

WR Grace documents

WR GRACE DOCUMENT INDEX

WR Grace Knowledge of Asbestos Health Hazards
WR Grace Knowledge of Inadequacy of TLV
WR Grace Knowledge of Respirator Needs
WR Grace to Knowledge of Substitutes
WR Grace Response to Knowledge

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS

WR Grace Knowledge of Asbestos Health Hazards Date 1/13/65

Document Description: JA Kelley to GW Blackwood

Quote: "Of course, we realize that any dust can be harmful and the only answer is control." (p. 2)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date

Document Description: George and Leonard Article

Quote: "The clinical facts on which Dr. Hawes based his diagnosis and prognosis of asbestosis were as follows: ... (5) that asbestosis was a progressive disease once contracted, whether the individual remained in the industry or was removed." (p. 197)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date

Document Description: George and Leonard Article

Quote: "The late John B. Hawes, Jr., M.D., who was one of our distinguished specialists on tuberculosis always forcefully expressed his opinion regarding an individual who worked in a dust hazard, claiming that exposure for three years or more made the individual a potential case of asbestosis." (p. 197)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 1934

Document Description: Report of visit to Dewey and Almey and Multibestos, 11/27/34, 11/28/34, and 12/11/34, by HB Elkins.

Quote: Report on Multibestos Company:

"There have been numerous cases of asbestosis developed here, and as a result the methods of manufacture have been greatly modified. The carding process has been dropped, the yarn being bought already spun, and a wet weave substituted for a dry weave process. Mr. Bateson said that more cases of asbestosis were developed in the weave room where the dust count was about seven and a half-million particles per cubic foot, than in the carding room, where the dust count was much higher." (p. 5)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 1/23/37

Document Description: Dangerous Dusts. By John B. Hawes. NEJM.

Quote: "There is not the slightest doubt, however, in my mind at least, that asbestos dust is the most dangerous of all dusts. Asbestosis is able to produce total and permanent disability in a remarkably short length of time, even after only 2 or 3 years' exposure and occasionally less, as compared with the much slower and more gradual action of pure silicon and the great majority of silicates ... The fact remains, however, that asbestos is extremely dangerous and fatal, while talc, cement and other silicates are comparatively innocuous except under prolonged, intense exposure along with a very greatly lowered individual resistance." (p. 165)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 2/23/38

Document Description: B Dewey to M Bowditch

Quote: "I personally cannot study the disease record of the Walpole plant and not believe that asbestosis is a very serious and sometimes fatal disease. I think it is one that should not be belittled and it is one which should be objectively studied until reliable facts are known and out in the open."

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 2/24/43

Document Description: LU Gardner to V Brown

Quote: "The question of cancer susceptibility now seems more significant than I had previously imagined."

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 2/11/59

Document Description: Discharge Summary: Glenn Taylor

Quote: Final Diagnosis on Discharge:

- "1. Histoplasmosis
- 2. Asbestosis"

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 3/20/59

Document Description: Discharge summary: Glenn Taylor

Quote: "Primary complaints: Shortness of breath, very severe, progressively increased over the last two years; loss of weight, about 20 pounds in the last two years and right pleuritic pains over the base of the lung since January 1958. The patient has been working for 18 years in a vermiculite rock and screening mill where Zonolite is manufactured."

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 7/20/59

Document Description: Letter to RA Bleich

Quote: "The following is a tentative analysis of chest X-Rays taken of the employees in your Company ...

- 1. Number of persons examined - 130
- 2. Number with normal chests - 82
- 3. Number with abnormal chests - 48

...

- c. Interstitial Fibrosis - 26

...

- g. Pneumoconiosis, or possible Asbestosis - 8

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 6/7/61

Document Description: Worker's Compensation Report on Gronenthal

Quote: "After a careful review of the record before us, we are persuaded that more likely than not, the `Asbestos' particles in Mr. Gronenthal's lung tissue were

carcinogenic agents which materially contributed to the development of the pulmonary adenomatosis, and that his combined pulmonary condition thus created caused the cor pulmonale resulting in his death on [January] 12, 1961.

