

# **SAFE AND RESPONSIBLE USE OF CHRYSOTILE ASBESTOS FROM POLICY AND LEGISLATIVE FRAMEWORK THE USA**

## **I. CHRYSOTILE MANAGEMENT AND CONTROL AGENCIES**

### **Governmental agencies**

*Environmental Protection Agency - EPA:* This is an agency of the US Federal Government, having its duty to promulgate legal regulations on the protection of human health and the environment as effectively as possible. The legal documentations show that EPA has its central role in protecting human health in general and workers in particular in the working conditions of asbestos.

EPA is an agency executing the standards on health and environment in the working conditions of toxic substances.

Besides the environment protection agency at the federal government, in the states, there are various agencies of the state governments executing the standards on environment, e.g. Department of Health and Senior Service of New Jersey or Department of Labor of New York City.

*US. Customs and Border Protection – CBP:* This agency is responsible for coordinating with EPA in management of import-export of hazardous chemicals, including asbestos.

*Occupational Safety & Health Administration – OSHA:* is an agency protecting rights of employees at their workplaces for purpose of minimizing, preventing the risks of unsafety for workers from working conditions and improving safety conditions to them in every trade. In respect of power, OSHA establishes standards on working safety conditions and gives warnings. OSHA also has power to handle the violations by the companies with their breach of working safety conditions during production of the asbestos-containing products.

*National Institute for Occupational Safety & Health – NIOSH:* This is an agency under the Center for Disasters Prevention and Control (under the *Department of Health and Human Services*) researching impacts on the health of workers in the working conditions of hazardous substances. The Institute has its role in supplying information, education and training.

*Inspection and control agencies:* Pursuant to Toxic Substance Control Act (TSCA), Section 11, any duly authorized administrators reserve their right to conduct inspection and control of implementing relevant obligations of those who are specified in TSCA.

### **Non-governmental organizations**

*Asbestos Disease Awareness Organization – Voice of the Victims:* This is the biggest association in the USA, established for preventing asbestos exposure, removal of asbestos-related diseases and protecting the rights of asbestos victims via education and enhancement of skills in community.

*Society of asbestos-containing products import and production companies:* For example, Union Carbide including 2,400 workers at 7 locations in the whole USA.

*Labor unions:* The labor unions have their vital role in protecting laborers' right, enhancing safe working conditions and maintaining fair treatment for those who might have exposed to the asbestos. There are now about 12 relevant labor unions, including the International Association of Heat and Frost Insulator and Allied Worker, International Brotherhood of Boilermakers, United Mine Workers of America<sup>12</sup>

## **II. POLICY FRAMEWORK**

In respect of exploitation, chrysotile exploitation has been prohibited since 2002 but the import activities and use of the chrysotile-containing products have continued. According to the U.S. Geological Survey, the United States imported and consumed about 820 metric tons of chrysotile asbestos in the first 7 months of 2010 and this figure was further increased in the following years.

In respect of import, the United States has mainly imported chrysotile from Canada to be mostly used in the US Army for manufacturing of fire-proof aircrafts, airplanes and weapons. It had been also used in construction of the trade towers before 1980. In addition, the roofing products also account for about 72% of the consumed chrysotile asbestos.

In the U.S.A and Canada, the movements against further exploitation, export and import of chrysotile have strongly taken place. The Asbestos Disease Awareness Organization – Voice of the Victims appealed the U.S President Obama to necessarily issue an order of banning import and use of the chrysotile in the United States. However, in order to establish their influence on the President's decisions, they need to do numerous activities such as pushing for a North American registry of exposure locations and people with past exposures, stronger measures to prevent exposure to asbestos, support for asbestos-producing communities and workers in transition to alternative industries and stopping any new production and export of asbestos. They called for the signatures to appeal the U.S President and the Canada Prime Minister for ending the assistance to the chrysotile exploitation industry and use, export and developing the safe alternative products (known as the North America Declaration on elimination of the chrysotile-related diseases)<sup>1</sup>.

However, the chrysotile-using manufacturers reserve their point of view that the use of chrysotile can be controlled and used safely. In 1930s, the scientific researches showed the relations between the exposure and the deadly diseases. Although the manufacturers knew this relation, they did not give warning to the workers and the public, so, the use of chrysotile in the construction industries and industrial products has continued.

