BUILDING STANDARDS COORDINATING COUNCIL

Minutes of Meeting, March 15, 1972, Architecture III
Office of Architecture and Construction
Sacramento



PRESENT:

Department of Public Health	
Supervising Architect	Mr. Charles Coogan
Industrial Hygiene Engineer	Mr. A. E. Lowe
Department of Housing and Community Development	
Housing Standards Coordinator	Mr. Arthur E. Dreyer
Office of State Fire Marshal	
Assistant State Fire Marshal	Mr. William S. Garrett
Fire Prevention Engineer	Mr. Robert W. Hall
Division of Industrial Safety	
Safety Engineer	Mr. Carl Pfaff
Senior Industrial Hygiene Engineer	Mr. William W. Steffan
Building Standards Commission	Mr. Alfred F. Smith
Structural Advisory Panel, SBSC	Mr. Jack S. Barrish
Mechanical Advisory Panel, SBSC	Mr. Leonard S. Stecher
Office of Architecture and Construction	
Deputy State Architect	Mr. William R. Vick
Chief Structural Engineer	Mr. Fred W. Cheesebrough
Junior Staff Analyst	Miss Nancy Ricker
City of Pomona	Mr. Eugene B. Pester
Zonolite Division, W. R. Grace & Co.	Mr. T. J. Pickthall
" " "	Mr. Ron Hodges
Terri-Air Balance, Inc.	Mr. Carl Treaster

Mr. Vick introduced Mr. Alfred Smith, Member of the State Building Standards Commission, and Mr. Jack Barrish, Member of the Structural Advisory Panel to the SBSC, and explained the BSCC goals. Mr. Smith in turn introduced Mr. Pester. Mr. Barrish indicated that the various SBSC panels intend to work with the code writing agencies before public hearings are held in order to eliminate second guessing.

...ue to the ...of the document ...lmed

MDQ015

The meeting then proceeded with the regular agenda.

1. AB 314 (1971) Fibers in Ducts

There was extensive general discussion on AB 314 and its intent. Sealants and their application are covered by UBC Standard 181. However, there is no standard for a sealant which would totally preclude erosion.

Mr. Lowe spoke on the health danger of asbestos fibers stating that the medical profession is in agreement that 2 to 5 fibers greater than 5 microns in length per cubic centimeter of air is being considered as a health hazard based on eight hours per day exposure. Since hotels and similar occupancies might subject a person to even greater hazard because of occupancy in excess of eight hours per day, Mr. Lowe recommends that the Department of Health standard should be followed ---- don't permit fibers in nonducted systems.

Mr. Steffan read recommendations which would essentially preclude exposed materials containing asbestos fibers in duct systems.

Mr. Pickthall, District Manager of the Zonolite Division for W. R. Grace and Company, read a prepared statement (see Exhibit A attached).

Mr. Vick outlined a procedure for meeting the problem:

a) Get legal opinion as to who has responsibility for promulgation and enforcement of any regulation adopted pursuant to AB 314.

b) May a level of safety for asbestos fiber content "not greater than outside air" be adopted as a reasonable standard and still comply with the statute?

Meanwhile it will be assumed that some state agency has the responsibility and the Department of Public Health and Division of Industrial Safety are designated to proceed with developing regulations and/or test standards.

Mr. Dreyer and Mr. Cheesebrough will draft an informal inquiry to the Attorney General's Office on the above questions for review by Council members.

2. /17-7/ Structural and Window Requirements for Hospitals

All members have not received copies. Generally, it was agreed that non-building regulations* should be pulled back out of Title 24. Sufficient copies of the proposal should be sent to Mr. Vick for distribution to the Structural, Mechanical and Electrical Panels in order that they may provide input at public hearings.

(*See T17-016 and T17-029)

3. Security in Residences

Mr. Roudabush did not appear.

4. /17-8/ Mobile Food Preparation Units and Commissaries

Mr. Coogan will furnish copies of the proposal to Mr. Vick for distribution to advisory panels. Article 10.1 is the portion which contains building regulations.

5. /8-7/ Mine Safety Orders

Mr. Bob Hall will work with Mr. Carl Pfaff on details to iron out format differences. Mr. Garrett pointed out that Section 7056 should define the meaning of fire resistant.

6. /24-4/ Adopt 1970 UBC - Part 6 Modifications (DIS)

Sections of the Uniform Building Code had been reprinted in Title 8 contrary to policy adopted by the Building Standards Commission as mandated by the Building Standards Law. Mr. Bob Hall will work with Mr. Pfaff.

7. /24-7/ Electrical Regulations - Adopt NEC by Reference

It was the consensus that the letter addressed to Mr. George Harris correctly expresses the charge of the Council to the Ad Hoc Committee. The Ad Hoc Committee should report back to the Council for approval of its proposal before proceeding.

8. Register 71-52 (12-25-71)

By letter dated February 17, 1972 Mr. Art Dreyer advised the Council of a conflict between the subject register and Section T21-5001(a)(8). Mr. Dreyer reported that Sid Lang will discuss the matter with the Division of Highways.

9. Board of Barber Examiners

Public notice of hearings and proposed amendments to rules and regulations of the State Board of Barber Examiners in Title 16 were forwarded to Mr. Vick for the State Building Standards Commission. Section 224 therein includes a building standard and should be prepared for inclusion in Title 24.