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 6/14/61

Document Description: Letter to CA Pratt

Quote: "From a report written in 1956 by an Industrial Hygiene Engineer, Division of Disease Control, Montana State Board of Health, I quote the following on dust toxicity: `A review of the literature indicates that vermiculite or the dust from this material is not especially toxic and is generally included only as a nuisance dust. However, the asbestos dust in the dust in the air is of considerable toxicity, and is a factor in the consideration of reducing dustiness in this plant.'" (p. 1)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 6/14/61

Document Description: Letter to CA Pratt

Quote: "In other words, they felt that they could not come to any conclusion as to whether our mill operation presented an above normal occurrence of respiratory trouble than occurs normally." (p. 3)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 6/14/61

Document Description: Letter to CA Pratt

Quote: Review of Taylor case: "During the time of his stay at Galen, of course, they conducted several x-ray and laboratory examinations and still only came up with a final diagnosis of `questionable asbestosis.'" (p. 2)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 1/2/65

Document Description: ED Lovick to JA Kelley

Quote: "In 1962, we had correspondence from a doctor in Wyoming on an employee who had worked for us for approximately 10 years and his doctor diagnosed that he had progressive pulmonary fibrosis, which he said on X-ray resembled that produced by prolonged exposure to asbestos. In 1961, we had correspondence with a doctor in Spokane concerning a former employee who said that the man's chest X-ray revealed extensive bilateral pneumonosis [sic] with definite progression in the fibrous deposits in the lungs, since the previous examination in May of 1960. These cases were referred to Chicago and handled by our insurance carrier." (p. 5)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 1/2/65

Document Description: ED Lovick to JA Kelley

Quote: "The first reference we can find in our files on the problem is a letter written by the Montana State Board of Health to John Myers, February 11, 1942, based on an inspection made December 9, 1941." (p. 1)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 1/13/65

Document Description: JA Kelley to GW Blackwood

Quote: "I should add further that the conversation with Dr. Nelson certainly indicated that there may be a long-term problem with some of our employees at Libby ... We have some men who have worked in dusty atmospheres for many years and show no difficulty and others who are relatively new employees working in less dusty atmospheres who have trouble, and then there are all shades in between." (p. 2)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "1/2/65 Letter from E.D. Lovick to J.A. Kelley ... Although X-rays showed lung disease in a number of employees (plus 20%) a panel of five doctors `felt that they could not come up with any conclusion as to whether our mill operation presented an above-normal occurrence of respiratory trouble.'" (p. 2)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "2/14/64 Report of examination of employee Eitel Ludwig, who complained of chronic cough, heavy feeling in the chest and shortness of breath on exertion, indicated that he had Pulmonary Fibrosis and recommended that he avoid exposure to dust as much as possible. The lung condition, the report stated, was due to inhalation of dust particles, almost certainly from the asbestos content of the dust." (p. 1)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "May - June, 1964 Respiratory function tests made on 140 men at Libby. Results of the tests showed that their respiratory function was below standard, that a serious hazard from Pneumoconiosis (lung condition resulting from inhalation of dust particles) exists to employees at Libby." (p. 1)

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE
11/25/67**

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "As I understand from information furnished by Mr. Lovick, the Libby, Montana Vermiculite mine and plant may well be the only one in the world where an identical situation exists ..." (p. 7)

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE
11/25/67**

Document Description: Letter to John Hopkins

Quote: "At any rate, the problem now presented is that claimant Welch may well have suffered 'an injurious exposure' as that term may be defined in the Occupational Disease Act, at most every point he was employed, including the warehouse." (p. 5)

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE
11/25/67**

Document Description: Letter to John Hopkins

Quote: "The information furnished by Mr. Lovick was to the effect that the Radiologist was convinced that a good many of the employees suffered from lung abnormalities which could be the result of encroaching asbestosis.

This information of course appeared to me to be of extreme importance, and we made arrangements to travel to Whitefish, Montana immediately to interview the Radiologist. The party involved, Dr. William Little, informed me that his studies most certainly did indicate there to be present a great deal of lung abnormalities among the insured's employees, far in excess of the percentage one would find in examining the ordinary population, and he did in addition point out that the situation was even more severe, when considering that he was in general examining young, hearty male workmen.