In the U.S, there is no federal legal system for comprehensive amendment of this matter; instead, the matter will be subject to the power of the state authorities who have their own approaches in

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<sup>1</sup> <http://www.asbestosdiseaseawareness.org/archives/8523> accessed on 6 Sept 2015

settling the risks and claims. However, despite the federal or state-level amendments, it always faces with two issues, i.e. the public safety and the relevant economic matters. The evolution of this matter might commence in the early 20<sup>th</sup> century, and up to date, the use of chrysotile in the U.S has become more dominant than the rest of the world.

The existing laws are now facing with numerous criticisms on two major contents, i.e. the ban of chrysotile and compensation for the damaged people due to the chrysotile exposure. The federal legal system assures for those who raise claims may be compensated for the expenditures of illness, diseases and income. A system for expenditures was established. Black Lung Benefit Act established a benefit program for the mine workers. However, a similar program was not established for those who exposed to the chrysotile asbestos.

It is impossible to say the chrysotile asbestos is not prohibited in the U.S and also impossible to say that the chrysotile has been absolutely banned. The environment industry of this country has made its numerous efforts for many years to minimize the use of this mineral. In 1973, EPA banned spray-applied surfacing asbestos-containing material for fireproofing/insulating purposes. In 1975, EPA banned installation of asbestos pipe insulation and asbestos block insulation on facility components, such as boilers and hot water tanks, if the materials are either pre-formed (molded) and friable or wet-applied and friable after drying. In 1978, EPA banned spray-applied surfacing materials for purposes not already banned. In 1977, the Consumer Product Safety Commission (CPSC) banned the use of asbestos in artificial fireplace embers and wall patching compounds<sup>2</sup>.

In 1989, the EPA issued a final rule under Section 6 of Toxic Substances Control Act (TSCA) banning most asbestos-containing products. However, in 1991, this rule was vacated and remanded by the Fifth Circuit Court of Appeals. As a result, most of the original ban on the manufacture, importation, processing, or distribution in commerce for the majority of the asbestos-containing products originally covered in the 1989 final rule was overturned.

At present, the exploitation and use of asbestos products in the United States are finally specified in Toxic Substances Control Act 1976 (TSCA). The regulations of Consumer Product Safety Act (CPSA) and Clean Air Act (CAA) are also referred and applied to these products. Based on such regulations, a legal documentation system of the federal and state governments is also issued.

### **III. LEGISLATIVE FRAMEWORK ON CHRYSOTILE ASBESTOS IN CERTAIN FIELDS**

#### **Import and export**

Pursuant to the Toxic Substances Control Act, the import of toxic substances in general and chrysotile asbestos in particular must comply with numerous legal regulations, mainly specified in TSCA. If a substance imported to the United States fails to satisfy the conditions provided in TSCA, it shall not be certainly imported.

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<sup>2</sup> EPA: U.S. Federal Bans on Asbestos, <http://www2.epa.gov/asbestos/us-federal-bans-asbestos#regulatory> accessed on 6 Sept 2015

To import the asbestos into the United States, the importer shall obtain the Import Certification granted by the US. Customs and Border Protection – CBP<sup>3</sup>. The granting of import certification by CBP will be involved in and coordinated by IPA. Upon receipt of the application documents, CBP may issue a Positive Certification Statement or a Negative Certification Statement. In addition, if the asbestos-containing products are imported for the first time, they shall comply with a number of conditions applicable to the first-time imported toxic substances.

The asbestos export shall also comply with the regulations set forth in TSCA, in which before export, the exporter shall send a notice to EPA for its further informing to the importing country. Furthermore, the export shall satisfy certain conditions, e.g. emission into the air and environment<sup>38</sup>. Also, if the asbestos-containing products are imported for the first time, they shall comply with a number of conditions applicable to the first-time imported toxic substances and labeled “export” on the commodity.

### **Transport and storage**

Hazardous Materials Transportation Act 1975 set forth the rules of hazardous materials transportation, including the asbestos.

The US Department of Transportation, pursuant to the above act, mandates that asbestos be transported in rigid, leak-tight packaging like metal, plastic, or fiber drums, bags or non-rigid packaging in closed freight containers, vehicles, or rail cars, or in dust and sift-proof bags or non-rigid packaging enclosed in outer packaging or closed freight containers<sup>49</sup>.

For the chrysotile waste, transport vehicles from production to the disposal area shall comply with the requirements of special labeling and transportation.

