Asbestos

REYNOLDS ALUMINUM
REYNOLDS METALS COMPANY - RICHMOND, VIRGINIA 23261

January 19, 1976

Roy F. Weston, Inc.
Weston Way
West Chester, PA 19380

Dear Sirs:

I have reviewed Mr. Hebb's memo of December 23, 1975, and have also reviewed the questionnaire supplied by your organization regarding information concerning asbestos. I have partially filled out your questionnaire but do not find it suitable with regard to relating the uses of asbestos in the aluminum industry.

We at Reynolds use a great deal of asbestos containing materials, such as marinite or marinett, in our molten metal transfer and casting operations. These materials are machined on a variety of equipment, usually of the W.W.II vintage.

Hooding has been designed specifically for each of the various pieces of equipment, and local exhaust ventilation is supplied to this hooding usually be the means of a cyclone. We can presently meet the 5 fiber standard, but would have had difficulty meeting the 2 fiber standard. The possibility of us reducing our asbestos machining emissions to below the .5 fibers/cc would be extremely difficult and costly. It is my determination that if we at Reynolds were to attempt to meet the OSHA proposed standard, it would require the purchase of new machining equipment designed specifically for asbestos handling and machining. It would also require that a separate building be constructed in order to isolate such an operation. I should add here that marinite is machined into inserts, baffles, and gasket materials for use in molten metal casting operations.

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As I understand it, all aluminum casting operations require the use of marinite inserts. There is at this point no known substitute for this item. Presently we at Reynolds machine such inserts in two of our plants and all other locations have this work done outside contract.

If you need any further information regarding asbestos usage in our industry, please contact me instead of our plant locations.

Sincerely,

Homer M. Cole
Corporate Industrial Hygienist

HMC/pcf

enclosures

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To: Mas Cole [illegible]
Re: telecon
[illegible]

AIA NORTH AMERICA
ASBESTOS INFORMATION ASSOCIATION
1660 L Street, N.W. / Washington, D.C. 20036 / (202) 223-4865

INDUSTRIAL HYGIENE RECEIVED
JAN 9 1976
H.M.C.
R.E.B.

I hope you have received my letter enclosing a memorandum from Guy G. Gabrielson, Jr. which outlines the Association's plan for an industry response to the proposed revision of the OSHA asbestos standard. In my letter, I encouraged membership in the Association to those of you not presently affiliated with AIA/NA. Whether you choose to join or not, we urge all recipients to participate in this industry-wide project and ask your consideration of financial support to help defray the expenses involved.

AIA/NA has engaged the services of the highly reputable consulting firm Roy F. Weston, Inc. to gather information and prepare a report covering the technological feasibility and economic impact of the proposed OSHA standard. This proposed standard could, through the governmental law-making process, reduce the 8-hour time-weighted average exposure of 5 fibers/cc (2 fibers/cc as of July 1, 1976) to 0.5 fibers/cc.

The study that Weston will make must be based on accurate information gathered from companies representing the various asbestos-using manufacturing processes within the industry. My letter has been sent to more than two hundred companies. We believe the effort we are making will benefit your company by helping to achieve a reasonable and realistic asbestos exposure standard in the workplace. Therefore, we ask that you provide the fullest cooperation and assist in the development of information essential to the study.

Weston will contact you in the very near future to discuss the enclosed questionnaire. Depending upon the project schedule and your situation, Weston will:

- Set up an appointment for a plant site visit; or
- Record your input by telecon; or
- Provide mailing instructions for your response.

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As indicated in Mr. Robert Mereness' recent letter to you, Roy F. Weston, Inc. has been engaged by the Association to gather information and prepare a report on the technological feasibility and economic impact of the proposed revision to the OSHA Asbestos Standard. This report will be based upon the data and opinion provided by your company. We believe it is in the best interest of your company, and the industry as a whole, to participate in achieving a reasonable Standard.

Weston's plans are to contact you to discuss the attached questionnaire. Depending upon the project schedule (Weston's report will be issued to AIA/NA no later than 2 February 1976), a member of our project team will:

- Set up an appointment for a plant site visit, or
- Record your input by telecon, or
- Provide mailing instructions for your response.

To assure confidential treatment of your input, the cover sheet of the questionnaire will be coded, detached from the questionnaire, and kept separate. The cover sheet and questionnaire will not be duplicated.

Your data will be kept by Weston until the rule-making process is completed. At that time, your original input will be returned to you.

