

1X STANDARD PAINT & VARNISH

Calidria ASBESTOS

or T. P. Morris
W. C. Thurber
J. E. Walsh
KC-File
NF-File

UNION CARBIDE CORPORATION
P.O. Box 579 Niagara Falls, N.Y. 14302

By H. B. Rhodes ✓

Date 11/13/74

Full Name	Standard Paint & Varnish	Interviewed
Address	Harvey, LA	Mr. Fred Kinsler - Technical Director
Mfrs. of	Epoxy Marine Paints	(Telecon)

OBJECTIVE

Return customer's telephone call at his request.

OBSERVATIONS

Walked into a real beauty here. Mr. Kinsler was in the process of having an OSHA inspection and he wanted me to get on the phone to "explain the OSHA asbestos regulations to the inspector."

I talked at some length with the inspector Steve Herron who sounded quite young. He wanted to know whether RG-244 was asbestos and I could only admit that it was. He wanted to know about dust levels on handling and particularly around warehouse locations with emphasis on the need for signs.

Told him we had monitored 10-15 dumping situations for RG-244 usually without special ventilation and were generally well below the limit, usually around 1-2 fibers/cc. We had not monitored warehouse activities to any extent but the bags were polyethylene overwrapped. Also that RG-244 tended to give airborne dust counts 1/2 to 1/3 those of conventional asbestos in comparable handling situations. His comment was that he would note this in his report but I don't think he really bought it. They will probably get a citation for no signs.

I finished up with a short conversation with Fred Kinsler. He seemed to have calmed down somewhat and requested me send him another copy of our dust count report since he could not locate his.

ACTION

JEW Follow up with Fred in a week or so to prevent further panic.
The size of our problem here will depend on the OSHA report.

HBR Send copy of dust counts. (Done 11/14/74)

A20803
UCC 007465

HBR Comment:

Standard Paint & Varnish were cited for not having signs and a number of other picky items. They say they will contest the citations.

A20804

UCC 007466

V. Baker and Taylor, Texas

The information below was received verbally from Montello. A Baker and Taylor drilling rig was inspected by OSHA. He found a broken step (for which he issued a citation) and asbestos on location. He did not take any air samples. He told them that if they used asbestos they must:

1. Put up warning signs where the asbestos is stored and on the rig where it is used.
2. Provide the men with special clothing.
3. Notify the laundry where the special clothing is sent so they could also put up signs.
4. Be faced with heavy fines if they didn't comply.

Baker and Taylors current position is:

1. They will provide details to Wyatt when he makes a personal visit.
2. They do not want to be party to any litigation.
3. There will be no more Supervisbestos used on Baker and Taylor rigs until the "Mickey Mousing" is straightened up.

VI. Added Note to Mr. Morgan

The sign posting requirement noted in IV and V seems to be a favorite of the inspectors these days, some cases in ridiculous extremes.

The regulations says that signs must be posted "... where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) ..."

It concludes, "Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers."

The intent of the paragraph is clearly to protect the unsuspecting worker from entering areas where he can be exposed to concentrations over the allowable limits. At least some of the inspectors are taking it to mean any place asbestos is present, regardless of the chance that the limits will be exceeded. Your comments are solicited.

A20805

Attachment II

Possible Action on OSHA "Overenforcement" Question

The course listed below could be followed by Union Carbide Corp. acting alone or via AIA/NA if they chose to spearhead it. The AIA/NA route seems to have more potential clout if it can be moved forward rapidly enough.

1. Assemble the facts now on hand plus whatever others are available from AIA/NA members and set up a meeting with the senior OSHA enforcement people in Washington.
2. Take a low key position with OSHA that these are isolated incidents but are becoming numerous enough to cause real concern. Ask them the question what should be one about it. Our objective would be to have them put out a clarifying directive to the field enforcement offices.
3. We could instead go to the field offices but I suspect would only be referred back to Washington.

Added Note:

It becomes evident on reviewing what facts we now have on these incidents that there are really two types of problem:

1. Where the inspector makes threats or misleads the user on what he must do to comply.
2. Where there is a reasonable difference of opinion such as the sign posting situation and may be actual citations to contend with.

We need to decide how to handle both situations.

A20893

INTERNAL CORRESPONDENCE

MINING AND METALS DIVISION

P. O. BOX 579, NIAGARA FALLS, NEW YORK 14302

To (Name) Mr. J. L. Myers
Division UCC Mining & Metals
Location Niagara Falls, NY

Date May 29, 1973
Originating Dept. "Calidria" Asbestos

Answering letter date

Copy to Messrs. R. E. Byrne, Jr.
P. J. Morgan
W. C. Thurber

Subject California Asbestos
Regulations

File ✓

Dear John:

The detailed comments on the new California asbestos regulations are attached. As with the recent review of the EPA regulations, most of these can probably be answered by Mr. Morgan.

The most obvious critical area that I can see is the use of an asbestos concentration of 1 fiber/cc. as the criteria for monitoring and medical examinations without defining whether this is a peak or TWA. A recent contact by Mr. Piersall indicates that there is considerable resistance to clarifying this; however, as you know, the future of our RG-244 business rests heavily on this seemingly small item.

In the course of this review, the AIA and UCC proposed changes were checked with the Emergency Regulations as published. UCC had a much higher batting average than the AIA but generally made less controversial recommendations. An annotated copy of the AIA proposals is also attached for your consideration.

It is suggested that you and Mr. Morgan review these comments and questions in the light of Mr. Piersall's discussions with California and the original AIA proposals. I feel we should concentrate on the things most important to us in separate UCC testimony at the hearings. The AIA can, obviously, make the same points as well as others but we have a large stake in California and should not rely wholly on the AIA, who does not have the same interest in "customer assistance" as we do.

It should be noted that this review has been made from the point of view of its impact on our customers. Problems it may present at our mine or at the King City mill have not been examined.

Very truly yours,

H. B. Rhodes

H. B. Rhodes

HBR:cjb
Attachments

A20887

UCC 007469

COMMENTS AND QUESTIONS ON THE CALIFORNIA EMERGENCY ASBESTOS REGULATIONS

SECTION 5208

1. Page 1, §5208 a.

The ceiling concentration wording is different from that in Article 108, Section 5155. A maximum of 5 periods of 15 minutes each for exposures of greater than 5 fibers but not more than 10 fibers is specified in Article 108. No such requirements are noted in §5208 a.

This does not appear to present any particular problem to us but it might make us some points to bring it to their attention.

2. Page 1, §5208 b.

The words "...Engineering controls....shall be used to meet the exposure limits in Section 5208 (0)..." appear.

Are we correct in assuming that if the exposure limits are being met without such engineering controls that they are not required? (Identical wording appears in OSHA.)

3. Page 1, §5208 b.

"All hand-operated and power-operated tools which may produce or release asbestos fibers...."

This look like the same use of "may" as in the EPA regulations, "...may emit." We assume that the same legal interpretation, whatever it is, will apply.

4. Page 4, §5208 c.

Asbestos containing materials shall not be removed from bags, etc. without being wetted unless it is enclosed and/or vented to effectively control airborne fibers so as not to exceed the allowable limits.

Suppose the asbestos is such a minor constituent or has been treated in such a way so that under any reasonable handling the allowable dust levels are not exceeded. Is prewetting or ventilation then required?

5. Page 2, §5208 d.

Reference is made to Section 5144 regarding respirators. There is no obvious problem but we should obtain a copy of this section for review.

6. Page 2, §5208 d.

The wording would seem to preclude wearing of respirators as an added precaution when concentrations are below the allowable values. It might be useful to change Item 1 to read:

A20800

"Reusable or single-use air filtering respirators may be worn for lower concentrations but shall be used when the concentration exceeds the levels specified in Section 5208 a....etc."

This is also consistent with parts (d)-1 and (d)-2.

7. Page 3, §5208 (e)-1.

Based on E. A. Piersall's letter of 4/12/73, the "ceiling level" is 10 fibers/cc. This seems quite clear. Is there any need to suggest any specific changes in the wording of the regulation?

8. Page 3, §5208 (e)-2.

Again, based on E. A. Piersall's letter, the term "exposure limits" covers both the TWA and/or the ceiling concentration. This, too, looks clear and I do not see any reason to suggest any wording changes.

9. Page 3, §5208 (e)-3.

As written, the lockers, etc. are not contingent on exceeding exposure limits. Their intent (E. A. Piersall's letter of 4/12/73) was to require this only when 10 fiber ceiling limit is exceeded. This needs to be pushed hard for clarification since it could be a major deterrent for the use of asbestos.

10. Page 4, §5208 (f)-3.

Labeling requirements are specified for "contaminated clothing" without any definition of what this means. It is suggested that such labels be required except where under any reasonably foreseeable handling the exposure limits of §5208 will not be exceeded. This follows OSHA wording.

Labeling reference in last sentence is §5208 i not h.

11. Page 4, §5208 (g)

The words "...where asbestos concentrations may reasonably be expected to exceed 1 fiber..." are used without definition as to whether it is peak or TWA. Ernie Piersall was unable to convince them that this should be TWA. This is a crucial point and we should push hard for TWA.

12. Page 5, §5208 (h)

This now says caution signs are required where "...concentrations of asbestos fibers may be in excess..." It is suggested that this should read "...asbestos fibers may reasonably be expected to be in excess of..."

