UNION CARBIDE

July 15, 1974

Mr. A. Libra, Counsel
California Manufacturers Association
P. O. Box 1138
Sacramento, California 95805

Dear Mr. Libra:

I have been discussing with Mr. Norman J. Hearn, Regional Vice President of Union Carbide, two items of proposed legislation which have been introduced in California during 1974, specifically Bills A-2991 and S-2419, both of which relate to use of asbestos-containing materials. Union Carbide, with asbestos mining and milling operations in California and product sales throughout the world, is intensely interested in all legislative activities which relate to this mineral.

After reviewing the content of the two proposed bills, we find that we have no specific interest in A-2991 but are strongly opposed to S-2419. I would request that the California Manufacturers Association express our opposition to this bill as is appropriate in their activities for the following reasons:

> The spraying of asbestos was carefully considered by the Federal Government during the proposed rule making on National Emission Standards for Hazardous Air Pollutants. The substance of their deliberations, quoted directly from the Federal Register, are attached to this letter. The final Federal Regulation (see Attachment 2) provides that materials containing less than 1% asbestos may be sprayed under certain prescribed conditions. It is our position that the Federal EPA Regulations embodied in the National Emission Standard for Asbestos (FR Volume 38 No. 66, Friday, April 6, 1973,) coupled with the Federal OSHA Regulations and the asbestos regulations published by the State of California (General Industry Safety Orders Section 5208 Asbestos July, 1973) provide more than adequate protection, both for the individual worker in his work place and for the general public.

In light of the existing legislation, implementation of S-2419 is unnecessary and for the reasons cited in Attachment 1 unduly punitive. I trust that you will keep Mr. Hearn and me advised on the progress of this bill in the California Legislature.

Very truly yours,

W. C. Thurber
Product Manager - Asbestos

WCT:es
Enclosures

cc: Mr. N. J. Hearn, R. H. Mereness

Attachment 1

materials, demolition operations, and the surfacing of roadways with asbestos tailings. The Administrator will continue to investigate other existing and new sources of asbestos emission and if any of them are found to be major sources, the standard will be revised to cover them.

As applied to mines, the proposed standard would have limited the emissions from drilling operations and prohibited visible emissions of particulate matter from mine roads surfaced with asbestos tailings. The Bureau of Mines has prescribed health and safety regulations (30 CFR 55.5) for the purpose of protecting life, the promotion of health and safety, and the prevention of accidents in open pit metal and nonmetallic mines. As related to asbestos mines, these regulations prohibit persons working in a mine from being exposed to asbestos concentrations which exceed the threshold limit value adopted by the American Conference of Governmental Industrial Hygienists. The regulations specify that respirators shall not be used to prevent persons from being exposed to asbestos where environmental measures are available. For drilling operations, the regulations require that the holes be collared and drilled wet. The regulations recommend that haulage roads, rock transfer points, crushers, and other points where dust (asbestos) is produced sufficient to cause a health or safety hazard be wetted down as often as necessary unless the dust is controlled adequately by other means. In the judgment of the Administrator, implementation of these regulations will prevent asbestos mines from being a major source which must be covered by the standard promulgated herein. Furthermore, the public is sufficiently removed from the mine work environment that their exposure should be significantly less than that of the workers in the work environment. Accordingly, the promulgated standard does not apply to drilling operations or roadways at mine locations.

For asbestos mills, the proposed standard would have applied to ore dumps, open storage areas for asbestos materials, tailings dumps, ore dryers, air for processing ore, air for exhausting particulate material from work areas, and any milling operation which continuously generates implant visible emissions. The promulgated standard prohibits visible emissions from any part of the mill, but it does not apply to dumps of asbestos tailings or open storage of asbestos ores. The Bureau of Mines' regulations previously referenced and regulations issued by the Occupational Safety and Health Administration (20 CFR 1910.93a) protect workers from the hazards of air contaminants in the work environment. The Occupational Safety and Health Administration regulations were promulgated on June 7, 1972. The regulations are intended to protect the health of employees from asbestos exposure by means of engineering controls (i.e. isolation, enclosures, and dust collection) rather than by personal protective equipment. It is the judgment of the Administrator that measures taken to comply with the Bureau of Mines and Occupational Safety and Health Administration [illegible] protect the health of persons [illegible] in proximity to dumps and storage areas will prevent the dumps and storage areas from being major sources of asbestos emissions.

