is a risk to the population from asbestos which is already included within a cement matrix in sheeting used in construction, given that the asbestos fibres are not easily released from the matrix. Nor is there any significant known risk from consuming water piped through asbestos cement piping.

Nevertheless, people who cut or trim such sheeting using high-speed tools (circular saws or sanders) are exposed to risk from the asbestos-fibre-containing dust given off.

In the case of brake linings or parts which contain asbestos, not only the workers who handle asbestos during manufacture are exposed to high risk, so are brake repair workshop mechanics who blow off the dust produced by wear. It should be noted that health controls over this activity are very difficult to implement because of its very nature. In many cases, the workshops involved are small ones that do not have the occupational health means to control the risks.

Asbestos substitution

It has been proved that it is feasible to replace asbestos with other fibres in manufacturing fibre-cement materials and still obtain products of similar quality. In fact, the company producing the greatest quantity of panels and sheeting for dwellings in Chile has replaced asbestos with other fibres such as cellulose.

In the case of brake parts, asbestos-containing and asbestos-free brake pads and linings are in use and on sale.

Department of Occupational Health
Environmental Health Division

PROHIBITS THE USE OF ASBESTOS IN LISTED PRODUCTS

No. 656/

SANTIAGO, 12 September 2000

NOTING articles 2, 3, 82, 90 and Section X of the Health Code, approved by Decree with force of law No. 725 of 1967, of the Ministry of Health; Decree No. 1,907 of 1998, of the Ministry of External Relations, which promulgates Convention 162 of the International Labour Organization on the safe use of asbestos; and articles 1, 4 and 6 of Decree-Law No. 2,763 of 1979; in exercise of the powers conferred on me by articles 24 and 32 No. 8 of the Political Constitution of the Republic, and

CONSIDERING

That it is the duty of the Ministry of Health to protect public health and take the necessary steps to avoid exposing people to agents which may cause disease, pursuant to its obligation to safeguard the health of the population,

That asbestos is a mineral known to be harmful to health when inhaled as free asbestos fibres which may cause serious diseases such as asbestosis, primary cancer of the lung and mesotheliomas, which are all highly lethal diseases,

That the groups at greatest risk of contracting those diseases are workers who handle asbestos or work in environments contaminated with this type of fibre,

That International Labour Organization Convention 162, whose articles 10 and 11 recommend the total or partial prohibition of the use of asbestos where necessary to protect the health of workers and where technically possible, has been promulgated in Chile, and

That in our country the technology to replace asbestos in the manufacturing processes for fibre cement and other construction materials currently exists,

DECREE AS FOLLOWS:

ARTICLE 1

The production, importation, sale and use of crocidolite (blue asbestos) and any material or product containing it is prohibited in Chile.

ARTICLE 2

The production, importation, sale and use of construction materials containing any type of asbestos is prohibited also.

ARTICLE 3

The production, importation, sale and use of chrysotile, actinolite, amosite, anthophyllite, tremolite and any other type of asbestos or mixture thereof for any item, component or product that does not constitute a construction material is prohibited, with the exceptions set forth in article 5 below;

ARTICLE 4

For the purposes of implementing this regulation, the meanings of the following terms shall be:

- (a) Asbestos: The fibrous form of the silicate minerals belonging to the serpentine groups of metamorphic rocks, that is, chrysotile (white asbestos), and to the amphiboles, that is, actinolite, amosite (brown asbestos, cummingtonite-grunerite), anthophyllite, crocidolite (blue asbestos), tremolite, and any asbestos mineral not specified and any mixture containing one or more of those minerals;
- (b) Friable asbestos: Exposed and crumbling asbestos mineral in lagging or jacketing;
- (c) Asbestos fibres: Asbestos particles suspended in air and deposited asbestos particles which may become airborne.

ARTICLE 5

Without prejudice to the provisions of article 3 above, the Health Authority may authorize the use of asbestos in the manufacture of products or components that are not construction materials so long as the interested parties can prove that there is no technically or economically feasible substitute for it.

To obtain such authorization, the manufacturer shall provide technical reports which describe the characteristics of the component to be manufactured, the types of asbestos which will be used, the measures taken to control the risk to workers' health, the manner in which wastes generated by the industrial processes and dust-capture systems will be disposed of, and the technical justification for why another type of fibre cannot be substituted for asbestos.

To import such materials, the interested party must obtain prior authorization by submitting to the Health Authority details of the type and quantity of asbestos, the place and conditions in which it will be stored, the conditions in which it will be handled, the conditions and manner in which wastes will be disposed of and the safety measures to be taken to protect workers.

ARTICLE 6

The manufacture of the products or components and the importation of asbestos to which article 5 above refers may take place only if strict health and safety measures for the workplace are taken; in every case, such measures shall be stipulated and authorized expressly by the competent Health Service, which must verify that the risks to workers' health have been controlled.

ARTICLE 7

In the event that asbestos is held in stock to be marketed or for manufacturing products, in conformity with the norms set forth above the holder of the corresponding authorization shall inform the relevant Health Service on a biannual basis as to the quantities being moved into and out of stock, indicating the suppliers and consignees thereof.

ARTICLE 8

Storage of asbestos as a raw material shall be effected in such a manner as to ensure that asbestos fibres will not be dispersed into the working environment at levels above the maximum limits permitted by the regulations in force. Also, dust-capture systems must have capture efficiencies of at least 99 per cent of the total dust in areas where asbestos is handled.

ARTICLE 9

On demolition of buildings containing friable asbestos-fibre insulation with the resultant risk that asbestos dust may spread, the company responsible for demolition must have express authorization for the demolition work from the competent Health Service. Such authorization shall stipulate the measures which must be taken to protect the health of workers and the surrounding population. The same procedure shall be followed in the event that friable asbestos is found during the course of demolition which was not known to be present when the demolition work began.

ARTICLE 10

Enforcement of this regulation shall be the responsibility of the Chilean Health Services and, in the Metropolitan Region, of the Environmental Health Service.

Breaches of this regulation will be penalized in accordance with the Section X of the Health Code.

ARTICLE 11

This regulation shall enter into force 180 days after its publication in the Official Journal, on which date any other norm, resolution or provision which might run counter to or be incompatible with the contents of this Supreme Decree shall be considered repealed.

LET IT BE INSCRIBED, LET NOTE BE TAKEN AND LET IT BE PUBLISHED IN THE OFFICIAL JOURNAL

**RICARDO LAGOS ESCOBAR
PRESIDENT OF THE REPUBLIC**

**MICHÈLLE BACHELET JERIA
MINISTER OF HEALTH**