This is a minor point and also is related to the legal meaning of "may."

A20800

13. Page 5, §5208 (h)

It would appear that the mill and the mine may have to be posted.
If so, are there any comments needed here?

14. Page 7, §5208 (j)-1

The same problem exists here as in §5208 (g), i.e., 1 fiber/cc. is not defined. It is even more crucial here since medical examinations are required. We could live with it under monitoring if we could get TWA specified here.

15. Page 7, §5208 (j)-1

The words "...shall be given" appear in reference to the physical examination. The AIA on page 3 of their letter, makes a considerable point that under OSHA policy an employee may refuse to take a physical examination made available by the employer. California seems to have refused to accept this. Should we get involved with it or leave it to the AIA?

16. Page 8, Article 108, Section 5155

A reference to section 5208 is made which is not internally consistent
Maybe this should be pointed out.

HBR:cjb
Mining & Metals Division
Niagara Falls, NY
5/29/73

A20900

Asbestos Information Association/North America

22 East 40th Street
New York, N. Y. 10016
212-689-3378

February 12, 1973

Mr. Richard Wilkins
Chief
State of California
Department of Industrial Relations
Division of Industrial Safety
Post Office Box 603
San Francisco, California 94101

Dear Mr. Wilkins:

On behalf of the 19 member companies of the Asbestos Information Association/North America, I wish to express to you our appreciation for permitting us additional time in which to review and submit comments on the Proposed Amendment to Group 16, Article 110 of the State of California General Industry Safety Orders, creating A new Safety Order, Section 5208 on Asbestos.

In general, we support both the intent and contents of the proposed standards on asbestos as being both necessary and feasible. However, in light of your comments to me in your letter of January 29, especially with regard to your "as effective as" OSHA restriction and the question of the proper interpretation of certain sections of the OSHA standards, we would like to submit the following comments and suggestions.

Section 5208 (a): In order that the results of both state and employer monitoring of ceiling or peak concentrations be comparable for purposes of inspection and enforcement, we recommend that specific measuring parameters be established. OSHA has no such parameters in their standard, however, the NIOSH Criteria Package recommended that the ceiling or peak concentration limit should be measured "for a period of at least 15 minutes and preferably 30 minutes." We concur with this recommendation, except that we feel a 15 minute sample would be the more preferable.

*Good idea. Not
accepted.*

*At high fiber
concentrations
could give un-
countable filters.
Leave to AIA.*

Section 5208 (b): We recommend that the wording "All hand-operated and power-operated tools etc." be changed to "All portable and fixed power-operated tools etc." It was not OSHA's intent to ~~require the use of~~ ventilation systems on such hand-operated non-power tools as files, sanders, small hand saws, etc., which are used almost exclusively in the insulation trades, and in areas, such as on ladders, girders,

*Good idea.
Not accepted.*

Leave to AIA.

etc., where the use of power-operated tools with ventilation systems is totally impractical. Work is presently underway to develop dust data on the use of these non-power-operated hand tools for the purpose of putting together a list of those tools which do not normally release dust in excess of the standards and those that do. A revision of the standard will then be proposed to OSHA exempting specific tools and operations from the standards and requiring personal protective equipment for those men using tools likely to release excessive dust.

*Not accepted.
Reasonable.
Leave to HIA.*

Section 5208 (c): For clarity purposes, we recommend inserting the word "insulating" between the words "asbestos" and "cement" in the second sentence of this subsection. As written, the standard could be interpreted to refer to asbestos-cement sheets and pipe, which was not the intent of OSHA in this requirement.

*Accepted
"and/or."*

Also in this subsection, we recommend changing the word "and" in the phrase "enclosed and ventilated" in the second sentence to "or," as is the intent and wording of the OSHA standards. Since either enclosure or ventilation is capable of lowering exposures below the established limits, there is no need to require both, as does your proposed standard. A suitable compromise would be "and/or."

Not accepted.

Section 5208 (d): Since not all manufacturing and mining operations can reasonably be expected to come into immediate compliance with the exposure standards, we recommend that, as in the OSHA regulations, respiratory protection also be permitted "During the time period necessary to install the engineering controls and to institute the work practices required" in the standards.

*Considerable
changes made.
Further clarification needed.
See letter
4/5/73.*

Section 5208 (e) (2): As we read this particular requirement, fixed locations, such as plants and mines, would not be required to provide protective clothing for employees, no matter what levels they might be exposed to. This is certainly not the intent of OSHA in its regulations, which require protective clothing for all employees, no matter what their place of employment, exposed to levels in excess of the peak concentration. The OSHA standards, on the other hand, do not require protective clothing for employees exposed above the time weighted average limit. We are also confused by the use of the phrase "non-regular employees" in this subsection.

Accepted

Section 5208 (g) (1) (b): While the sign specifications contained in the proposed regulations are precisely those required in the OSHA standards, it should be pointed out that the OSHA specifications are a minimum size, and that the employer is free to produce a larger sign with larger letters if he considers it necessary from the point of view of easier employee readability. We believe the California regulations should contain the same flexibility.

Accepted.

Section 5208 (h) (1): The use of the phrase "provide or make available" in the OSHA standards was intended to permit the employer, if he could not "provide" medical examinations at a company clinic, to make available examinations at outside non-company facilities. Thus, your use of the word "and" instead of the OSHA word "or" does not reflect the intent of OSHA in this situation. We recommend, therefore, that the phrase be changed to "provide or make available."

Also in this subsection, we agree that specific criteria should be set identifying those employees who are required to have a yearly medical examination. The OSHA standards are quite confusing in this regard, however, we believe that the interpretation contained in the proposed regulations is too loose. We recommend, therefore, that the state adopt the recommendation contained in the NIOSH Criteria Package on Asbestos, which called for yearly exams on those employees exposed to greater than one fiber per cc as a time weighted average or to greater than five fibers as a peak concentration. We believe that this is more in keeping with the intent of OSHA than your proposed standard.

*Not accepted.
Very valid point.
Probably better
to leave it as is*

Your use of the word "given" in the second sentence of this subsection carries with it a connotation that the employee is required to accept the medical examination "provided or made available" by his employer. If this is your intent, it should be pointed out that it is established OSHA policy that no employee has any obligation whatever to accept a medical examination provided by his employer. Asbestos insulation employees throughout the country, for example, have absolutely refused to honor any of the medical examination requirements contained in the OSHA standards. This would also be the case, I assume, with these workers in California. Thus, if it is your intent to require employees to accept medical examinations, a strong statement of their responsibilities in this regard should be included in the standards.

A20903

90 days
accepted.

We believe that the 30 day limit established for the completion of required preplacement and existing employee medical examinations is too tight. In large operations, it would take considerably longer to conduct these examinations. In addition, in some cases, employers will have to purchase additional medical equipment for their clinics or find qualified outside physicians to conduct the examinations. For these reasons, we would recommend a 90 day period instead of the proposed 30 days.

Accepted.
Entire reference
to prev. exp.
deleted

Section 5208 (h) (2): We believe that clarification of the entire second sentence of this subsection is in order. If "previous employment" is intended to refer to employment with other companies prior to an employee's joining his present company, then we would be depending upon an employee's recollection of previous exposure and the date when it began. This would appear to be totally impractical and untrustworthy as a method of developing exposure data and we would recommend against such an interpretation. On the other hand, if it is intended that "previous employment" should refer to past employment within his present company, we may still run into trouble with long-term employees who may or may not have been exposed at some time in the past or for whom detailed work records are not available. Perhaps a clarifying phrase such as "as far as can be determined" should be included in the sentence.

Once again, let me express our appreciation for the opportunity to submit these comments for your consideration. If you have any questions with regard to this submission, or would like further details on any other matter relative to the proposed regulations with which we can be of assistance, please do not hesitate to contact us. We would appreciate being added to your mailing list for information on activities affecting asbestos or the asbestos industry, and would also appreciate receiving a copy of the final standards on asbestos.

Very truly yours,

Matthew M. Swetonic

Matthew M. Swetonic
Executive Secretary

A20904



COMMUNICATIONS

teletypewriter message

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MESSAGE ADDRESSED TO	ADDRESSEE	UCC ACTIVITY	CITY
	Division of Industrial Safety Department of Industrial Relations 455 Golden Gate Avenue San Francisco, California		

MESSAGE SECTION - If additional addressees are required continue to list below:

Attention: Mr. Richard Wilkins

Subject: General Industrial Safety Orders Section 5208, Asbestos and
Section 5155, Threshold Limit Values

Pursuant to your letter of January 29 addressed to E. A. Piersall of Union Carbide Corporation, the following are our comments regarding the proposed Asbestos standard for review by the Industrial Safety Board.

AAA Section 5208(g)(2) requires that caution labels be affixed to all waste as well as other products containing Asbestos Fibers. It must be recognized that the OSHA regulations were not specifically concerned with mining operations and therefore did not consider the problems of ore tailings piles. It is obviously not possible to package and label the large quantities of material in ore tailings. The piles can be treated to minimize dusting and posted if necessary. We suggest that tailings piles be specifically exempt from the labeling provision although they should be subject to the posting of caution signs if excess airborne concentrations exist.