Dr. Little stated that we did indeed have a severe problem, and that we might expect a good many claims involving asbestosis." (p. 3)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "The Industrial Hygiene Foundation is currently circulating a communication which I have seen, proposing a 0.0 mppcf for asbestos dust. They apparently feel that any exposure to asbestos dust is hazardous. Many doctors are of the opinion that there is a definite relationship between asbestos dust and certain types of cancer." (p. 2)

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 12/10/68

Document Description: Grant Industries to RW Sterrett

Quote: "Attached is a copy of a Workmen's Compensation Board Report on Paul C. Annon an employee at our Winnipeg plant. You will notice he is suffering from Asbestosis ... I have no knowledge about Annon's previous employment but the eighteen years he has been with us has given him ample opportunity for exposure to asbestos, in spite of the fact that we require all employees working around our mixers to wear respirators.

Annon's case is not yet disabling. From the alarming information we have all received it is reasonable [sic] likely that it eventually will be. We have several employees who have been with us as long and longer than Annon. I am genuinely concerned about them."

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 3/20/69

Document Description: Discharge summary: Glenn Taylor

Quote: "Final Diagnosis on Discharge:

1. Histoplasmosis
2. Asbestosis

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 6/20/69

Document Description: J Cintani to T Egan

Quote: "However the use of asbestos in construction posed another problem, particularly in the field of spray fireproofing and acoustical application. Dr. Pundsack was of the opinion this caused the greatest amount of potential hazard

because the asbestos fibers were able to be air borne and thereby contaminate a large area."

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE
6/20/69**

Document Description: J Cintani to T Egan

Quote: "The meeting made a deep impression on me. I was surprised at universal agreement among the parties at the meeting on the harmful effects of asbestos. I thought John's Manville would try to refute Dr. Selikoff's statements but they did not do so." (p. 2)

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE
4/17/70**

Document Description: TF Egan to Others [Attachment: article by HJ Rosen in Progressive Architecture, 2/70]

Quote: "Although this improvement in working conditions lengthened the life expectancy of these workers, it was learned in 1935 by Dr. Lynch in this country that asbestos workers were dying of cancer as a result of their association with asbestos. Independent investigators in many parts of the world were likewise coming to the same conclusion based on their studies of the association of workers with asbestos."

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS Date 5/15/70

Document Description: RL Parks to T Feit

Quote: "A copy of the Engineering News-Record, April 2, 1970 lead article, 'Loose Asbestos Fiber Seen As A Cancer Threat To Men In Building Trades' is enclosed for your review."

WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS DATE 6/1/70

Document Description: T Egan to RL Asher et al.

Quote: "Dr. Irving J. Selikoff, Chief-Environmental Medicine, Mt. Sinai Hospital, New York, New York, was the man who spoke out first and often at least for the public record on the dangers of asbestos. He was supported by the Asbestos Workers' Union and noted the dangers in three work areas: (1) Asbestos Cement (2) Asbestos Pipe Covering (3) Sprayed Asbestos Fiber Fireproofing."

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS - FIBER
TYPE DATE 12/14/37**

Document Description: LU Gardner to AJ Lanza

Quote: "Cases of human asbestosis produced by these different substances have been reported in the literature and it was my feeling that most people were convinced that there was little difference in their capacity to produce pulmonary reaction."

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS - FIBER
TYPE Date 12/14/37**

Document Description: LU Gardner to M Bowditch

Quote: "I do not think the subject is closed but I would be surprised if we found evidence of a difference in the irritating properties of the various kinds of asbestos."

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS - FIBER
TYPE DATE 2/19/38**

Document Description: M Bowditch to B Dewey

Quote: "While his experiments have thus far been by injection, the best opinion seems to be that the results of injection are indicative of those to be expected from inhalation. If this is so, the fact that the five types give similar results by the former method may be taken to indicate that the inhalation effects would also be much alike."

**WR GRACE KNOWLEDGE OF ASBESTOS HEALTH HAZARDS - FIBER
TYPE DATE 3/22/38**

Document Description: LU Gardner to Bowditch

Quote: "On my return from Guatemala I found your letter of the 4th with its enclosure from Mr. Bradley Dewey. I do not think that his explanation that Russian and Rhodesian asbestos might be the cause of asbestosis is the proper one. I cannot help but feel that the length of the fibre has more to do with it."

**WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
Date 6/14/61**

Document Description: Letter to CA Pratt

Quote: "Asbestos, however, is a cause of asbestosis, which has been a matter of concern. There is a relatively large amount of asbestos dust present in our mill and this is difficult to control."

WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
Date 6/14/61

Document Description: Letter to CA Pratt

Quote: "Getting back to the problem of dust, there is of course asbestos present in the concentrates which we ship to our expanding plants. The amount of dust from this should be very small in the expanding process, however. It would seem that the greatest exposure to dust which would included the asbestos dust, to our people would be in the unloading of cars. There will be some help on this problem when we install 'dedusting' units both in our mill and at our point of loading. Final design is now being made for these units and installation will be completed by the end of this summer. These will not eliminate the dust problem in the concentrates, but we expect to cut it down considerably." (pp. 4-5)

WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
Date 4/19/62

Document Description: Report of Industrial Hygiene Study of the Zonolite Company, Libby, Montana, by Montana State Board of Health

Quote: "As indicated in the findings of this study, it appeared that no progress had been made in reducing dust concentrations in the dry mill to an acceptable level and that, indeed, the dust concentrations had been increased, substantially, over those in the past." (p. 4)

WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
DATE 4/19/62

Document Description: Report of Industrial Hygiene Study of the Zonolite Company, Libby, Montana, by Montana State Board of Health

Quote: Dust counts from Dry Mill.

WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
Date 1/2/65

Document Description: ED Lovick to JA Kelley

Quote: "With the design of the final screening plant the dust situation can be designed for and brought under good control. This is the goal that we must work toward." (p. 5)

**WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
DATE 11/25/67**

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "Now however, we find that dust from the mill itself may from time to time permeate the entire yard, and of course it may well be argued, and perhaps with some validity due to the incorrectly placed exhaust, that the entire yard area may subject workmen to what might be termed to be `injurious exposure.'" (p. 7)

**WR GRACE KNOWLEDGE OF EXCESS EXPOSURE TO ASBESTOS FIBERS
DATE 11/25/67**

Document Description: Letter to John Hopkins

Quote: "Through the years, however, the plant inspections did reveal asbestos content, and of course the percentage of such fibers found to exist in the dust in the mill did far exceed what were considered to be allowable concentrations." (p. 1)

WR GRACE KNOWLEDGE OF INADEQUACY OF TLV

KNOWLEDGE OF INADEQUACY OF TLV DATE 1943

Document Description: Gardner Outline of Monograph on Asbestosis

Quote: "(a) While there is no official standard, the tentative one of 4 to 5 million particles per cubic foot of air is frequently quoted.

(b) This is probably unreliable because it is based upon sampling with a standard impinger which we have shown does not collect most of the fibres that are the source of hazard." (p. 10)

KNOWLEDGE OF INADEQUACY OF TLV DATE 2/24/43

Document Description: LU Gardner to V Brown

Quote: "While there is no official standard, the tentative one of 4 or 5 million particles per cubic foot of air is frequently quoted ...

This is probably unreliable because it is based upon sampling with a standard impinger which we have shown does not collect most of the fibres that are the source of hazard." (p. 10)

KNOWLEDGE OF INADEQUACY OF TLV DATE 4/19/62

Document Description: Report of Industrial Hygiene Study of the Zonolite Company, Libby, Montana, by Montana State Board of Health

Quote: "In the final analysis; however, the asbestos content of the dust is the controlling factor making the maximum allowable concentration 5 million particles per cubic foot for this component of the dust." (p. 4)

KNOWLEDGE OF INADEQUACY OF TLV DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "11/3/65 Letter from J.A. Kelley to G.W. Blackwood ... An attached report of dust counts in seven different areas showed a range between 4 mppcf and 9 mppcf. The report further stated that the maximum allowable concentration was 10 mppcf." (p. 3)

KNOWLEDGE OF INADEQUACY OF TLV DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "12/28/65 Letter from L. Park to F.W. Rupp recognized that progress in dust control was being made at Libby, and explained how and by whom maximum allowable concentrations are established, and the purpose of such standards. He stated further that 'it is believed possible and practical that positive control of certain dusty operations will establish and maintain the dust concentration below the maximum allowable concentration.'"