A questionnaire for each plant is required. If you have more than one plant, please duplicate the attached questionnaire.

Very truly yours,

Jerry L. Hebb
Manager, Occupational
Health Management
Department

JLH:jwg
Attachment

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TX TINER
RMC0049556

ROY F. WESTON, INC.
WESTON WAY
WEST CHESTER, PA. 19380
PHONE: (215) 692-3030
TELEX: 83-5348

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ENVIRONMENTAL CONSULTANTS-DESIGNERS

ASBESTOS INFORMATION ASSOCIATION/NORTH AMERICA

INDUSTRY QUESTIONNAIRE(1)(2)

Company Name: Reynolds Metals Company

Plant Address: Corporate Headquarters

Corporate Affiliation: Richmond, Virginia

Name of Plant Contact: H. M. Cole Title: Corporate Industrial Hygienist

Phone Number: (807) 382-2311

Note: This cover page will be detached from the remainder of the questionnaire to insure confidential handling of all information.

(1) For assistance in completing the information in this questionnaire, please contact Mr. Jerry L. Hebb, Roy F. Weston, Inc., phone (215)692-3030.

(2) If, for any reason, you do not choose to participate in the study by completing this questionnaire, please return it directly to Mr. Jerry L. Hebb at Roy F. Weston, Inc.

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I. General Product/Process Information

1. Which of the following industry segments best describes the asbestos containing products in your operations? (Check more than one, if appropriate).

___ Asbestos Cement Products (pipes, sheets, siding, shingles)
X Asbestos Paper Products (asbestos felts, lapped sheets, underlayments, electrical and commercial papers)
___ Floor Tile
___ Coatings (roof coatings, caulks, sealants, paints, adhesives and undercoatings)
___ Friction Materials (automotive linings, disc components, blocks, clutch facings)
X Gasket, Packing, Sealing Devices
___ Joint Cements
___ Asbestos Reinforced Plastics
___ Asbestos Textiles
___ Asbestos Drilling Muds
___ Asphaltic Paving
___ Distribution/Resale
X Miscellaneous (Specify) Plastic

2. Which of the following categories best describes the operation at your plant? (Check more than one, if appropriate).

a. ___ Manufacture a product where raw asbestos is used.
What tonnage of raw asbestos do you use per year? ___
b. X Process a product which already contains asbestos.

3. In reference to Question 1, for each industry segment, give the specific asbestos end product(s) (siding, pipe, etc.) manufactured, handled, or used at this location and the annual volume of each (in pounds, tons, square feet, etc.).

Industry Segment	End Product(s)	Annual Volume
[illegible]	[illegible]	

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4. What was the aggregate sales value of asbestos containing products manufactured at this plant during the last five calendar years?

1971 $ _____
1972 $ _____
1973 $ _____
1974 $ _____
1975 $ _____

5. What was the level of capital expenditure for plant improvement and expansion of production facilities for asbestos containing products during the last five calendar years? (Include capital expenditures for environmental control, plant improvement and expansion).

1971 $ _____
1972 $ _____
1973 $ _____
1974 $ _____
1975 $ _____

6. What is the total plant employment at this location? 15 plants with asbestos applications

7. Give the approximate percentage of the employees whose asbestos exposure falls in the following categories:
   a. Continually in the work environment (operating, production, materials handling personnel) _____
   b. Frequently in the work environment (maintenance, supervisory personnel) _____
   c. Only occasionally (less than 5 times per week) in the work environment (management, engineers) _____
   d. Never or very infrequently enter the work environment (secretaries, sales personnel) _____

8. What unions (locals) represent your employees, if any? United Steel Workers of America [illegible]
   a. How active have the unions been in the area of employee health and safety (demands for hazard pay, shorter work periods, etc.)?

Active Area	Extent of Activity (V--Very, M--Moderate, N--None)

   b. What is the current pay scale range of unionized personnel? _____

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H. Control Technology/Cost Information

9. Provide a brief description of each step in your operation as it relates to asbestos handling or movement. Interest is primarily in the location of dust sources (bag slitting and dumping, sanding/finishing, etc.) and in dust control at these sources (hoods, etc.) rather than in the production equipment. A block flow diagram is suggested. There should be one such diagram for each product group and/or process used. Include raw materials entry and finished product handling. A blank page has been inserted at the end of this section for the block flow diagram(s) and description(s). If additional space is needed, please attach extra sheets.