BBB In Paragraph 5208(h) medical examinations are required "within thirty days of effective date of this regulation for existing

[CONTINUED ON PAGE 2]

DATE	SIGNATURE	UCC ACTIVITY	CITY
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- TO COMMUNICATIONS DEPARTMENT -

UCC 007477



COMMUNICATIONS
teletypewriter message

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PAGE 2

employees." This could be interpreted to require an additional examination for existing employees who had been previously *Accepted* examined within a relatively short period. We suggest that this sentence be revised to read "Such examination should be given within thirty days of the effective date for existing employees who have not had such an examination within one year."

CCC Also in Paragraph 5208(h)(2) it is required that records be kept of employees showing the date of the employee's first date of exposure to Asbestos Fibers. In a case of an employee who *Accepted* has previously worked elsewhere, we will not necessarily be able to obtain an adequate and verified record of his previous employment. We can keep on record what the employee listed in his application. We would have no way of determining where or when he may have first been exposed to Asbestos Fibers except for the statement made by the employee as he was hired.

DDD Lastly, the OSHA regulation included a paragraph on waste disposal *Not accepted* which you may wish to include in the State Regulations.

William N. Johnson
Union Carbide Corporation
270 Park Avenue
New York, New York 10017

DATE /15/73	SIGNATURE W. N. Johnson	UCC ACTIVITY Mining & Metals Div.	CITY 38th Floor
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Mining and Metals Division
Niagara Falls, NY 14302
November 29, 1973

MEMORANDUM

To: J. L. Myers
W. C. Thurber

From: H. B. Rhodes

Copy: File✓

Subject: Joint NIEHS - EPA Conference on Biological Effects of Asbestos
Durham, N.C. - November 18-20, 1973

The writer attended the above noted meeting as an observer. Although the meeting was officially sponsored by NIEHS and EPA, it was Selikoff's show. Overall, it was a big production with a number of distinguished foreign researchers included among the speakers. Attendance was limited to 135 of which 12 were from Mt. Sinai. Senior government officials from the various regulatory agencies, the environmental protection crusaders, and the press were heavily represented. Industry representation consisted of Sid Speil (J-M), Fred Pundsack (J-M), a couple of British and South African medical researchers who were on the program, and several unofficial observers. An official listing of registered attendees is attached.

In spite of the heavy antiasbestos background of a majority of the speakers and the audience, the general tone of the meeting was that of searching for the scientific truth. Only occasionally would a speaker get up and make statements like, "I hate to even have asbestos around, it's too dangerous to work with," or, "Why are we even discussing things; we have the Delany amendment, let's invoke it!"

The quality of the scientific oral presentations was surprisingly poor. Over half of the talks were unorganized, disjointed, mumbled (frequently in a thick accent), and backed up by unreadable or poorly prepared slides. The writer took extensive notes wherever it was possible to make out what the speaker was saying. These have been filed together with copies or abstracts of several of the papers that were available.

You got the impression throughout the meeting that the Mt. Sinai people were about to drop a bomb and they may have done so to the press without exposing it to review and criticism by the scientific types present. They seemed to be building up to extending the Minnesota scare to the rest of the country on the basis of asbestos picked up from asbestos-cement pipes, and from higher than ordinary ground water "asbestos" levels from natural causes and/or industrial pollution. This never came out, however, and looking back on the questions they asked the various speakers, it seems evident that they have not yet been able to

A20907

November 29, 1973

come up with any statistical or autopsy evidence that the levels in the Minnesota water have been harmful to the population. If they had, this certainly was the place to announce it.

In fact, towards the end of the meeting, Selikoff himself stated that the background exposures which the general population is experiencing, both in air and water, are not causing cancer. The thing to watch out for is short term but severe industrial exposure. At about this point in the meeting Prof. W. E. Smith, who has been testifying for industry in the Minnesota trial and who had to force his way in to be allowed to attend this meeting, stood up and reported that he had made extensive animal studies where 1% asbestos had been part of the diet. He found no evidence of tumors and quoted several other studies that had come up with the same findings. He first asked Selikoff if he knew of any contradictory studies and then asked the question of the entire audience. No one rose to challenge him.

In general, the conference was undoubtedly useful as a scientific meeting where the leading researchers in the field got together and exchanged information. To the best of my knowledge, nothing new and startling was announced in the scientific session. We can only wait to see, however, what Selikoff has told the press representatives.

A listing of the specific topics covered and the speakers is attached for reference. A brief statement of the general theme and tenor of each session is also included.

H. B. Rhodes

H. B. Rhodes

HBR:cjb
Attachments

A20900

Session I - Ingestion of Particles

There were several "Eureka's" here in that when an animal is fed a massive dose of asbestos fiber, some small percentage of it gets through the bowel wall. It is then transferred rapidly to a variety of organs including the brain. It is hard to see why the researchers finding this seemed so surprised since it is a relatively well-known phenomenon called "Persorption."

The same results on transport throughout the body were reported by those who injected asbestos, also in massive doses, into various locations in the animals.

Several of the foreign researchers (England and South Africa) questioned quite forcefully the applicability of results based on massive dosages. This is apparently a fundamental controversy in the interpretation of animal testing.

Session II - Identification and Quantification

This was mainly a discussion of progress and practicality of automatic particle counting in liquid samples. The consensus was that the only way to go for sure identification was the electron probe combined with electron diffraction. Direct transfer mounting of samples also was the preferred route of sample mounting. The problems of separating the rare fibers from the plentiful mud seemed to be well known with no really good solution. The technique used previously by Nicholson where the sample was homogenized in a blender and only a very small percentage of the sample was counted was considerably criticized. (Nicholson was not identified by name, however.)

Dr. Nicholson, incidentally, presented the results of their analysis of the Lake Superior water, i.e.,

20-70 mineral fibers/liter

5-25 micrograms/liter

The majority of the "fibers" were less than 1μ in length and seemed to be cummingtonite chips. I did not see a single true fiber in any of the slides.

Sid Speil from J-M followed quite shortly after Nicholson. He stated that chrysotile is present to some extent in all potable water and quoted results on a ten-city survey which ranged from 0.01 to 6 gram/gal. Analytical differences between laboratories were as large as X5. His most telling point was that at a typical situation of 1μ g. per gal., 2 liters per day, for 70 years would result in the ingestion of 0.013 g. of asbestos.

Session III - Biological Effects

This was largely a discussion of how to prepare tissue samples to identify and count particles and fibers.

Session IV - Biological Effects (continued)

Asbestos does have an active surface and effects on cells which come in contact with it. Some changes when heated, i.e., to 650-750° had some sharply increased biological activity. One of the strong "antiasbestos" types (S.Epstein) was sorry to report that their initial studies on carcinogenic effects of asbestos were negative but they were hopeful they could induce cancer with it by changing the technique.

A20009

Session V - Epidemiological Considerations

This session was started about two hours late and the writer had to leave due to prior travel commitments. Dr. C. S. Thompson of R. T. Vanderbilt kindly supplied the information as to the happenings. There were no outstanding new revelations and the statements given previously in the main body of the report pretty much sum up the situation.

H. B. Rhodes
11/29/73

A20910

Joint NIEHS - EPA Conference
on
BIOLOGICAL EFFECTS OF INGESTED ASBESTOS

Durham Hotel-Motel, Durham, N.C., November 18-20, 1973

PROGRAM

Sunday, November 18

4.00 pm Welcome David P. Rall, Director, NIEHS

4.10 pm Opening Statements Conference Committee

Session I -- Ingestion of Particles

Chairman -- V. Newill, EPA

- 4.30 Passage of particles through wall of G.I. tract
 G. Volkheimer (Berlin); G. E. Westlake (San Francisco)
- 5.00 Lymphohematogenous distribution following ingestion
 R. D. Pontefract (Ottawa); A. M. Brown (Rochester, Minn.)
- 5.30 Particles in Bowel wall ✓
 A. M. Langer (New York); F. Pooley ✓ (Cardiff); R. Rickert ✓ (E. Orange, N.J.)
- 6.00 Discussion
- 7.00 Reception *University Room*
- 7.30 Buffet Dinner

Monday, November 19

Session II -- Identification & Quantitation

Chairman -- F. L. Pundsack, JM

- 8.30 Instrumental approaches & constraints
 A. M. Langer (New York) ✓; I. Stewart (Chicago)
- 8.50 Microparticles in water ✓
 W. J. Nicholson (New York) ✓; P. Biscaye (New York) ✓; S. Spiel (Denver) ✓;
 E. Goldberg (La Jolla) ✓; G. Everett (EPA)
- 9.40 Geochemical considerations
 D. O. Whittemore (Manhattan, KA); ~~E. Gotanzaro (New York)~~
- 10.00 Environmental exposure to metals
 J. J. Vostal ✓ (Rochester, N.Y.); R. E. Eckhardt (Linden, N.J.)