KNOWLEDGE OF INADEQUACY OF TLV DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "2/15/66 Letter from L. Park to P. Kostic stated that air samples taken by Zonolite on a regular basis (assumed to be monthly) and that the maximum allowable concentration used is that of the State of Montana, which he indicated as 5 mppcf. An attached report indicated that dust counts samples from seven different areas on 10-12-65 showed readings ranging from 4 mppcf to 9.3 mppcf. Five of the seven readings were above the 5 m level. It further stated that 'Management at Libby seemed to feel that the total dust count is shown to a level that is as good as present equipment can maintain. As to a total concentration of 5 mppcf, there seems to be a discrepancy in our thinking on this figure.' The inspector who wrote the report questioned as to which was the proper figure." (p. 4)

KNOWLEDGE OF INADEQUACY OF TLV DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "Another big difference expressed in the correspondence is in the maximum allowable concentration. L. Park of Maryland Casualty specifies, as does the recognized authority (American Conference of Governmental Industrial Hygienists), that the MAC for asbestos is 5 mppcf. In a letter to F.W. Rupp from R.A. Bleich, 1-25-66, Bleich states 'We have two distinct differences from what Mr. Park has indicated ... For our own purposes, we have voluntarily set our standards at 10 mppcf total dust.' Frankly, this letter confuses me." (p. 5)

KNOWLEDGE OF INADEQUACY OF TLV DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "At any rate, Fenner and Sheckler emphasized that Threshold Limits (MAC) should be used as guides in the control of health hazards and should not be regarded as fine lines between safe and dangerous concentrations." (p. 3)

KNOWLEDGE OF INADEQUACY OF TLV DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "Regardless of the percentage of asbestos dust particles in the air, our goal should be to keep the total dust count below 5 million particles per cubic foot of air. This is to say that the total count of all dust particles less than 10 microns in size should not exceed 5 mppcf of air. (It should be noted in reviewing our files that the percentage of asbestos dust at Libby had been expressed at one time or other as 6.2%, 12%, 22.5%, 40% and 75%.)" (p. 2)

KNOWLEDGE OF INADEQUACY OF TLV DATE 12/10/68

Document Description: Grant Industries to RW Sterrett

Quote: "I'm afraid that we may still be exposing our employees to an unnecessary health hazard. Has Zonolite ever conducted an air sample programme at bagging stations or elsewhere in plants to determine the degree of asbestos pollution in the air? If so, what did you find? If not, do you plan to conduct such tests?"

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS Date 1/2/65

Document Description: ED Lovick to JA Kelley

Quote: "From the time the vermiculite business began operations in Libby, the company furnished respirators for its employees working in dusty areas." (p. 1)

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "11/5/64 Letter from D. Park, Maryland Casualty Supervisor, strongly urged that approved respirators be provided at Wilders, Ky." (p. 1)

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "12/18/64 Letter from A Mac Arthur to C.R. Babb advised that it is an established company policy that all employees making mixed product as well as those employees making mixed products as well as those employees engaged in bagging Perlite, must at all times wear a respirator, and asked that people at their Atlanta plant be advised accordingly." (p. 2)

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "I agree with L. Park of Maryland Casualty in that respirators should not be considered a substitute for proper engineering controls. Respirators are fine for short periods of time, but to get a man to wear one eight hours a day is next to impossible." (p. 5)

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: " Employees should be informed regarding the consequences of inhaling dust particles and the complications such as T-B, cancer, lung abscess, etc. which might develop. If they are familiar with the hazards involved, they are likely to make greater effort to protect themselves." (p. 3)

WR GRACE KNOWLEDGE OF RESPIRATOR NEEDS DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "It has been J-M's experience that personal protective devices such as masks and respirators are only 50% effective. This type of equipment, therefore, should be used only in emergencies and for exposures of short duration." (p. 3)

WR GRACE KNOWLEDGE OF SUBSTITUTES

WR GRACE KNOWLEDGE OF SUBSTITUTES DATE

Document Description: R&D Program for Asbestos-Free Mono-Kote

Quote: "Within a few months we had defined the function of asbestos as primarily a yield increasing additive, also useful in improving the homogeneity and pumpability of the composition."

WR GRACE KNOWLEDGE OF SUBSTITUTES DATE 2/25/60

Document Description: CA Pratt to Jackson

Quote: "We may substitute the product Mouldene for the asbestos in this formula."

WR GRACE KNOWLEDGE OF SUBSTITUTES DATE 1/28/69

Document Description: Letter from Culver

Quote: "The February issue of Walls and Ceilings (formerly Plastering Industries) has quite an article on page 15 regarding glass fiber reinforcement for plaster and concrete. This might be the answer to a 'maiden's prayer' for getting a substitute for asbestos in Mono-Kote. Likewise, it didn't appear to be a similar answer to the horsefeather problem."