The proposed standard would have applied to buildings, structures, or facilities within which any fabricating or manufacturing operation is carried on which involves the use of asbestos materials. Comments received on the proposed standard indicated that the requirements for fabricating and manufacturing operations were confusing. Much of the confusion was created by the use of terms such as "any," "continuously," and "forced gas streams." The promulgated standard is more definitive as to applicability of the provisions. The promulgated standard prohibits visible emissions from the nine manufacturing operations which, in the judgment of the Administrator, are major sources of asbestos. The promulgated standard does not cover fabrication operations. Of all fabrication operations, only those operations at new construction sites are considered to be major sources of asbestos emissions. The Occupational Safety and Health Administration regulations specify that all hand- or power-operated tools (i.e. saws, scorers, abrasive wheels, and drills) which produce asbestos dust be provided with dust collection systems. In the judgment of the Administrator, implementation of these regulations will prevent fabrication operations from being a major source which must be covered by the standard promulgated herein.

The proposed standard would have prohibited visible emissions of asbestos particulate material from the repair or demolition of any building or structure other than a single-family dwelling. Comments indicated that the no visible emission requirement would prohibit repair or demolition in many situations, since it would be impracticable, if not impossible, to do such work without creating visible emissions. Accordingly, the promulgated standard specifies certain work practices which must be followed when demolishing certain buildings or structures. The standard covers institutional, industrial, and commercial buildings or structures, including apartment houses having more than four dwelling units, which contain friable asbestos material. This coverage is based on the National Academy of Sciences' report (53) which states, "In general, single-family residential structures contain only small amounts of asbestos insulation. Demolition of industrial and commercial buildings that have been fireproofed with asbestos-containing materials will prove to be an emission source in the future, requiring control measures." Apartment houses with four dwelling units or less are considered to be equivalent to single-family residential structures. The standard requires that the Administrator be notified at least 20 days prior to the commencement of demolition.

[illegible] would be emitted from the source if the source were equipped with a particulate, or, in some cases, a wet-collection cleaning device. This would have required a standardized emission-measuring technique, which is not currently available. The promulgated standard prohibits visible emissions which contain asbestos and provides the option of using specified air-cleaning methods. The existence of particulate asbestos material in a gas stream vented to the atmosphere can be determined by collecting a sample on a filter and analyzing it by microscopy techniques. The proposed standard stated that the air-cleaning requirement would not be met if a number of listed faults, e.g., broken bags, leaking gaskets, threadbare bags, existed and it required that collection hoppers on some baghouses be emptied without generating visible emissions. Comments received suggested that this negative approach tended to make the quality of air-cleaning operations dependent upon the ability of EPA to anticipate and to include in the standard all the factors which would constitute improper methods. Since the intent was, and is, to require high quality air-cleaning operations, the promulgated standard requires proper installation, use, operation, and maintenance without precisely defining the means to be used.

The proposed standard would have prohibited the spraying of any material containing asbestos on any portion of a building or structure, prohibited the spraying of any material containing asbestos in an area directly open to the atmosphere, and limited emissions from all other spraying of any material containing asbestos to the amount which would be emitted if specified air-cleaning equipment were used. Comments received pointed out that this standard would: (1) Prohibit the use of materials containing only the trace amounts of asbestos which occur in numerous natural substances, (2) prohibit the use of materials to which very small quantities of asbestos are added in order to enhance their effectiveness, and (3) prohibit the use of materials in which the asbestos is strongly bound and which would not generate particulate asbestos emissions. The promulgated standard applies to those uses of spray-on asbestos materials which could generate major emissions of particulate asbestos material. For those spray-on materials used to insulate or fireproof buildings, structures, pipes, and conduits, the standard limits the asbestos content to no more than 1 percent. Materials currently used contain from 10 to 80-percent asbestos. The intent of the 1-percent limit is to ban the use of materials which contain significant quantities of asbestos, but to allow the use of materials which would: (1) Contain trace amounts of asbestos which occur in numerous natural substances, and (2) include very small quantities of asbestos (less than 1 percent) added to enhance the material's effectiveness. Although a

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...adopted reference method has not been developed to quantitatively determine the content of asbestos in a material, there are acceptable methods available, based on electron microscopy, which independent laboratories have developed. Determining the asbestos content of a material with these methods costs approximately $300, and the results are accurate within plus or minus 50 percent; these limits on accuracy were taken into account in establishing the 1-percent limitation.