Asbestos Program

-2-

- 10.20 Discussion and Coffee
- 10.45 Microparticles in solid materials ^{mt. S.}
D. Bowes (Glasgow); A. Rohl (New York); M. Ross (Washington) ^{W.S.G.S.}
- 11.15 Automation of particle quantitation ^{mt. S.}
C. Maggiore (New York); K. Heinrich and E. P. White (College Station, Pa.); I. Eichen (Dearborn) ^{mt. S.}
- 11.45 Discussion ^{End Mtn Co.}

Session III -- Biological Effects

Chairman -- I. J. Selikoff
(Mt. Sinai)

- 1.00 Crystallography
J. Konnert (Washington)
- 1.15 Microparticles in biological materials
F. Poolley (Cardiff); ~~A. M. Langer (New York)~~; A. Fondimare (Le Havre);
J. Bignon (Paris) ^(Le Bouffant, France)
- 2.00 Pathological correlations
H. Otto (Erlangen)
- 2.30 Cell penetration
Y. Suzuki (Nagoya); J. M. G. Davis (Edinburgh); H. Hayashi (Kawasaki)
- 3.15 Fibrogenesis ^{mt. S.}
J. S. Harington (Johannesburg); S. D. Douglas (New York); M. Chvapil (Tucson)
- 3.45 Surface activity of particles ^{mt. S.}
R. J. Schnitzer (New York); ~~J. S. Harington (Johannesburg)~~ ^{H. Hayashi}
- 4.30 Discussion

8.00 pm Panel on Research Directions

(Members to be notified)

Chairman

B. P. Rall, NIEHS

A20012

Tuesday, November 20

Session IV -- Biological Effects (contin.)

Chairman -- J. S. Harington,
Johannesburg

- 8.30 Experimental pathology
I. Webster (Johannesburg); L. H. Zaidi (Lucknow); P. F. Holt (Reading);
A. G. Heppelston (Newcastle); J. Churg (New York)
M.S.
- 9.30 Effects on DNA
S. Epstein (Cleveland); J. Glass (Brookhaven); D. Amacher (Cleveland)
- 10.00 Carcinogenesis
H. L. Stewart (NCI); F. Pott & F. Huth (Düsseldorf)
- 10.30 Immunology
R. Burrell (Morgantown)
- 10.45 Discussion and Coffee

Session V -- Epidemiological Considerations

Chairman - D. H. K. Lee, NIEHS

- 11.00 Geographical pathology of G. I. cancer
E. C. Hammond (New York); J. K. Wagoner (Cincinnati)
- 11.20 Extrathoracic neoplasms after asbestos exposure
I. J. Selikoff (New York); W. J. Smither (London)
- 11.40 Discussion
- 12.00 Lunch (individual arrangements)
- 1.00 Inorganic particle content of food and drugs
W. Eisenberg (Washington); C. Maggiore (New York)
- 1.30 Multiple factors in particle-associated disease
S. Epstein (Cleveland)
- 2.00 Inorganic particles of agricultural origin
K. Kay (New York); E. Goldberg (La Jolla); G. Stotsky (New York)
- 2.45 Essentials of epidemiological approaches
M. Schneiderman (Washington)
- 3.00 Discussion

A20913

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A20918

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A20920

May 27, 1977

Mr. Norman Hill
Allied Manufacturing Company
1245 E. Commercial
Springfield, MO 65803

Dear Mr. Hill:

You are no doubt aware of recent action by the Consumer Product Safety Commission (CPSC) to propose a ban on consumer use of asbestos-containing taping, spackling and joint-sealing compounds. Their action was instigated by a petition filed on 7/15/76 by the National Resources Defense Council (NRDC).

The CPSC voted on 5/2/77 to take action on the petition via the "Proposal and Hearing" procedure. This involves the following steps and would probably take a minimum of six months:

1. Publish the proposed regulation.
2. Accept written comments.
3. Schedule and hold a public hearing.
4. Publish a final regulation.

Although the CPSC has no jurisdiction over the manufacture and sale of products for commercial use, the proposed ban, depending on its wording and interpretation, could inadvertently affect the packaging and sale of products intended for industrial users. It is our understanding that the usual commercial packaging, 5-gallon pails of ready-mix and 25-pound bags of dry-mix, are stocked by some retail outlets, such as lumber yards. It is highly probable that these products could be purchased and used by a "do-it-yourself" consumer. The CPSC, in prior actions, has taken an ultra-conservative approach that any product which can be obtained by a consumer is a "consumer product" and would be covered by their regulations. This is the type of question which could be discussed and resolved at a public hearing.

The CPSC also has the power to implement an immediate ban on a product and to order its recall to prevent further distribution to consumers. Although we do not expect this to happen, the NRDC and other activist groups are continuing to press for this type of action; and the CPSC can vote at any time to change their action plans. There is, at the present time, little or no counter-pressure from industry; and this is the main reason for our letter to you. Enclosed is a copy of information sent to the CPSC last September by the Asbestos Information Association. This information was developed by Dr. H. B. Rhodes of our asb group.

20921

As you can see from the contents of the enclosure, we do not believe that the use of asbestos in spackling and similar compounds presents a significant hazard to the consumer. However, we do not feel that it would be prudent to oppose a ban on asbestos-containing compounds in "consumer-type" packaging, i.e., 1-5 pounds or 1-4 quarts. The consumer does not need the high-performance products (containing asbestos) which are required by commercial applicators, and the "protection" of your products for commercial use is much more important.

Also enclosed is a copy of our letter recently sent to members of the Consumer Product Safety Commission. We felt that it was appropriate to take this action before asking you to become involved. If you are concerned about the possibility of an inadvertent and perhaps immediate ban on your asbestos-filled products, even though they are intended for commercial use, we suggest the following action:

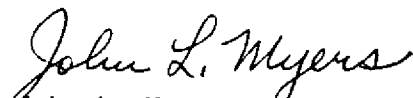
1. Review the enclosure to determine the facts about the issue.
2. Express your concern to the CPSC, including the following points:
 - A. The effect on your commercial products which could result from a ban on consumer products.
 - B. Your preference for the proposal/hearing procedure rather than any immediate action which is unnecessary and could have a severe deleterious effect on your business.
 - C. A hearing is necessary to properly air the potentially harmful consequences of any CPSC action.
 - D. Suggest, if you concur, that your products be labeled with the regular OSHA asbestos warning plus "For Commercial Use Only." This would be based on the assumption that such products would then be exempt from CPSC regulations.

Your comments, opinions, etc. should be expressed directly to:

Mr. S. John Byington, Chairman
Consumer Product Safety Commission
1750 K Street, N.W.
Washington, DC 20036

Please be assured that Union Carbide will take an active part in a hearing or in any other phase of the CPSC procedure where such action is appropriate and necessary to assist our customers. Please let us know if you require additional information or wish to discuss this matter in more detail.

Very truly yours,


John L. Myers
Marketing Manager

A20922

/cjb
Enclosures

P.S. It is obviously at your discretion, but we would appreciate receiving copies of correspondence between your company and the CPSC.

UNION CARBIDE CORPORATION

270 PARK AVENUE

NEW YORK, N.Y. 10017

A. S. Hart
Vice-President

May 26, 1977

The Honorable
S. John Byington
Chairman
Consumer Product Safety Commission
1111 18th Street, N.W.
Washington, D.C. 20207

Dear Mr. Chairman:

This letter is in regard to potential action by the Consumer Product Safety Commission on the second petition by the Natural Resources Defense Council to effect an immediate ban on certain asbestos-containing spackling and tape joint compounds to prevent their further use by consumers.

Union Carbide is engaged in the mining and milling of asbestos ore at a plant in California and markets asbestos for use in numerous applications including tape joint compounds.

We are not opposed to a ban on the consumer use of the products in question, even though we do not believe that the use of asbestos in these products presents a significant health hazard. What we are proposing is that a ban be implemented through Section 8 of the Consumer Product Safety Act, so that the Commission will have access to the full implications of its ruling.

To supplement this request, we call your attention to the communication the Asbestos Information Association sent to you on September 1, 1976. Our concern is two-fold:

1. An immediate ban, especially if coupled with a product call-back, would cause an unnecessary hardship for our customers who manufacture spackling compounds.
2. The wording and/or interpretation of your ruling could inadvertently inhibit or prohibit the use of asbestos-containing tape joint compounds by commercial applicators.

A20923

"Ready-Mix" (pre-wetted) tape joint compounds for commercial as contrasted to consumer use are normally packaged in 5-gallon pails (62.5 pounds) or in 50-pound polyethylene bags in cardboard boxes. "Dry-Mix" compounds are packaged in 25-pound bags which yield about 50 pounds of compound when water is added. These packages contain enough material to finish the drywall in three rooms and are normally marketed through wholesale channels to commercial applicators. This quantity of material is substantially greater than required for normal consumer use. However, some building supply outlets stock these packages for small contractors and they would, therefore, be available to a "consumer." If these commercial packages are judged to be "...packaged in a form suitable for use in the household," the ban requested by the NRDC will, in effect, apply to the commercial as well as the consumer market.

Asbestos-free spackling and tape joint compounds have proved to be technically inferior and a ban on the package sizes mentioned above, which are targeted for commercial users, would destroy the market.

In summary, we feel that because of the relatively insignificant consumer hazard and the potential deleterious effect on the commercial market, we respectfully recommend that you implement a ban on the products in question via Section 8, the "proposal and hearing" procedure. This would provide industry with the opportunity to contribute information on the size and value of the consumer market and to respond concerning what effect your rulemaking could have on the commercial market.

We would be glad to work with you on the wording of your proposal to limit or negate its effect on the commercial market for asbestos-containing tape joint compounds.