WR GRACE KNOWLEDGE OF SUBSTITUTES DATE 10/69

Document Description: 1970 Long Range Plan, Vol. 1

Quote: "Asbestos fiber is a health hazard during the application of Mono-Kote. Work done late in 1969 to eliminate asbestos from the product indicates that a substitute has been found which does not deter from the properties of the original Mono-Kote." (p. V-15)

WR GRACE KNOWLEDGE OF SUBSTITUTES DATE 10/70

Document Description: Walls and Ceilings

Quote: "In your New Products section the July issue you indicate the availability of a product which is claimed (at that time) to be the 'only commercially available direct-to-steel spray fireproofing which does not contain asbestos.' AlbClad Intumescent Mastic contains no asbestos and has been commercially available

for 8 years. Seymour I. Kawalier, Albi Manufacturing Co., Rockville, Connecticut." (p. 95)

WR GRACE RESPONSE TO KNOWLEDGE

WR GRACE RESPONSE TO KNOWLEDGE DATE

Document Description: George and Leonard Article

Quote: "From about 1928 to 1933, we routinely examined those cases suspected clinically of asbestosis. By 1933 the insurance premiums had pyramided to 15 per cent of the payroll, and the carriers were rather indifferent to the taking on of the risk. Finally, one of the large companies decided that before they took over this risk, they would have examined, clinically and by x-ray, all of the employees of the plant totaling approximately eight hundred."

WR GRACE RESPONSE TO KNOWLEDGE DATE 8/13/36

Document Description: Summary of Jersey City Dust Survey to WL Keady

Quote: "What action shall we take on notifying the men who have been examined of the various diseases which they have?" (p. 3)

WR GRACE RESPONSE TO KNOWLEDGE DATE 6/14/61

Document Description: Letter to CA Pratt

Quote: "In this way Zonolite Company did not give any information to the employees as to their physical condition so we could not be responsible for or liable in any way for giving out information which might be construed as misleading." (p. 3)

WR GRACE RESPONSE TO KNOWLEDGE DATE 6/14/61

Document Description: Letter to CA Pratt

Quote: "The law stated that employers would not be responsible for anything which had been contracted by their employees prior to the date that the law became effective. However, they would be responsible for any contraction of disease after that date, or any aggravation of the conditions which existed in the employee due to industrial conditions which existed in a particular plant. In order to protect ourselves and place ourselves on record as to the condition of our employees as of the effective date of the law, we instituted a program whereby all of our employees would have x-rays at the local hospital." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE Date 1/13/65

Document Description: JA Kelley to GW Blackwood

Quote: "I should say that I found that the State of Montana had inspected Libby on several occasions and for the first time I saw the reports which were received at Libby but never sent to me. Our record is not as good as it should be as far as the state is concerned. We made some improvement but not nearly enough." (p. 1)

WR GRACE RESPONSE TO KNOWLEDGE Date 1/13/65

Document Description: JA Kelley to GW Blackwood

Quote: "The second important decision made at Libby was that we would move as fast as possible to eliminate the dry mill ... We just simply could not afford the cost of rehabilitating the present dry mill concerning circuits to make it a modern and completely dust free operation." (p. 1)

WR GRACE RESPONSE TO KNOWLEDGE DATE 1/13/65

Document Description: JA Kelley to GW Blackwood

Quote: "There is an immediate step needed and which had been planned for additional dust collection in the dry mill which is where our greatest trouble is ... Our record is not as good as it should be as far as far as the state is concerned. We made some improvement but not nearly enough."

WR GRACE RESPONSE TO KNOWLEDGE DATE 1/13/65

Document Description: JA Kelley to GW Blackwood

Quote: "We just simply could not afford the cost of rehabilitating the present dry mill concentrating circuits to make it a modern and completely dust free operation."

WR GRACE RESPONSE TO KNOWLEDGE DATE 3/29/66

Document Description: P Kostic to JF Murphy

Quote: "3/2/65 Letter from J.A. Kelley to G.W. Blackwood, had an attachment, a report of analysis and study of X-rays, breathing tests and other pertinent data relating to employees at Libby, by a Dr. Spicer, a recognized lung specialist of the University of Maryland. Some of the things Dr. Spicer had to say:

1. The tests done by Dr. Nelson at Libby, and the data received by Spicer from Nelson was incomplete and unsatisfactory.
2. His (Spicer's) findings were inconclusive.
3. He recommended extensive and costly studies of employees, and a control group, to be repeated in 2-3 years." (p. 3)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "A study of the information furnished by the State Board would therefore make it appear that the asbestos problem has existed certainly since 1956, and generally with increasing severity." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "I would hesitate to allow in evidence the State Board reports if it is possible to keep them out of the hands of the Industrial Accident Board, and through it, the general public.

