cc: TPN

Chevron

Chevron Research Company

February 14, 1980

Docket No. OTS 61005
Advance Notice of Proposed
Rulemaking Under the Toxic
Substances Control Act
Commercial and Industrial
Use of Asbestos Fibers

Mrs. Joni T. Repasch
Record Clerk
Office of Toxic Substances (TS793)
U.S. Environmental Protection Agency
401 M Street Southwest
Washington, D.C. 20460

Dear Mrs. Repasch:

EPA (Federal Register Vol 44, No. 202, pp 60061-60068, dated Wednesday, October 17, 1979) asks for comments and information relevant to the proposed regulatory decision on the commercial and industrial use of asbestos fibers.

Among the four Regulatory Control Options proposed by EPA, we prefer the first one. This would examine each product category and prohibit specific products based on the evidence. We believe Control Options 2 and 3 will create supply shortages and higher prices. Control Option 4 takes the approach that everybody is guilty until proven otherwise.

We are addressing our comments to the use of asbestos fibers that are encapsulated in resinous and polymeric binders and coatings in general. We offer the following comments for your consideration:

Asphalt- and polymer-based industrial, maintenance, and recreational surface coatings containing asbestos provide significant protection at reasonable cost. We do not know of any satisfactory economic replacement for asbestos in these coatings.

Worker exposure to asbestos fibers during coating manufacture is already controlled by EPA and CAL-OSHA regulations. After manufacture, these coatings are nonfriable and do not release free asbestos fibers during application and service life. This has been recognized by the EPA and CAL-OSHA in previous regulations. We believe that no additional regulations of nonfriable coatings is necessary.

C.C. B.J Pigg
J.C.M

PLAINTIFF'S EXHIBIT

UC-4547

Asphalt-based industrial and maintenance coatings are typical examples of these products. These products serve a vital role in protecting and waterproofing roofs, walls of buildings, and equipment. Aluminum pigmented coatings are also used to protect the roofing membrane and to reduce energy requirements for heating and air conditioning.

General compositions include:

1. Asphalt or organic polymer as the binder or resin.

2. Organic solvent or water as the diluent.

3. Fillers and Pigments: Asbestos, mica, slate flour, limestone dust, colored pigments, aluminum pigment, etc.

Our detailed comments follow the numerical sequence of the questions as shown on pages 60066-60068.

1. Definition of Several Key Terms

1.1 Asbestos

Generic term for fibrous silicate-type minerals, generally meaning chrysotile. However, for us the term asbestos mostly means the short asbestos fibers used in coatings, resins, patching compounds, undercoatings, etc. These are usually classified as Grades 7R, High Purity Open, Regular Coating, or Resin Grades.

1.2 Encapsulated Fiber

The fibers are dispersed in an asphalt resin or latex or any other resinous material. The fibers are then encapsulated in the asphalt or other polymeric material after the solvent evaporates on application.

1.3 Locked Fibers

We are not familiar with this term.

1.4 Easily Released Fiber

Fibers not bound together by cement or resinous material may become airborne with some air movement. Loose insulation used previously is one of the examples.

1.5 Friable Material

Material which crumbles easily and turns to dust.

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Product Category

h. Paints, Coatings, Sealants

Chevron U.S.A. manufactures and markets a number of coatings containing asbestos at several locations. Diluents include both solvent and water. The asbestos in all these coatings is encapsulated, and the coatings are nonfriable. Coating types include:

Fibrated Aluminum Coating
Asbestos Roof Coating
Fibrated Asphalt Emulsions
Plastic Cement
Undercoating
Coatings for Recreational Surfaces
Resurfacers

Our manufacturing operation, loading, mixing, and filling, complies with CAL-OSHA regulation, Section 5208, Title 8, General Industry Safety Orders, Asbestos Regulation and Federal OSHA Regulation Section No. 1910.1001 Asbestos.

3. Asbestos-Containing Products Listed in Appendix I

Our products are covered under the following items:

Roofing Materials
Aluminum Roof Coatings
Roof Patch
Roof Preservative
Undercoating (Metal Deadener)
Latex Coatings
Asphalt Emulsion Coatings

a. Asbestos Content

Eleven of our surface coatings contain asbestos fibers. The asbestos content ranges from 2% to 18% by weight.

b. Purpose of the Asbestos in the Coating

The asbestos serves the following purpose in the coatings:

Film Reinforcement (Integrity)
Sag Resistance
Film Build
Improved Weathering
Improved Fire Resistance

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The coatings use short fibers, generally classified as 7R or HPO (High Purity Open) and Regular Grade 210.

c. Production and Sales of Asbestos-Containing Products in 1978

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The 3.5 MM gallons of coatings manufactured in 1978 used 2.3 MM pounds of asbestos.

d. Value of the Products and the Cost of Asbestos

The value of these asbestos-containing products sold in 1978: about $5.7 MM.