Sincerely,

(Original signed by)

A. S. Hart

CC: Commissioners Pittle, Franklin, Kushner and Garrett
Messrs. Kapps, Garrish and Hobby

A20924



ASBESTOS INFORMATION ASSOCIATION

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1 September 1976

Mr. S. John Byington
Chairman
Consumer Product Safety Commission
1750 K Street, N.W.
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Re: Petition of Natural Resources Defense
Council, Inc., and the Consumers Union
of U.S.A., Inc., for the Promulgation
of a Rule Declaring Certain Patching
Compounds to be Banned Hazardous
Substances

Dear Chairman Byington:

The Asbestos Information Association/North America, an incorporated, non-profit organization of firms and corporations engaged in the manufacture or processing of asbestos-containing products and in the mining and milling of asbestos fiber, desires to comment on the petition to the Commission submitted July 15, 1976 by the Natural Resources Defense Council, Inc. and the Consumers Union of U.S.A., Inc. The petitioners seek an order by the Commission to ban patching compounds containing asbestos by declaring such compounds to be hazardous products.

Comments contained in the attachment have been prepared following consultation with member companies of the Association and other expert sources of information.

We are pleased to have this opportunity to present our comments and to advise that, if desired, we are prepared to further address this matter with you or members of your staff.

We wish to inform you that Ms. Shacter of the Commission staff has been highly efficient and responsive to her public interest charge in the conduct of business with this Association. We commend to your attention her professionalism and pleasant demeanor.

Sincerely yours,


R. H. Mereness
Executive Director

Enclosure

A20923



ASBESTOS INFORMATION ASSOCIATION

1835 K Street, N.W., Washington, D.C. 20006 • (202) 223-4885

Response to Consumer Product Safety Commission
on petition by Natural Resources Defense Council,
Inc. and Consumers Union of U.S.A., Inc. for the
Promulgation of Rule Declaring Certain Patching
Compounds to be Banned Hazardous Substances, dated
July 15, 1976.

30 August 1976

A20923

I INTRODUCTION

On July 15, 1976, a petition was filed by the Natural Resources Defense Council, Inc. (NRDC) and Consumers Union of U.S.A., Inc. with the Consumer Product Safety Commission pursuant to paragraph 2 of the Federal Hazardous Substances Act, 15 U.S.C. paragraph 1261 (1974) requesting that consumer patching compounds containing asbestos be banned as hazardous substances. Patching compounds were indicated to include taping, spackling and joint sealing and joint sealing compounds. The petition alleged that continued use of these compounds "... will result in a significantly higher incidence of cancer (including lung cancer and mesothelioma)" and "that no cautionary label would adequately protect the public from the risk of illness associated with patching compounds."

The Asbestos Information Association/North America is an association of 32 producers of asbestos and asbestos containing products. Members of the Association are directly affected by the petition and wish to enter this response into the record.

II USE OF ASBESTOS IN PATCHING COMPOUNDS

Composition of Drywall Compounds

The petitioners note correctly that the principal use of patching compounds by consumers is in home drywall construction and repair. This discussion therefore will focus on the material generally used for the application, tape-joint compound (TJC).

There are two principal types of joint compound. One uses a latex or water-soluble glue as a binder and "sets" by evaporation of the water. The other uses dehydrated gypsum as the binder (and the principal dry ingredient), or gypsum in combination with water soluble binders, and sets by chemical reaction as the gypsum combines with water of hydration. The evaporative type, composed mainly of limestone, lesser amounts of mica and 3-5 percent asbestos plus the binder, controls about 80 percent of the market, and usually is sold in the ready-mixed, wet form. The hydrating type (gypsum-based), with roughly 20 percent of the market, also typically contains asbestos and must, of course, be sold dry and mixed just before use.

Asbestos is added to these compounds for two principal reasons:

1. It imparts properties to the compound (mud) which make it flow easily and smoothly when trowelled on, while still remaining viscous enough to stay in place during the initial stages of hardening.

A20927

It also is appropriate to examine the significance of the quart of compound cited in the petition as the typical purchase size. A quart of ready-mix compound weighs a little over three pounds and will finish about 45 square feet of drywall. This is less than two of the standard size 4' X 8' gypsum board sheets and appears to be a reasonable quantity for the usual do-it-yourself craftsman.

Most of the packaging and distribution of products to the consumer market is done by one or two of the large building products companies, several larger companies that specialize in the consumer tape joint compound field, and a substantial proportion of the major paint manufacturers who market through their own distribution outlets. The medium to large regional manufacturing companies which have a substantial share of the commercial TJC business generally are not involved. Consumer TJC is distinguishable from commercial TJC in that the consumer product finally passes into and through mass distribution retail outlets.

The question of container size is particularly relevant to the issue raised by the petition. TJC for retail distribution typically is packaged either in a one gallon container of the wet type or in a one pound or five pound package of the dry type. The largest clearly identified consumer product found in our brief survey, was a kit containing 18 lbs. of wet compound plus tape which was intended for use in the installation of 250 sq. ft. area, i.e., a small room. Some large retail stores, however, stock limited quantities of commercial 5 gallon pails for the convenience of the smaller commercial contractor. While it is conceivable that a home-craftsman might purchase one of these 5 gallon pails, it would be a rare home repairman who would undertake a complete three room finishing job. Ready-mix compound intended for commercial use, by contrast, universally is packaged either in 5 gallon pails (62.5 lbs.) or in 50 lb. polyethylene bags in cardboard boxes. Dry-mix compound is packaged in 25 lb. bags which yield approximately 50 lbs. of compound when water is added. If these commercial containers are to be "... packaged in a form suitable for use in the household" the ban requested by the petitioners will apply, not just to the consumer market (5% of the total), but to the entire market, commercial as well as consumer.

III ASBESTOS EXPOSURE DURING DRYWALL INSTALLATION

The petitioners do not provide any data which show the level of exposure that occurs during use of the compounds at a scale and under conditions likely in consumer use. The only data presented is that of Rohl et al (Reference 7) obtained during a test performed at one location by commercial drywall workers. Materials were handled on a much larger scale than that which must be considered here. Exposures recorded were high, and it is alleged that exposures in consumer use would be similar.

A20028

The concentrations described above all were ceiling concentrations obtained during sanding operations. In most cases even commercial operators do not sand for an entire shift so that the 8-hour time weighted average exposure will be considerably less. TWA values for the study cited (1) are shown in the table below:

SUMMARY OF AIRBORNE ASBESTOS
Fiber Concentrations During Drywall Sanding

<u>Location</u>	<u>Ceiling Exposure</u> <u>(Fibers/cc > 5µm)</u>	<u>Exposure Time</u> <u>During Sanding</u> <u>(Hours)</u>	<u>Estimated 8-hour</u> <u>TWA Exposure</u> <u>(Fibers/cc)</u>
New York City, N.Y.	0.4	8.0	0.3
Hialeah, FL	1.0	4.0	0.4
Ft. Lauderdale, FL (Hand)	1.1	1.0	0.1
Detroit, MI	1.3	8.0	0.9
Dallas, TX	1.8	0.5	0.1
Ft. Lauderdale, (Pole)	3.4	3.3	0.6
Niagara Falls, N.Y.	3.6	0.6	0.2

It is our contention that these lower values are much more representative of exposure during commercial operations than those cited by the petitioners. It is also our contention that, because smaller quantities are handled, peak consumer exposures generally will be no greater than the commercial ceiling exposures recorded above. And, since consumers work with tape joint compound infrequently, average or TWA exposures for consumers will be much lower than for commercial operators.

IV THE MEDICAL EVIDENCE

Petitioners cite, in support of their position, a selection of pieces from the medical, scientific and popular literature, some of which items are of questionable value in furthering the regulatory process. Because time does not permit a detailed analysis of each reference cited, we can only offer a few cautionary considerations to be borne in mind when studying the petition:

A20929

qualified experts would conclude that:

1. Asbestos, when inhaled, causes fibrosis (asbestosis).
2. Asbestos, when inhaled, is associated with the development of malignant tumors of the bronchial system and lung and with mesothelioma, (in other words, asbestos is a carcinogen).

Few, if any students of the subject would disagree with the conclusion that there is a dose-response relationship between exposure to airborne asbestos and the development of asbestosis. There is also a substantial body of expert opinion which supports the premise that there is a dose-response relationship between exposure to most, if not all, carcinogens and the development of cancer. There is no reason to believe, from the data available to us, that asbestos is an exception to this generality; although, at this time, no one definitely can say at what exposure level asbestos becomes a cancer hazard to man.

Our view of the literature indicates that no credible epidemiological studies have been published which would suggest an excess of malignant tumors among persons exposed to no more than 2 asbestos fibers per cc of air (TWA), using the prescribed membrane filter test method. This is a fact simply because there have yet been identified for study no populations the exposure experience of which consistently has been as low as 2 fibers. Since all populations studied to date have been exposed to substantially higher concentrations of airborne asbestos, we can conclude only that an excess of all types of asbestos disease is associated with levels of exposure significantly higher than the level currently mandated to become effective on July 1, 1976."

Johns-Manville Corporation, the largest producer of fiber in the western world and the largest manufacturer of asbestos-containing products in the United States, also conducted a detailed medical review and the following conclusions were included in their statement to OSHA. Exhibits B and C from the Johns-Manville response are attached hereto for reference.