The proposed standard would have prohibited the surfacing of any roadway with asbestos tailings. The promulgated standard applies to all roadways except those on ore deposits; these roadways are temporary, and control measures taken to comply with the Bureau of Mines regulations prevent them from being a major source which must be covered by the standard promulgated herein. At this time, the application of asbestos tailings to public roadways is not widely practiced, but because of the close proximity of roads to the public, a ban on using asbestos tailings on roadways is included in the promulgated standard to avoid a future problem and stop the practice where it is followed. The term "surfacing" is defined to include the deposit of asbestos tailings on roadways covered with snow or ice; therefore, this practice is prohibited.

Consideration was given to including provisions in the standard requiring proper disposal of the asbestos material generated during demolition and collected in control devices used to comply with the requirements of this standard. It was decided that this was not necessary because the Occupational Safety and Health Administration regulations (29 CFR 1910.93a(h)) include housekeeping and waste disposal requirements. These regulations require that any asbestos waste, consigned for disposal, be collected and disposed of in sealed impermeable bags or other closed, impermeable containers.

The potential environmental impact of the promulgated standard was evaluated, and it was concluded that the standard will not cause any adverse effects. The potentially adverse environmental effects of the standard are:

(1) The asbestos-materials which will be collected in control devices and generated during demolition will have to be disposed of or recycled.

(2) Materials, such as mineral wool, ceramic wool, and fiberglass, will be substituted for asbestos presently contained in spray-applied fireproofing and insulating materials.

In some manufacturing operations, a major portion of the asbestos-material collected by fabric filters is either recycled to the process or is marketed for other uses. For example, one asbestos textile mill recycles large quantities of longer-fiber asbestos for process use and sells more than 90 percent of the remaining collected materials to a brake lining manufacturer. Consequently, a significant portion of the increased quantities of "waste" asbestos materials which will result from the implementation of the standard will not require disposal. Where disposal is required, the Occupational Safety and Health Administration regulations (29 CFR 1910.93a(h)) require that any asbestos waste, consigned for disposal, be collected and disposed of in sealed impermeable bags or other closed, impermeable containers. The contamination of ground water supplies with asbestos from landfill disposal is not considered a potential problem.

The substitution of ceramic wool, mineral wool, and fiberglass for asbestos is not now known to be a problem. There is no evidence that these materials cause health effects in the concentrations found in occupational or ambient environments.

Although the standard was not based on economic considerations, EPA is aware of the impact (55) and considers it to be reasonable. Costs among the various sources covered by the standard are quite variable. Although the standard may adversely affect some individual plants or companies which are marginal operations, it appears that such effects will be minimal and the impact to the asbestos industries as a whole will not be large.

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Attachment 2

(e) Spraying: There shall be no visible emissions to the outside air from the spray-on application of materials containing more than 1 percent asbestos, on a dry weight basis, used to insulate or fireproof equipment and machinery, except as provided in paragraph (f) of this section. Spray-on materials used to insulate or fireproof buildings, structures, pipes, and conduits shall contain less than 1 percent asbestos on a dry weight basis.

(1) Sources subject to this paragraph are exempt from the requirements of § 61.05(a), § 61.07, and § 61.09.

(2) Any owner or operator who intends to spray asbestos materials to insulate or fireproof buildings, structures, pipes, conduits, equipment, and machinery shall report such intention to the administrator at least 20 days prior to the commencement of the spraying operation. Such report shall include the following information:

(i) Name of owner or operator.

(ii) Address of owner or operator.

(iii) Location of spraying operation.

(iv) Procedures to be followed to meet the requirements of this paragraph.

(f) Rather than meet the no-visible-emission requirements of paragraphs (a), (c), and (e) of this section, an owner or operator may elect to use the methods specified by § 61.23 to clean emissions containing particulate asbestos material before such emissions escape to, or are vented to, the outside air.

§ 61.23 Air-cleaning.

If air-cleaning is elected, as permitted by § 61.22(f), the requirements of this section must be met.

(a) Fabric filter collection devices must be used, except as noted in paragraphs (b) and (c) of this section. Such devices must be operated at a pressure drop of no more than 4 inches water gage, as measured across the filter fabric. The airflow permeability, as determined by ASTM method D737-69, must not exceed 30 $ft^3/min/ft^2$ for woven fabrics or 35 $ft^3/min/ft^2$ for felted fabrics, except that 40 $ft^3/min/ft^2$ for woven and 45 $ft^3/min/ft^2$ for felted fabrics is allowed for filtering air from asbestos ore dryers. Each square yard of felted fabric must weigh at least 14 ounces and be at least one-sixteenth inch thick throughout. Synthetic fabrics must not contain fill yarn other than that which is spun.