The value of the asbestos used: about $275,000 (12 cents/lb)

e. Exposure During Manufacturing and Product Use

Once the asbestos is incorporated in the liquid coatings, there is no danger of releasing fiber from the coating during filling, storage, transportation, or application.

The coatings can be applied by spray, brush, or roller. In most commercial applications, airless spray equipment is used because of efficiency and economy. Since the asbestos fibers are completely encapsulated by asphalt or resin, no emission of free asbestos occurs during spraying. Due to air currents, some droplets may become airborne during spraying. But even in this form the asbestos does not exceed the one fiber/cc OSHA limit (briefing paper by Union Carbide for November 8, 1978, CAL-OSHA hearing).

f. Asbestos Discharge to Water

There is no asbestos discharge to water associated with manufacturing. The only way asbestos fiber might get into water is through erosion of the weathered roof coating. We believe that erosion loss of these coatings is negligible. We based this estimate on the fact that these coatings show little erosion throughout their expected 10-20 year life.

g. Asbestos Containing Waste from Manufacturing

The waste generated during manufacturing of the coatings includes the empty asbestos bags, the disposable protective clothing, and the dust recovered in the baghouse. These are collected in sealed containers and disposed of in an approved manner.

h. Product Life and Final Disposal

The life expectancy of the roof coating products is 10 to 20 years. Usually they are overcoated before the product fails by weathering. When a building is reroofed or demolished, the usual disposal is landfill. The only results for fiber exposure during demolition of which we are aware are from Union Carbide's briefing paper for the CAL-OSHA hearings on Possible Changes in the Health and Safety Code Section 25910 on November 8, 1978, and April 26, 1979.

4. Industry Structure

a. Current Trends

Due to various regulations, the use of heated asphalt for roofing is declining. At the same time, the use of cold-applied asphalt- and polymer-based industrial and maintenance coatings cut back with hydrocarbon solvent or water is increasing both in new construction and repair of existing structures. The demand for recreational coatings is also increasing with the expanding recreational facilities.

b. Market Stability

There has been increased demand for our coating in roofing, waterproofing, maintenance, and recreational fields over the last few years.

c. Industries Most Likely to be Affected by the Regulation

The housing and building industry are the most likely industry to be affected by another asbestos regulation.

5. Asbestos Substitutes

a. Available Substitutes

The following asbestos substitutes are being currently offered:

Polyethylene Fibers
Polypropylene Fibers
Cellulose Fibers
Carbon Fibers
Ceramic Fibers
Thickeners (Alone or in Combination)

b. Substitute Products

Elastomeric Roof Coatings
Single-Ply Elastomeric Roof System
Grease-Type Undercoating

c. Performance Characteristics

The asbestos substitutes do not:

Provide adequate sag resistance and film build
Provide good thixotropy
Reinforce the film former
Aid fire resistance

Substitute coatings are:

More expensive
Cannot be applied by homeowner
No good for patching

d. Unpublished Exposure Data on Substitutes

We have not seen any exposure data on the substitutes.

e. Price Differentials

Asbestos fibers for coatings are available for 10-15 cents/lb, which is less expensive than any of the substitutes.

Asphalt-based asbestos roof coating and recreational coatings are currently available for about $1.20/gal.-$4.20/gal. The elastomeric coatings cost about $20/gal. and up.

f. Time Required to Convert to Alternatives

If a good quality asbestos substitute were to become available, it would take at least a year to test and evaluate the coating for stability and performance. However, before general use could begin a few years of on-site weathering exposure is needed.

g. Extent and Cost of Change to Alternatives

Until replacement material is known, we will not know if substitutes can be made in existing manufacturing facilities.

h. Possible Effect of the Asbestos Regulation on New Products

We will have inferior coatings at a higher price.

6. Products which do not present health hazards.

We believe the nonfriable coatings in which the asbestos is encapsulated in asphalt, resin, or polymeric binder do not constitute health hazards. These coatings do not release the fibers either during application or service life.

7. Asbestos-containing products which could be considered essential because of their benefits or lack of reasonable substitutes.

Nonfriable surface coatings should be considered as essential because: (a) there is no reasonable substitute existing at this time either for the asbestos in the product or for the product itself; (b) they provide significant benefits in protecting society and structures from weather at reasonable cost.

8. State of the Art for Asbestos Identification

We cannot comment on the methods of identification and quantification of asbestos. We only collect the samples and an accredited industrial hygiene laboratory (not associated with Chevron) analyzes them for asbestos.

9. Handling of Confidential Data by EPA

We believe that you should use the guidelines in Section 14 of the Toxic Substances Control Act for protection of confidentiality of information.

We hope these comments will be helpful in arriving at appropriate regulatory action.

Very truly yours,

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cc: Mr. Harrison B. Rhodes

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