From page 4:

"2. J-M's Review of the Medical References Cited By OSHA

We have reviewed in considerable detail all of the references cited by OSHA, and conclude from this study that these references totally fail to provide

A20356

"B. Criteria in Human Studies

Types of evidence suggesting that an agent is carcinogenic in humans include: neoplastic response directly related to exposure (both duration and dose), incidence and mortality differences related to occupational exposure; incidence and mortality differences between geographic regions related to difference exposures rather than genetic differences and/or altered incidence in migrant populations; time trends in incidence or mortality related to either the introduction or removal of a specific agent from the environment; case control studies; and the results of retrospective-prospective and prospective studies of the consequences of human exposure. Clinical case reports may also provide early warning of a potential carcinogen. Negative epidemiologic data may not establish the safety of suspected materials. Negative data on a given agent obtained from extensive epidemiologic studies of sufficient duration are useful for indicating upper limits for the rate at which a specific type of exposure to that agent could affect the incidence and/or mortality of specific human cancers (Emphasis added.) "

"E. Extrapolation from Experimental Data and Evaluation of Human Risks

The criteria listed above provide a guide to determining whether a compound is carcinogenic under a specific set of exposure conditions in a given species or subpopulation. Quantitative extrapolation from animal studies for the purposes of evaluating human risks entails large uncertainty at the present time. Each case must be individually evaluated, taking into consideration such factors as adequacy of experimental design, statistical significance of the data, dose-response relations, duration of exposure, route of administration, metabolism (including species variations), host susceptibility, co-factors and other modifying factors, and the amount of the material to which humans will be exposed. The criteria for extrapolation may vary depending on the agent in question. (Emphasis added.)"

The National Cancer Institute report does not appear to support the OSHA position that the concept of a "no effect" or "threshold level" may have little real significance.

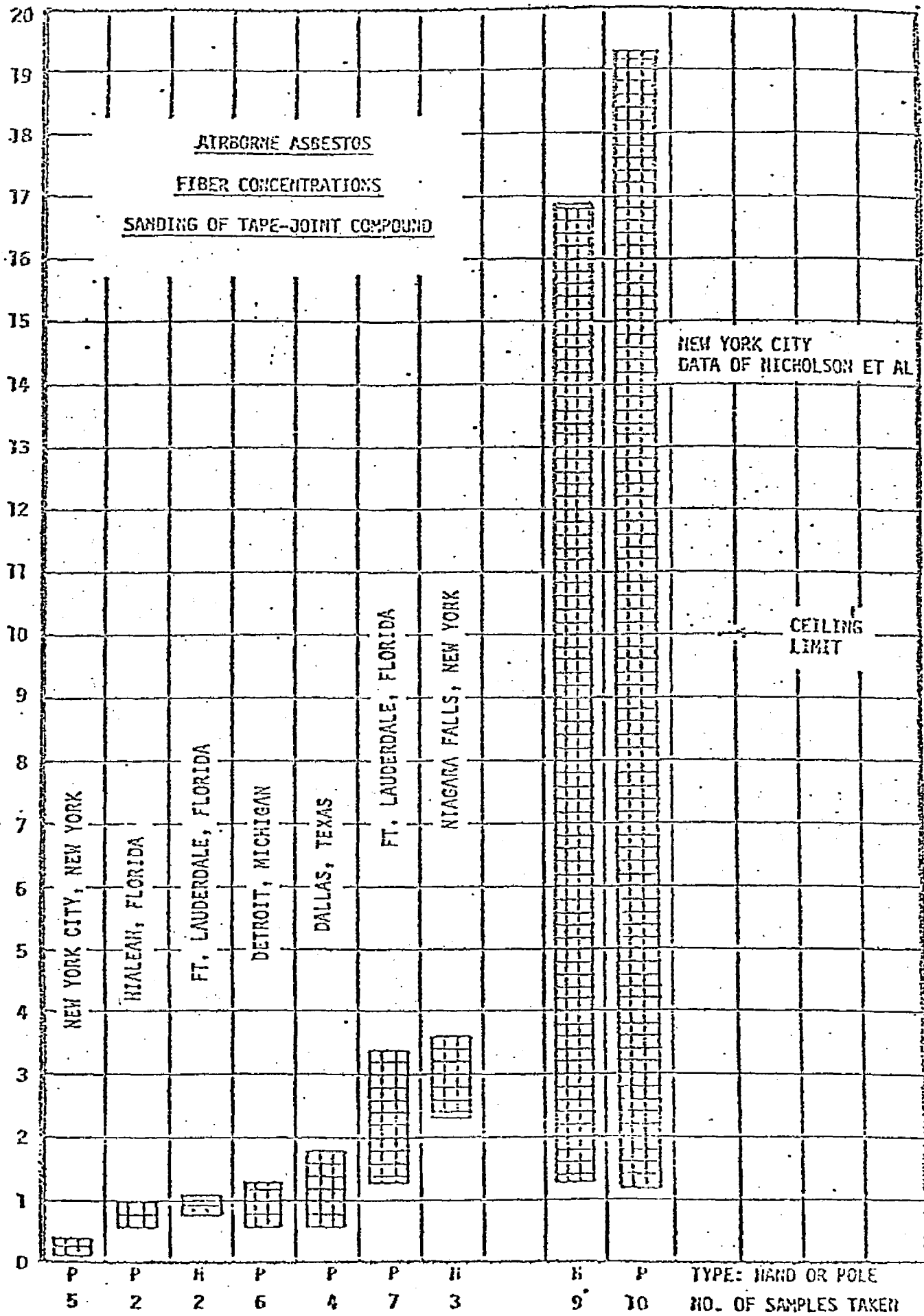
V STATEMENT OF POSITION

A20931

For the reasons cited above, it is the position of the AIA/NA that:

1. Because consumers use tape joint compounds in small quantities and at infrequent intervals, the levels of airborne asbestos to which consumers will be

AIRBORNE ASBESTOS FIBER CONCENTRATION (Fibers/cc longer than 5 micrometers)



A20932

UCC 007504

Figure 1

Keywords
Pollution
Effluents
Pollution control
Standards
Toxicity
Carcinogens

Abstract

The U.S. Environmental Protection Agency has established effluent limitations and standards for regulating the discharges from pulp, paper, and paperboard mills. The Agency has recently signed a consent decree (June 1976) as a result of litigation brought by five public interest groups. The consent decree requires the Agency to establish revised effluent limitations and standards regulating the discharge of up to 65 classes of pollutants from pulp, paper, and paperboard mills, builders paper mills, and converted paper plants. The regulations must be promulgated within 3 years and would be applicable to new facilities, to existing facilities (on or before 1983), and to users of publicly owned treatment works.

Revision of the 1983 effluent guidelines

The role of toxic compounds

Craig Vogt

Under the authority of the Federal Water Pollution Control Agency (FWPCA), the U.S. Environmental Protection Agency (EPA) has established effluent limitations for existing sources, standards of performance for new sources (NSPS), and pretreatment standards for discharges to publicly owned treatment facilities for 43 industrial categories (including the pulp, paper, and paperboard industry). Regulations have been established for existing sources which had to be met by July 1, 1977, through application of the best practicable control technology currently available, and by July 1, 1983, through application of the best available technology economically achievable (BATEA). The basis for the NSPS is the best available demonstrated technology (BADT). The regulations are required under sections 301, 304, 306, 307(b), and 307(c) of the FWPCA and (except for pretreatment) are intended for use in the section 402 NPDES program.

In order to develop effluent limitations and standards for the pulp and paper industry, the industry was divided into two phases: unbleached and bleached production. Regulations for the unbleached or Phase I segment of the industry were promulgated in May

1974, challenged in litigation, and affirmed by the U.S. Court of Appeals in August 1976. Regulations for the 1977 effluent limitations for the Phase II segment were promulgated in January 1977 and are presently in litigation. The regulations for the Phase II 1983 effluent limitations and NSPS were proposed in February 1976. Pollutants controlled by the regulations include such classical pollutant parameters as BOD₅, TSS, and pH but do not include toxic compounds required to be regulated under section 307 (a).

To urge the EPA to proceed to develop regulations for the control of additional pollutants including toxic pollutants, five public interest groups filed civil suits in the U.S. District Court in the District of Columbia against EPA. The public interest groups were the following: Natural Resources Defense Council, Inc.; Environmental Defense Fund, Inc.; Businessmen for the Public Interest, Inc.; National Audubon Society, Inc.; and Citizens for a Better Environment, Inc. The litigation was settled out of court and a consent decree was signed by the Agency and approved by the U.S. District Court on June 7, 1976.

REQUIREMENTS OF AGREEMENT

The consent decree, or Settlement Agreement, requires the Agency to develop and promulgate regulations which establish effluent limitations and guidelines for existing sources to be met

no later than June 30, 1983, in effect requiring the application of BATEA which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, including toxic pollutants. The Settlement Agreement also requires establishment of standards of performance for new sources requiring the application of BADT and pretreatment standards for existing and new sources for controlling discharges of toxic materials into publicly owned treatment facilities.

The pollutants which are to be regulated are specified in the Agreement, and these include 65 individual or classes of compounds as shown in Table I. The Agency must also identify the types of mills discharging the compounds shown in Table II.

Regulations must be established for 21 major industry categories specified in the Settlement Agreement, and these are shown in Table III. The Settlement Agreement requires that regulations be established for pulp, paper, and paperboard mills, builders paper mills, and converted paper plants. The SIC codes to be covered within the pulp and paper industry are shown in Table IV.

The schedule for promulgating the limitations and standards is also set. For the pulp and paper industry, the regulations must be promulgated by September 30, 1979, which allows one year for contractor studies beginning June 30, 1977. The regulations are to be

Craig Vogt, U.S. Environmental Protection Agency, Waterside Mall, 401 M Street SW, Washington, D.C. 20460.