While I have not researched the problem, it has even occurred to me that insured's inability to curb the problem at the State Board's recommendations through the years, might be alleged at least to have constituted willful and wanton conduct on its part, with whatever complications that particular change might carry with it." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "In addition, it appears that counsel has subpoenaed insured's Safety Engineer, who we would assume, is well aware of the major aspects of our problem, and a good bit of damaging testimony may get into the record at that time." (p. 6)

WR Grace Response to Knowledge Date 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "Many recommendations were presented by the State Board and it would appear insured gradually attempted to correct the situation. It must however further be considered that it might appear to others that the action taken by insured to correct the situation which was presented, might not to the unbiased observer, appear to have been either extremely effective, or quickly performed." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "Most certainly claimant's counsel around the area are going to be well aware of the existence of the problem if all information is placed in evidence." (p. 7)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "The question of relevancy now of course presents difficulty, in that if dust from the mill is being exhausted in the yard area where the warehouse is situate, the content of the dust at the dry mill may well be considered to relate directly to Mr. Welch's condition. Even our own expert, Dr. Oscar Sander, would be forced to hold to this view, were he in fact examined." (p. 6)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Larrick to John Hopkins, Maryland Casualty Company

Quote: "We might point out that apparently the only persons aware of the studies are the insured's officials, and Dr. Little. Again, as you may well realize, I would much like to avoid having evidence presented by the opposing party which would reveal the extent and severity of the problem with which we are concerned." (p. 3)

WR GRACE RESPONSE TO KNOWLEDGE DATE 11/25/67

Document Description: Letter to John Hopkins

Quote: "When all of the above developed so rapidly, it occurred to me that discretion might be the better part of valor in the instant case, and that you might wish to seriously consider a compromise settlement in hopes of, in this manner,

avoiding the necessity of exposure of all of the more damaging aspects of our own situation at the Hearings rooms." (p. 5)

WR GRACE RESPONSE TO KNOWLEDGE DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "After it is recognized that we do have dust problems and the problem areas are identified, we should move fast in doing whatever had to be done to remedy the situation. This is of course to minimize dust inhalation by all employees, but most important to arrest lung contamination by the 32 aforementioned employees. These employees, so far as we know, are not presently disabled. If we minimize their exposure to a dust level not exceeding 5 mppcf chances are we may be able to keep them on the job until they retire, thus precluding the high cost of total disability." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "Regarding the 32 employees showing abnormal chest X-ray pictures, it was recommended that they be given complete and thorough examinations and tests by a physician well versed in pulmonary diseases." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 1/5/68

Document Description: P Kostic to RW Sterrett

Quote: "The case involving former employee, L.P. Welsh, should be quickly settled out of court. Whenever it is proven to our satisfaction that an employee has developed an injury or disease while in our employ, especially in instances where a plant is located in a small town, public relations could be damaged if the employee is required to fight for his benefits through the courts." (p. 3)

WR GRACE RESPONSE TO KNOWLEDGE DATE 12/1/69

Document Description: TF Egan to VH Dodson

Quote: "Knowing the building pressure against the use of asbestos in sprayed fireproofing, particularly in the New York, Philadelphia area, and with concern spreading rapidly throughout the country, there are two prime reasons we should get asbestos out of Mono-Kote. They are:

1. We are going to get included in the indictment since we have asbestos in Mono-Kote.

2. Mono-Kote without asbestos would give us a tremendous sales increase at once.

Also, we have an ethical obligation to get it out."

WR GRACE RESPONSE TO KNOWLEDGE DATE 4/9/70

Document Description: TF Egan to Regional Managers

Quote: "This is to alert you to do some homework and get back after any and all projects that you have lost or those that fibers are bidding. Be very alert to the involvement of the owner and general contractor in possible lawsuits over this health hazard."

Sell the advantages of cementitious and that the fiber is locked in the mix. Push very hard on the air erosion in plenum and the present danger of the sprayed fibers being blown through the air distribution system. This is no time to be gentle, timid or really too diplomatic. You must move quickly.