10. Has control equipment been installed at each step or combination of steps in the block flow diagram(s) where asbestos is released to reduce worker exposure to airborne asbestos? Yes X No ____

List control equipment in use:

Step	Type of Equipment	Date Installed
Hooding	laybe	1972
"	table saw	"
"	band saw	"
"	drill press	"
"	sanding machine	"

11. What is the total cost of control equipment listed in Question 10?
    a. Capital cost (installed) $ ____
    b. Operating cost (annual) $ ____
    (Note: give horsepower, exhaust volume, etc., if operating costs are unknown.)
    c. What effect has this equipment had on your process, product or production rate? ____

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d. Did this equipment increase or decrease the plant/process energy requirements (electrical power, space heating, etc.)? Increase _____ Decrease _____ By how much? _____

12. What process modifications or work practice changes, if any, were instituted to reduce worker exposure to asbestos? bagging - waste disposal

a. Capital Cost (installed) $ _____
b. Operating Cost (annual) $ _____
c. What effects have these process modifications or work practice changes had on your process, product, or production rate? _____

d. Did these process modifications or work practice changes increase or decrease the plant/process energy requirements? Increase _____ Decrease _____ By how much? _____

13. Have the control equipment or work practice changes reduced airborne asbestos levels in all of the work areas? Yes X No _____

List the ranges of asbestos fiber counts in the work areas involved:

Work Area	Range of Asbestos Fiber Counts Before Modifications/ Changes	After Modifications/ Changes
laying	>5	<1
drilling	>5	<1
[illegible] saw	>5	<2
[illegible]	>5	<5
milling	>5	<2

14. Have the control equipment or work practice changes reduced airtime-weighted average exposure to airborne asbestos in all of the work areas? Yes X No _____

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Work Area	Range of TWA Asbestos Fiber Counts: Before Modifications/Changes	After Modifications/Changes

The present asbestos standard sets a maximum allowable Time-Weighted Average (TWA) exposure of 5 fibers/cc over an 8-hour period. This, by statute, will be reduced to 2 fibers/cc in July, 1976. The proposed standard would reduce this level to 0.5 fibers/cc at some time in the future. If you have already reached 0.5 fibers/cc at each step where asbestos is released into the work place, please go on to Part III; if not, please complete the following:

15. At each location where asbestos dust is released, do you feel you have installed the "Best Available Technology?" Yes _____ No _____
Best Available Technology (BAT) is defined as control equipment, process modifications, work practice changes, or combinations thereof, which have been demonstrated to provide the most effective control or reduction of contaminant emission.

16. If not, what do you consider the BAT to be, and how effective will it be in reducing airborne asbestos at each location? (Can be control equipment, work practices, process modifications, or combinations thereof)

* Present equipment would have to be scrapped and new equipment and ventilation controls installed.

Locations	BAT	Estimated Asbestos Fibers/cc

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17. What is the expected cost of BAT in terms of:
a. Capital Cost (installed) $ 2100,000
b. Operating Cost (annual) $
c. Plant/Process Energy Requirements, Increase
Decrease
d. Personnel Requirements, Increase Decrease
e. Process/Product Effects, Increase $
Decrease $
Explain

f. By what date could BAT be implemented?

18. If the Best Available Technology does not reduce worker exposure to a TWA of 0.5 fibers/cc and a ceiling of 5 fibers/cc at all points, provide your considered judgment on the possibility, cost, and timing to develop new technology to achieve this level. What approach might be used?

19. If the proposed 0.5 fibers/cc level is adopted, what action is foreseen at your plant? All machining of asbestos containing products will have to be contracted outside

III. Industrial Hygiene and Health Information

20. The existing and proposed standards require certain industrial hygiene practices where workers are exposed to airborne asbestos below the established TWA or ceiling levels. Do you (provide cost data where available):

	Yes	No	Cost/ Man-Year	Total ~~Plant~~ Cost/Year
a. Provide preplacement employee medical exams?	X		$100.00	200 employees
b. Provide annual employee medical exams?	X		"	"
c. Provide termination employee medical exams?	X		"	"

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	Yes	No	Cost/ Man-Year	Total Plant Cost/Year
d. Retain medical records (20 year period)?	X			
e. Maintain records of employee exposure to asbestos fibers (30 year period)?	X			
f. Dispose of waste materials which may contain asbestos in sealed containers?	X			
g. Provide caution labels for all material containing unbound asbestos?				
h. Provide initial monitoring (sampling) of the work place for airborne asbestos?	X			
i. Provide periodic monitoring (sampling) of the work place for airborne asbestos?	X			