### **Regulations on manufacturing of the chrysotile containing products**

At present, there are no chrysotile asbestos extraction operations in the USA, however, there remain numerous regulations on raw chrysotile processing. Most of raw asbestos materials are still imported into the USA and becomes material for several industries. Therefore, there are so many special requirements for production and processing. Companies using the chrysotile as input material must strictly comply with specific requirements, especially the treatment of the asbestos-containing wastes.

The Asbestos Information Act specifies that the companies must declare and clearly determine types of asbestos to be produced by requesting the producers to report their business output to EPA<sup>68</sup>.

In addition, EPA shall be responsible for receiving and handling the questions of the public on using the chrysotile and promptly settling at the regional-level. In case of national extent, it shall be referred to OECA, which is the Headquarter office of Enforcement and Compliance Assurance.

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<sup>3</sup> Section 12 Toxic Substance Control Act (TSCA)

In this regard, apart from the federal law, there remains the law of each state, for example in New Jersey State, the state government issued Asbestos Control and Licensing Act, under which, any companies related to asbestos production must obtain the license from the state government (signed by the Commissioner of Labor and Workforce Development Department) and individuals who want to work in these companies must also obtain the permits (issued by Department of Health and Senior Services). These licenses and permits are only valid for one year. After one year, the state agencies shall review the to-be-licensed subjects and then decide whether the license is further granted or not. Annually, the companies shall also submit to the competent agencies the reports on situations of production locations. During inspection, if any violations are found to exist by the state agencies or for the sake of the employees and the public, the permits which were granted to the companies and employees may be suspended.

### **Regulations on use of chrysotile-containing products**

At present, the asbestos is widely used in buildings such as schools and public buildings. To minimize the asbestos impact on the users' health, the

United States has issued a number of regulations to amend the use in question.

During the use of these buildings, EPA shall issue specific instructions to support the owners thereof in respect of the methods of maintaining operation of the buildings to mitigate the risks from asbestos, e.g. introducing a programme on operation, maintenance, training and improving skills, popularizing the exposure level as minimum as possible.

The Asbestos Hazard Emergency Response Act requires EPA issuing the regulations on asbestos-containing materials being used in schools and requests the local education facilities to examine their schools and make plans for replacing the existing materials to remove the dangerous risks from the chrysotile asbestos.

To deal with the above matter, the United States also provides financial assistance to enable the schools or public facilities to replace the asbestos-containing materials (*Asbestos School Hazard Abatement Reauthorization Act*). In addition, improving awareness and skills of people, pupils, students who are living in the buildings with use of the asbestos-containing materials is also taken into account, i.e. increasing the number of hours for skill training and expanding the scope of licensing to cover the asbestos-using projects in the public or commercial buildings outside the schools.

The demolition of the asbestos-using construction works is also strictly regulated. Before the demolition, the facility owner must inform the competent authority and the relevant people, e.g. workers, contractors, supervisors and managers must experience a training programme on the asbestos.

Families, children, and those who lives in the asbestos-containing buildings are also protected by the consumer protection law, especially in relation to the hazardous substance i.e. asbestos (*Consumer Product Safety Commission (CPSC)*).

In respect of new use, on 12 July 1989, EPA issued a rule banning most asbestos-containing products. However, in 1991, this rule was overturned by a judgment of the Fifth Circuit Court of

Appeals in New Orleans. As a result, only a few products are banned for use and this ban applies to the new use, which means that the USA does not encourage the new use of asbestos-containing materials.

### **Regulations on environment**

In 1970, under the Clean Air Act 1970, for the first time, the Congress determined the chrysotile as the toxic air pollutant. Then, this Act was amended and developed into the Environmental Protection Agency (EPA) regulations adjusting the use and trading of chrysotile. This Act was then the base for numerous regulations, e.g. Consumer Product Safety Act and Occupational Safety and Health Administration (OSHA) regulations. Although the chrysotile is still used in some specific products, identifying it as a pollutant is helpful for minimum use of it.

At present, the emission discharged into the ambient air as the asbestos in form of waste shall comply with the provisions of Clean Air Act, accordingly, EPA shall be responsible to protect and improve the national environment quality and ambient air, specifically, EPA shall set the national emission standards for the toxic pollutants, including the chrysotile asbestos.

In case, the asbestos waste is discharged into the water environment, the Safe Drinking Water Act sets the requirements of ensuring drinking water quality in the states and localities and the water suppliers must comply with these standards.