Also, I want to report that we have at least two formulations that work without asbestos." (pp. 1-2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 4/17/70

Document Description: TF Egan to Others

Quote: "Secondly, since this effects our competitors (sprayed fibers) directly, it is important that you use these facts with architects who have used or are contemplating specifications for sprayed fiber fireproofing. For the present, please sell the inherent advantages of a cementitious product."

WR Grace Response to Knowledge Date 6/1/70

Document Description: T Egan to RL Asher et al.

Quote: "The general feeling was that he [Selikoff] would go away if he was treated gently." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 6/1/70

Document Description: TF Egan to RF Chaney

Quote: "Went to Winnipeg and met Whittaker. He can't understand why you fellows have been so quiet about asbestos? I made no comment, and he proceeded to tell me what an unethical competitor Bob Chaney is. I stated you had to lose, but agreed completely on your scruples.

Stay unscrupulous, unethical, man and selling Mono-Kote.

Seriously, the fiber boys are really worried about this situation and as soon as we have the new Mono-Kote, lay it on them in your area."

WR GRACE RESPONSE TO KNOWLEDGE DATE 8/20/70

Document Description: TF Egan to Many

Quote: "Already we have lost a major project in Philadelphia, and I'm sure others may follow across the country. The asbestos-free product will get the order."

WR GRACE RESPONSE TO KNOWLEDGE DATE 8/20/70

Document Description: TF Egan to Many

Quote: "Recent discussion with Johns-Manville personnel - Dr. Sidney Spiel and Mr. Ed Fenner - confirm my earlier comments that, barring some alarming medical fact to the contrary, the health hazard of asbestos will require the ban on loose asbestos particles to the atmosphere, and probably within one year."

WR GRACE RESPONSE TO KNOWLEDGE DATE 12/1/71

Document Description: Minutes of Meeting of Plaster and Fireproofing Committee

Quote: "It was agreed to continue with the present [Mono-Kote] applicator manual."

WR GRACE RESPONSE TO KNOWLEDGE DATE 12/1/71

Document Description: Minutes of Meeting of Plaster and Fireproofing Committee

Quote: "There was agreement that data sheet 'Job Set-Up' was sufficient. If local conditions require additional information, such information should be prepared by that local office to fit their individual needs." (p. 4)

WR GRACE RESPONSE TO KNOWLEDGE DATE 5/26/72

Document Description: Letter to D Slaughter, EPA

Quote: "What asbestos emissions are generated from a material like Mono-Kote 3 during the demolition of a building?"

Because of the effective bonding between the asbestos and Gypsum, we feel emissions of free asbestos fibers would be extremely low, particularly in relation to asbestos from other products that would be pulverized during demolition (e.g., floor tiles, pipe insulation, paints, ceiling tiles, roofing materials, etc.)"

WR GRACE RESPONSE TO KNOWLEDGE DATE 8/2/72

Document Description: TP Feit to JH Greer

Quote: "For that reason, we are hopeful that the EPA will rule that all contracts awarded prior to the effective date will be honored and the spraying of that particular building with MK-3 can remain." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 8/2/72

Document Description: TP Feit to JH Greer

Quote: "Obviously, if this is not the cutoff date or if we get an additional 90 days, we will continue to make and sell MK-3 until we no longer can." (p. 1)

WR GRACE RESPONSE TO KNOWLEDGE DATE 8/2/72

Document Description: TP Feit to JH Greer

Quote: "The EPA regulations have the effect of banning the spraying of fire-proofing materials containing asbestos. We, therefore, could continue to manufacture (presuming we comply with all other OSHA and EPA in plant procedures) and sell MK-3. Any applicator, however, so spraying MK-3 once the EPA regulations are in effect would risk the penalties and possible imprisonment as spelled out in the Clean Air Act. Our attorneys have explained to me that we can, therefore, fulfill our end of the contract by supplying MK-3, but obviously, the subcontractor cannot use the material." (p. 2)

WR GRACE RESPONSE TO KNOWLEDGE DATE 5/24/73

Document Description: Memo from WV Culver

Quote: "In accordance with the bulletin dated April 17, 1973, regarding the EPA 'National Emissions Standards for Hazardous Air Pollutants', all stocks of MK-3 should be used prior to July 4, 1973.

Please arrange to have any warehouse stocks shipped to one of your customers in time for use of the material prior to the above date. We will be unable to accept any MK-3 for return or credit."