21. Certain provisions of the existing regulation require additional industrial hygiene practices where levels of airborne asbestos exceed TWA or ceiling standards. Where these requirements apply to your plant, do you:

	Yes	No	Cost/ Man-Year	Total Plant Cost/Year
a. Have a respirator program (for use in certain work situations or emergencies)?				
b. Provide worker rotation where employee is unable to function normally while wearing a respirator?				
c. Provide protective clothing (for employee exposed to asbestos greater than the ceiling level)?				
d. Provide change rooms (where special clothing is required?				
e. Provide separate locker facilities (where special clothing is required)?				
f. Provide laundering of special clothing?				
g. Post caution signs (where levels are greater than the ceiling or TWA levels)?				

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22. Do you employ a company physician? Yes X No ____
If yes: Full-Time X Part-Time ____ Part-Time hours/week also 1 physician part time [illegible]

23. Do you employ an industrial hygienist? Yes X (2) No ____
If yes: Full-Time X (2) Part-Time ____ Part-Time hours/week ____ (Corporate)

24. Who performs your medical examinations (clinic, resident physician, etc.)?
____

25. The proposed standards expand the scope of industrial hygiene practices into areas such as: shower requirements, regulated areas, expanded respirator programs, and employee education programs. In general, how do you believe your employee will react to such practices? Positively
____

IV. Economic Impact Information

26. Considering individually the major products manufactured at this location, has implementation of asbestos exposure control procedures and industrial hygiene programs affected the cost of these products? Yes X
No ____
If yes, specify:

Products	Implementation Cost, $/Unit of Production: Increase	Decrease

27. Have you experienced a shift or change in product sales due to the cost impact described in Question 26? Yes ____ No X

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If yes, specify:

Products	Sales Change, $/Year: Increase	Decrease

b. If sales have decreased, has the demand been satisfied by:

	Yes	No
Other Asbestos Products		
Asbestos Substitute Products		
Imported Asbestos Products		

c. Which of the above has had the greatest impact on your sales?

28. Considering individually the major products manufactured at this location, do you expect the future implementation of BAT control procedures and expanded industrial hygiene programs to affect the cost of your products?
Yes _____ No _____ N.A.
If yes, specify:

Products	Implementation Cost, $/Unit of Production: Increase	Decrease

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29. Will you expect to experience a shift or change in product sales due to the cost impacts described in Question 28? Yes ___ No X

a. If yes, specify:

Products	Sales Change, %/Year: Increase	Decrease

b. If you expect a sales decrease, will the demand be satisfied by:

	Yes	No
Other Asbestos Products	___	___
Asbestos Substitute Products	___	___
Imported Asbestos Products	___	___

c. Which of the above would your expect to have the greatest impact on your sales? ___

30. What is the typical age of production equipment in use at your plant in your particular industrial segment?

Segment	Typical Production Equipment Age, Years: 0 - 5	5 - 15	15 - 25	25+
Machining	___	___	X	___
	___	___	___	___
	___	___	___	___
	___	___	___	___
	___	___	___	___

31. In your opinion, with the implementation of BAT and the proposed OSHA standard to control worker exposure to asbestos, what portion of the existing production equipment may continue to be economically utilized? (Consider the portion of capital equipment retained as a percentage of the total production area investment). NONE

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Less than 10% X
10% - 25%
25% - 50%
50% - 75%
Greater than 75%

32. Within your company, which estimate best describes the portion of the total work force employed at your plant?

Less than 10% (illegible)
10% - 25%
25% - 50%
50% - 75%

V. Information Regarding Manufacturers/Fabricators of Asbestos-Containing Products

The proposed regulations apply to every place of employment where asbestos, or a product containing asbestos, is manufactured, processed, packaged, stored, applied, used, or otherwise handled. It is extremely important to our assessment to include estimates of the number of people involved as your products are ultimately used and the possible asbestos exposure levels of these individuals. Insofar as is possible, kindly provide the following information:

33. Who uses the asbestos-containing products you produce (construction industry, auto repair garage, fabricator, etc.)?

34. Describe how your products move from your plant through the final consumer

35. Estimate numbers of people and what levels of asbestos dust exposure, if any, may occur at each step (from further processing, fabrication, installation, etc.)?

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36. Provide names of your customers and appropriate trade associations that Weston might obtain more comprehensive information in these areas.

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