Table I. Settlement Agreement Pollutants

Accroplithene	DDT & metabolites	Mercury & compounds
Acrolein	Dichlorobenzene	
Acrylonitrile	Dichlorobenzidine	Napthalene
Aldrin/dieldrin	Dichloroethylenes	Nickel & compounds
Antimony & compounds	2, 4-dichlorophenol	Nitrobenzene
Arsenic & compounds	Dichloropropane & dichloropropene	Nitrophenols
Asbestos	2, 4-Dimethylphenol	Nitrosamines
	Dinitrotoluene	
	Diphenylhydrazine	Pentachlorophenol
Benzene		Phenol
Benzidine		Phthalate esters
Beryllium & compounds	Endosulfan & metabolites	Polychlorinated biphenyls
	Endrin	Polynuclear aromatic hydrocarbons
	Ethylbenzene	
Cadmium & compounds		Selenium & compounds
Carbon tetrachloride	Fluoranthene	Silver & compounds
Chlordane		2, 3, 7, 8 - Tetrachlorodibenzo-p-dioxin
Chlorinated benzenes	Haloethers	
Chlorinated ethanes	Halomethanes	Tetrachlorethylene
Chloralkyl ethers	Heptachlor & metabolites	Thallium & compounds
Chlorinated napthalene	Hexachlorobutadiene	Toluene
Chlorinated phenols	Hexachlorocyclohexane	Toxaphene
Chloroform	Hexachlorocyclopentadiene	Trichloroethylene
2-Chlorophenol		
Chromium & compounds	Isophorone	Vinyl chloride
Copper & compounds		
Cyanides	Lead & compounds	Zinc & compounds

Table II. Settlement Agreement Pollutants (Secondary)

Acetone	Dialkyl ethers	Nitrites
n-Alkanes (C ₁₀ - C ₃₀)	Dibenzofuran	Secondary amines
Biphenyl	Diphenyl ether	Styrene
Chlorine	Methylethyl ketone	Terpenes

proposed within 6 months of completion of the economic contractor studies (due 3 months after technical studies) and promulgated 6 months after proposal.

The 65 compounds shown in Table I were determined for inclusion in the Settlement Agreement through the efforts of a special Agency ad hoc work group assisted by consultants and environmental interest groups. The group developed an initial list of 232 candidate pollutants of concern from information supplied from the Agency's Office of Toxic Substances, Water Supply, and Water Planning and Standards, the National Science Foundation, the Environmental Defense Fund, and the Natural Resources Defense Council. Additional information was obtained from the National Institute of Occupational Safety and Health, the International Agency for Research on Cancer, and the National Cancer Institute.

Each of the pollutants on the initial list was researched to determine human carcinogenicity, other chronic toxicity, aquatic toxicity, bioaccumulation, persistence, and presence in effluents, aquatic environment, drinking water supplies, and media sources (air, water, and food) of the pollutant. The initial list of 232 substances was reduced to the 65 individual compounds or classes of compounds through examination of

such criteria as (1) known occurrence in point source effluents, in the aquatic environment, in fish, or in drinking water, (2) carcinogenicity, mutagenicity, or teratogenicity in human epidemiological studies or in animal bioassays, and (3) known toxic effects on humans or aquatic organisms.

In order to develop a specific list of pollutants which are to be considered in setting the effluent regulations, the 65 compounds were examined by the Agency and a specific list of 123 pollutants was determined. The selection of the specific compounds was based upon a number of criteria including (1) the frequency of occurrence of the compounds in receiving waters, (2) the availability of chemical standards for analytical requirements, (3) the production and number of plants involved in the manufacture of the compounds, and (4) the chemical stability and structure of the compound.

PROGRAM STRATEGY

The agency's approach to satisfying the requirements of the Settlement Agreement involves the staff included in the office of Water Planning and Standards which is included in the organizational structure under the Office of Water and Hazardous Materials.

Table III. Industries Covered by Consent Decree

1. Timber Products Processing
2. Leather Tanning & Finishing
3. Steam Electric Power Plants
4. Iron & Steel Manufacturing
5. Petroleum Refining
6. Nonferrous Metals Manufacturing
7. Paint & Ink Formulation & Printing
8. Auto & Other Laundries
9. Paving & Roofing Materials
10. Ore Mining & Dressing
11. Coal Mining
12. Textile Mills
13. Soap & Detergent Manufacturing
14. Plastic & Synthetic Materials Manufacturing
15. Pulp & Paperboard Mills; Converted Paper Products
16. Rubber Processing
17. Miscellaneous Chemicals
18. Machinery & Mechanical Products Manufacturing
19. Electroplating
20. Inorganic Chemicals Manufacturing
21. Organic Chemicals Manufacturing

Table IV. Settlement Agreement: Pulp and Paper Industry

Pulp, paper, and paperboard mills; converted paper products

- SIC 2611 - Pulp Mills
- SIC 2621 - Paper Mills, Except Building Paper Mills
- SIC 2631 - Paperboard Mills
- SIC 2641 - Paper Coating and Glazing
- SIC 2642 - Envelopes
- SIC 2643 - Bags, Except Textile Bags
- SIC 2645 - Die-Cut Paper and Paperboard and Cardboard
- SIC 2646 - Pressed and Molded Pulp Goods
- SIC 2647 - Sanitary Paper Products
- SIC 2648 - Stationary, Tablets, and Related Products
- SIC 2649 - Converted Paper and Paperboard Products, Not Elsewhere Classified
- SIC 2651 - Folding Paperboard Boxes
- SIC 2652 - Set-Up Paperboard Boxes
- SIC 2653 - Corrugated and Solid Fiber Boxes
- SIC 2654 - Sanitary Food Containers
- SIC 2655 - Fiber Cans, Tubes, Drums, and Similar Products
- SIC 2661 - Building Paper and Building Board Mills
- SIC 2782 - Blankbooks, Looseleaf Binders and Devices

A20936

and Standards, four separate divisions have specific responsibilities in a program which has been designed to fully integrate the Agency's regulatory programs under sections 301, 304, 306, and 307 and which is keyed to the effective control of toxic and hazardous pollutants discharged by industrial point sources. These divisions include the Effluent Guidelines Division (EGD), Criteria and Standards Division (CSD), Monitoring and Data Support Division (MDS), and the Office of Analysis and Evaluation (OAE). Section 301 (d) of the FWPCA requires the Agency to review and revise, if necessary, the effluent limitations within 5 years, and the Agency's approach to responding to the Settlement Agreement will also satisfy this requirement. The program strategy is to integrate studies of the health and environmental effects of individual pollutants or families of pollutants along with industry-by-industry technical and economic studies to provide a final framework for regulating the 123 pollutants. These studies will be conducted primarily by private consulting firms contracted to the Agency.

Health/Environmental Studies

The CSD and the MDS are responsible for conducting studies into the health and environmental impacts of the 65 classes of compounds. These studies will gather, develop, and analyze scientific, technical, economic, analytical, and background information pertaining to the evaluation of potential human-related or ecological-related hazards in the water environment of the 65 compounds listed in Table I and the 12 compounds listed in Table II. The studies will include geographical and quantitative identification of the toxic pollutants in water, fish, wildlife, air, and on land; geographical and quantitative identification of importing, manufacturing, distribution, consumption, uses, disposal, and fate of the pollutants; relative significance of indirect and direct discharges of the pollutants to the total environment burden; and the identification of geographical and environmental areas of concern and the potential sources of each of the pollutants.

Economic Impact Studies

The OAE is responsible for economic studies which will examine the economic impact of achieving the effluent limitations and standards. Preliminary analyses will be conducted to establish ranges of acceptable, marginal, or unacceptable costs associated with installation of pollution control technologies. The purpose of the preliminary analyses is to provide the EGD with some information relative to the magnitude of the costs which can be

various industries. Thus, economic studies will be integrated into the program at the outset which will minimize problems with coordination, sub-categorization, and setting of effluent limitations.

Technology Studies

The EGD has the responsibility for investigating alternative pollution control technologies which can be applied to each subcategory for reduction of the compounds in Table I. Costs for each of the treatment alternatives will be determined in addition to the effluent reduction capabilities. In the course of collecting information and data for these efforts, it is anticipated that extensive use of section 308 requests for information and data from individual plants will be used. This will place a responsibility on industry to provide data and on the Agency's contractor and in-house resources to analyze the data and complete the engineering studies. Within the Agency, the Office of Research and Development and the Regional Office staffs (Surveillance and Analysis Division) will also provide information and data from on-going projects and plant surveys.

In addition, sampling of mill raw water supplies, raw waste waters, and final effluents will be conducted by the contractor. These sampling surveys will be conducted in two phases. The initial survey efforts (termed "screening" surveys) will include approximately one or two plants in each subcategory, and, in the second, all 123 pollutants are to be measured. Present plans are to collect one 72-hr composite sample from the mill's raw water, raw wastewater, and final effluent. Following analysis of the screening survey results, the second phase surveys ("verification surveys") will be conducted at approximately five plants in each subcategory, and more extensive sampling will be conducted including at least 3 days of sampling efforts during which 24-hr composite samples will be collected. It is anticipated that many of the 123 pollutants will not be found in significant amounts in the screening survey samples, and thus the verification survey samples will hopefully be analyzed for much fewer than the original 123 pollutants. In addition to measuring the 123 pollutants, the classical pollutant parameters (such as BOD₅ and COD) will also be measured because correlations between the 123 pollutants and the more classical parameters may exist and surrogate parameters may be desirable to be used to regulate the 123 pollutants.