To prevent and remedy the consequences due to the discharge of asbestos into the environment, the Comprehensive Environmental Response, Compensation and Liability Act sets the duties of production companies in compensation and methods of response to the damages when discharging asbestos into the environment. In which, the Act empowers the Administrators in issuing regulations on the requirements of quality, even the quantity of the toxic chemical substances as may be necessary or as the risks of environmental impact are visible<sup>4</sup>. The Act also provides the duties of relevant persons and respective penalties if they fail to fulfill their duties on discharge of toxic substances into the environment.

The Asbestos National Emission Standards for Hazardous Air Pollutants – NESHAP sets the regulations on specific working conditions in relation to the asbestos in demolition and renovation of construction facilities and buildings. The production must not generate emission to the environment or if any, it shall comply with the air clearing sequences and other specific requirements of waste transportation.

The Resource Conservation and Recovery Act revising the hazardous solid waste treatment of the United States did not enforce the disposal of solid wastes containing asbestos under its provisions. Seemingly, the law-makers believe that asbestos is only harmful via airway. The solid asbestos-containing wastes which are not friable or free of dust-releasing are not considered as the hazardous wastes. The waste generating dust is treated under Clean Air Act (CAA).

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<sup>4</sup> 9062 Designation of additional hazardous substance and establishment of reportable released quantities, regulation, *Comprehensive Environmental Response, Compensation and Liability Act*

However, the above regulations have changes in California. The solid waste containing asbestos is considered hazardous if it is “friable” and contains from 1% of asbestos upwards. It is considered to be a "non-RCRA" or “California only”.<sup>5</sup>

### **Regulations on health and employees**

Pursuant to the provisions set forth in Section 6, Toxic Substances Control Act, EPA expanded the requirements of worker protection to the workers in asbestos industry of each state.

Additionally, the Occupational Safety and Health Administration – OSHA also promulgated Asbestos General Standard including the regulations on permissible exposure limit, operation monitoring, worker training, labeling, ambient air and asbestos wastes and promulgated the Asbestos Construction Standard with regulations on asbestos-containing work sites, maximum exposure limit to asbestos dust, awareness of workers, etc. This is considered as the most perfect working and production safety standard related to asbestos out of the standards within the scope of this research.

With respect to the permissible exposure limit, the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber/1ml of air in 8-hour working period<sup>6</sup> and the maximum exposure limit to the asbestos dust in a 30-minute interval shall not exceed 1 fiber/ml.

Concerning the awareness of the asbestos hazard, the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) specified that each production facility of chrysotile product has at least one representative who has been trained on use and working in the asbestos-containing environment.

OSHA regulated in Regulation 29CFR the compulsory warnings at the workplaces with asbestos:

**DANGER**

**ASBESTOS**

**MAY CAUSE CANCER**

**CAUSES DAMAGE TO LUNGS**

**AUTHORIZED PERSONNEL ONLY**

If it becomes necessary to wear respiratory protection and protective clothing, the following text line must be added:

**WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA**

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<sup>5</sup> California Environmental Protection Agency, Department of Toxic Substance Control – DTSC: Managing Asbestos Waste, Fact Sheet, December 2006, page1

<sup>6</sup> Asbestos General Standard – Specification of permissible exposure limits, engineering controls, worker training, labeling, respiratory protection pertain to handling asbestos in workplace (29 CFR 1910.1001)

Before 1 June 2016, the employers may use the warning signs with contents as it was before:

**DANGER**

**ASBESTOS**

**CANCER AND LUNG DISEASE**

**HAZARD**

**AUTHORIZED PERSONNEL ONLY**

Where necessary to wear respiratory protection and protective clothing, before 1 June 2016, the text line as before can be added:

**RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA**

For bags of tools, protective clothing, devices, waste, disposals, debris-containing asbestos, the following information must be written:

**DANGER**

**CONTAINS ASBESTOS FIBERS**

**MAY CAUSE CANCER**

**CAUSES DAMAGE TO LUNGS**

**DO NOT BREATHE DUST**

**AVOID CREATING DUST**

Before 1 June 2016, the employers may use the warning signs with contents as it was before for these items:

**DANGER**

**CONTAINS ASBESTOS FIBERS**

**AVOID CREATING DUST**

**CANCER AND LUNG DISEASE HAZARD**

The medical examination for the workers is compulsory for once/year. The more frequencies shall be decided by the experts (Part 1910 Occupational Safety and Health Standards, Section IV, Standards 29CRF).