(b) If the use of fabric filters creates a fire or explosion hazard, the administrator may authorize the use of wet collectors designed to operate with a unit contacting energy of at least 40 inches water gage pressure.

(c) The administrator may authorize the use of filtering equipment other than that described in paragraphs (a) and (b) of this section if the owner or operator demonstrates to the satisfaction of the administrator that the filtering of particulate asbestos material is equivalent to that of the described equipment.

(d) All air-cleaning equipment authorized by this section must be properly installed, used, operated, and maintained. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

§ 61.24 Reporting.

The owner or operator of any existing source to which this subpart is applicable shall, within 90 days after the effective date, provide the following information to the administrator:

(a) A description of the emission control equipment used for each process;

(b) If a fabric filter device is used to control emissions, the pressure drop across the fabric filter in inches water gage.

(1) If the fabric filter device utilizes a woven fabric, the airflow permeability in $ft^3/min/ft^2$; and, if the fabric is synthetic, indicate whether the fill yarn is spun or not spun.

(2) If the fabric filter device utilizes a felted fabric, the density in oz/yd^2, the minimum thickness in inches, and the airflow permeability in $ft^3/min/ft^2$.

(c) Such information shall accompany the information required by § 61.10. The appropriate form is contained in appendix A to this part.

Subpart C—National Emission Standard for Beryllium

§ 61.30 Applicability.

The provisions of this subpart are applicable to the following stationary sources:

(a) Extraction plans, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste.

(b) Machine shops which process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight.

§ 61.31 Definitions.

Terms used in this subpart are defined in the act, in subpart A of this part, or in this section as follows:

(a) "Beryllium" means the element beryllium. Where weights or concentrations are specified, such weights or concentrations apply to beryllium only, excluding the weight or concentration of any associated elements.

(b) "Extraction plant" means a facility chemically processing beryllium ore to beryllium metal, alloy, or oxide, or performing any of the intermediate steps in these processes.

(c) "Beryllium ore" means any naturally occurring material mined or gathered for its beryllium content.

(d) "Machine shop" means a facility performing cutting, grinding, turning, honing, milling, deburring, lapping, electrochemical machining, etching, or other similar operations.

(e) "Ceramic plant" means a manufacturing plant producing ceramic items.

(f) "Foundry" means a facility engaged in the melting or casting of beryllium metal or alloy.

(g) "Beryllium-containing waste" means material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to this subpart.

(h) "Incinerator" means any furnace used in the process of burning waste for the primary purpose of reducing the volume of the waste by removing combustible matter.

(i) "Propellant" means a fuel and oxidizer physically or chemically combined which undergoes combustion to provide rocket propulsion.

(j) "Beryllium alloy" means any metal to which beryllium has been added in order to increase its beryllium content and which contains more than 0.1 percent beryllium by weight.

(k) "Propellant plant" means any facility engaged in the mixing, casting, or machining of propellant.

§ 61.32 Emission standard.

(a) Emissions to the atmosphere from stationary sources subject to the provisions of this subpart shall not exceed 10 grams of beryllium over a 24-hour period, except as provided in paragraph (b) of this section.

(b) Rather than meet the requirement of paragraph (a) of this section, an owner or operator may request approval from the Administrator to meet an ambient concentration limit on beryllium in the vicinity of the stationary source of 0.01 $\mu g/m^3$, averaged over a 30-day period.

(1) Approval of such requests may be granted by the Administrator, provided that:

(i) At least 3 years of data is available which in the judgment of the Administrator demonstrates that the future ambient concentrations of beryllium in the vicinity of the stationary source will not exceed 0.01 $\mu g/m^3$, averaged over a 30-day period. Such 3-year period shall be the 3 years ending 30 days before the effective date of this standard.

(ii) The owner or operator requests such approval in writing within 30 days after the effective date of this standard.

(iii) The owner or operator submits a report to the Administrator within 45 days after the effective date of this standard which report includes the following information:

(a) Description of sampling method including the method and frequency of calibration.

(b) Method of sample analysis.

(c) Averaging technique for determining 30-day average concentrations.

(d) Number, identity, and location (address, coordinates, or distance and heading from plant) of sampling sites.

(e) Ground elevations and height above ground of sampling inlets.

(f) Plant and sampling area plots showing emission points and sampling sites. Topographic features significantly affecting dispersion including plant building heights and locations shall be included.

(g) Information necessary for estimating dispersion including stack height, inside diameter, exit gas temperature, exit velocity or flow rate, and beryllium concentration.

(h) A description of data and procedures (methods or models) used to design the air sampling network (i.e., number and location of sampling sites).

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