These sampling surveys are a major focus of a program which has been designed to use Agency resources initially to identify informational and data re-

quirements. Following these efforts, emphasis is to be placed on industry to provide the extensive information and data required. The initial data base put together by the Agency will thus include all available information and data from the literature, from mill sources, and from mill sampling surveys. It is presently anticipated that this initial information and data base will be used as a basis to request by the section 303 mechanism, if necessary, on-site monitoring (sampling and analysis) of mill effluents by mill personnel over extended periods of time. The Agency is hopeful that the industry will initiate self-monitoring programs at an early stage of the regulations development in order to generate an extensive data base.

The effluent limitations and standards will be determined using the information and data derived from all of the above studies. Depending upon the assessment of health and environmental risk avoidance and the economic impact, one of the treatment technology alternatives will be selected as the basis for the limitations and standards.

SUMMARY

In summary, the Office of Water Planning and Standards strategy is to: (1) integrate its control options for water quality constituents of concern under sections 301, 304, 306, 307 into one program; (2) initiate a series of health/environmental, economic, and technical studies to support the ranges of regulatory options; (3) complete health and environmental effects studies, pollutant-by-pollutant, as well as for other constituents associated with the section 304(a) water quality criteria mandate; (4) complete a general overview study; (5) accomplish technical and economic studies, industry-by-industry and place increased emphasis on statistics and technology demonstration; and (6) use sections 301, 304, and 306 in most cases to achieve effective control of the substances of concern. However, if a BATEA technology level is not deemed sufficient control, and the health/environmental risks are severe, section 307 (a) will be used to require more stringent, environmentally protective controls. Section 307(b) and (c) would continue to control indirect dischargers. The water quality monitoring program will be used where possible as a feedback mechanism to determine the effectiveness of the final regulations over the long term. If more stringent controls are determined to be necessary, the section 302 and 303 processes will be used to achieve the desired control.

Received for review May 24, 1977.

Accepted May 24, 1977.

Based on a paper published in *TAPPI Conference Papers - 1977 Environmental*, a copyrighted publication of the Technical Association of the Pulp and Paper Industry, Inc., Atlanta, Ga.



INTERNAL CORRESPONDENCE

METALS DIVISION

P. O. BOX 579 • 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 14302

To (Name) Messrs. C. R. Allenbach
Division R. E. Byrne, Jr.
Location J. L. Myers
E. W. Shortridge
W. C. Thurber

Copy to File ✓

Date August 18, 1977
Originating Dept. "Calidria" Asbestos
Answering letter date
Subject Revised EPA Effluent
Guidelines

As you may be aware, the EPA settled a law suit by a group of environmental activists by agreeing to promulgate effluent regulations for a wide variety of toxic substances by 1983. An article describing the program and an EPA response to a request by Nicolet, Inc., for a NPDES permit are attached for your information. The latter is interesting in that the deadline for the control equipment to be operational is 1981 not 1983 and zero discharge of fibers longer than 5 μ , not all asbestos fibers is required.

H. B. Rhodes
H. B. Rhodes *dal*

HBR:dal
Attachments

A20933

NOTICE OF ISSUANCE
NPDES PERMIT

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III
PERMIT BRANCH
SIXTH & WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106
TELEPHONE: (215) 597-9800

PENNSYLVANIA DEPARTMENT OF
ENVIRONMENTAL RESOURCES
1875 NEW HOPE STREET
NORRISTOWN, PENNSYLVANIA 19401
TELEPHONE: (215) 631-2432

Notice is hereby given that the Environmental Protection Agency, after public notice, has on this date issued a National Pollutant Discharge Elimination System permit pursuant to PL 92-500, the Federal Water Pollution Control Act Amendments of 1972 (the Act), to:

1. Nicolet Industries, Inc.
Norristown, Pennsylvania
EPA: PA 0013471
2. Certain-Teed Products Corporation
Ambler, Pennsylvania
EPA: PA 0012483
3. Nicolet Industries, Inc.
Ambler, Pennsylvania
EPA: PA 0011991

This notice is provided pursuant to 40 CFR, Part 125.35 (b) (2), which requires the Regional Administrator, to provide a notice of permit issuance or denial to any persons on the mailing list maintained by the Regional Administrator. Such notice is to briefly indicate any significant changes which have been made from terms and conditions set forth in the fact sheet and the draft permit. The significant changes are as follows:

Changes to all three permits

1. These facilities will be required to cease discharge of all process-related wastewater by January 1, 1981. The limitations pages have been changed accordingly.
2. The following asbestos limits have been added under Part III:
 - A. There shall be no discharge of any asbestos particle larger than five (5) microns in length.

A20934.

- B. Asbestos shall be sampled once/month by visual microscopy and once/quarter by electron microscopy. In addition to reporting the number of fibers/liter, permittee shall report the size of the largest fiber found and the number (if any) of fibers/liter larger than five microns in length.

The analytical method for visual microscopy can be found in: Julian and McGrone, Microscope 18, 1 (1970). The method for electron microscopy is given in: Anderson, "Interim Procedure - Transmission Electron Microscopic Method For Asbestos Analysis", USEPA (Athens), 1976.

3. All schedules of compliance have been deleted and the following schedule substituted:

First Report of Progress	January 1, 1978
Report of Progress	July 1, 1978
Final Plan Approved	January 1, 1979
Begin Construction	July 1, 1979
Report of Progress	January 1, 1980
Report of Progress	July 1, 1980
Attainment of Operational Level	January 1, 1981

These changes have been made in accordance with new Regional Policy developed with regards to asbestos discharge.

PA 0013471

4. The interim limitation page (effective date through June 30) has been deleted.
5. Page 12, 13, & 14, titled "Proposed Other Conditions" have been deleted because the applicant has already achieved compliance with these provisions through state order.

PA 0012483

6. The first date of the limitations page has been changed to July 1, 1977.
7. The requirement dealing with the solid waste disposal area, formerly number 2 in Other Requirements, has been deleted since this requirement has been met. The requirement dealing with BOD-5, formerly number 1 in Other Requirements, has been renumbered to letter "C".

PA 0011991

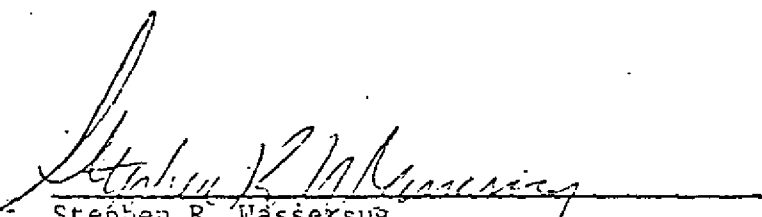
8. The interim limitations pages (effective date to September 30, 1976; October 1, 1976 to June 30, 1977) have been deleted.
9. The pages titled "Proposed Other Conditions" have been deleted because the applicant has already achieved compliance with these provisions through state order.

It is the judgement of the Regional Administrator that the terms and conditions of the permit, which include the significant changes presented above will not interfere with the attainment or maintenance of water quality standards and does provide for the application of best practicable control technology by July 1, 1977. This determination is based upon a review of water quality data and studies.

The permit will become effective July 30, 1977 , and will expire at midnight, July 30, 1982.

The draft permit, finalized permit, and all related documents are on file at the Region III office of the Environmental Protection Agency, Sixth and Walnut Streets, Curtis Building 2nd Floor, Philadelphia, Pennsylvania 19106. The documents may be inspected and arrangements made for copying between 9 am and 4 pm Monday through Friday, except during Federal Holidays.

Please bring the foregoing matter to the attention of persons whom you know would be interested.


Stephen R. Wassersug
Director, Enforcement Division

A20930



INTERNAL CORRESPONDENCE

METALS DIVISION

P. O. BOX 579 • 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 14302

To (Name) Dr. C. R. Allenbach
 Division UCC - Metals Division
 Location Niagara Falls, NY

Date July 20, 1977

Originating Dept. "Calidria" Asbestos

Answering letter date

Copy to Messrs. R. E. Byrne, Jr.
 B. L. Ingalls
 J. L. Myers
 E. W. Shortridge
 W. C. Thurber
 F. B. Twitty
 R. G. Woolery

Subject Toxic Substances Control
 Act Listings

File ✓

This is in reference to the portion of my letter of June 16, 1977, relating to materials manufactured or potentially manufactured in the Niagara Falls pilot plant. The matter has been discussed with Bob Woolery and he states that there are no plans or serious prospects of manufacturing either of the acid-leached products. Mr. Thurber concurs, so we will drop any further consideration of these products.

Present emphasis is on the combined silane and silica treated material. This product is manufactured in the same manner as RG-244 except that Y-9187 silane is added at a level of about 6%. Y-9187 is octyl triethoxy silane $[C_8 H_{17} Si (C_2 H_5 O)_3]$.

The impurities, intermediates, by-products and wastes in this process are ethanol and small amounts of unreacted silane.

If you need any further information, please let me know.

H. B. Rhodes
 H. B. Rhodes

HBR:da1

A20940

UCC 007512