Mr. Cheesebrough was requested to write a letter to Mr. James D. Knauss, Executive Secretary for the Board, inviting him to attend a future BSCC meeting to acquaint him with the goals of the Council.

10. /8-6/ High Voltage Electrical Safety Orders

Proposed Electrical Safety Orders were held without action pending determination of proper format for Part 3 of Title 24.

11. The next meeting of the Council will be held April 19, 1972.

Fred W. Cheesebrough
Recorder

FWC:lt
Attachment

cc: Mr. Lawrence R. Robinson, Jr.
Mr. D. E. Roudabush
Mr. Vincent L. White
Mr. Albert C. Starr

BSCC #1

GENTLEMEN: My name is Pickthall. I represent Zonolite, Construction Products Division, W. R. Grace. We wish first to express our appreciation to this council for the opportunity you have given us to participate in your efforts to develop reasonable and practical regulations affecting use of asbestos containing materials in air duct systems in buildings in the State of California. I refer specifically to Assembly Bill 314.

At the offset it should be understood that I represent only one segment of the fireproofing industry. Two completely different materials are available for the purpose. Sprayed fibers and cementitious. My remarks will be confined to the latter except to explain the differences in the two materials.

One must assume that A.B. 314 is the result of growing concern on the part of responsible people for the health hazard that may result from exposure to asbestos fibers.

Copy for:
Garrett
Vick
Dreyer
Coogan
White
Stephen
Pfaff
Lowe
& others present

We in Grace share that concern. For the last three years the major portion of the Grace Construction Products Division research and development budget has been channeled toward the complete elimination of asbestos from our fireproofing material which is marketed under the trade name Mono-Kote.

The areas of our concern are five fold. The people in our plants, the workmen directly involved in application on jobs, the hazard to other workmen at the job sites, the hazard to the general public during application and finally the possible hazard to people working in buildings which have been fireproofed with Mono-Kote.

The people in our plants have always worn protective gear but this gear has been upgraded and failure to wear it is cause for immediate discharge. Two years ago we retained the services of Drs. Tabershaw Cooper who are highly respected in this field to determine the hazards present in field operations. The results of their findings were conclusive. The hazards were well below the present threshold limits established by the Federal Government. The results of this work was turned over to the Department of Industrial Safety, State of California.

Tabershaw Cooper also conducted tests on a new major office building in San Francisco to determine the asbestos fiber count in the air supply system. The results of those tests indicated that the occupants were safer inside the building than they were on the streets. These tests I believe are in the possession of this committee. If not, they are available.

A building in Seattle, Washington was similarly tested by Valentine Fisher & Tomlinson.

I wish to quote two paragraphs from their report and to make the full report available to this committee.

Purpose

> "The purpose of this report is to determine if asbestos particles were present in the return and supply air ducts of an occupied office building. The building had the return air plenum sprayed with asbestos containing insulation for fireproofing the structural steel members which are part of the returning air plenum. The asbestos containing fireproofing by brand name was "Monokote"."

Summary

"No asbestos particles were found on the bases of weight, optical microscope and prefilter-washing investigations. The prefilter that was washed had been in operation over 6 months. Asbestos particles were present during construction but the building has since been purged with fresh air to adequately cleanse the construction phase environment."

Despite the favorable indications of all this testing we in Grace continue to devote enormous amounts of both money and human resources to the elimination of Asbestos from our product. To date we have not been entirely successful. We do have an Asbestos free fireproofing product but it does not have the full equivalency of the asbestos containing material. We are not alone in this endeavor. Other producers have developed asbestos free products too but there is nothing available as of this moment that has full equivalency.

So the industry is caught, so far, in somewhat of a pinchers movement. The Fire Prevention People demand, and rightfully so, the best that's available. The health authorities look askance at a mineral that makes it so.

Grace will continue to spend both time, effort and money to satisfy both.

I want to divert for a moment now to a discussion of the two types of fireproofing materials which are in common use today and why there may exist differentials in health hazard.

Our material Mono-Kote falls in the cementitious classification. It is a plaster with a dry in place density of 20# cu.ft. It is basically the same material that replaced concrete as a fireproofing material some 20 years ago. Originally it was a combination of Gypsum and vermiculite and was applied on metal lath with a trowel.

We found that with the addition of 10% to 12% of Asbestos by weight plus some other unrelated materials we could spray the material directly to steel and that it would adhere during full fire exposure.

It is premixed wet in a slurry and pumped through a hose to the point of application. There it is sprayed in a tight pattern, by use of air, from a nozzle with a 3/8" to 1/2" opening. The wet material sets and becomes a hard plaster. This is a sample of the finished product. W. R. Grace is presently the only company supplying material of the cementitious type in California.

The other fireproofing materials in trade parlance are called Sprayed Fibers. They contain, depending on the manufacturer, up to 33% of asbestos by weight. The asbestos is combined with mineral wool fibers and inorganic binders. The fibrous mix is dumped dry into a hopper which fluffs the dry material. This is then blown in the dry state through a hose to the point of application where it emerges from a nozzle 2" to 3" in diameter. A water spray is introduced at the nozzle and the dry fibrous material is blown through the water spray causing the material to be wetted and propelled to the surface to be coated. The in place density is generally in the 10 to 11 lb. per cubic foot range. The final density is largely a function of the amount of water used. This is a sample of sprayed fiber taken directly from a job.

As you can see the two materials have nothing in common either in final form or method of application.

One is a plaster coat, the other a fibrous mat. A sealant which could be completely effective or even unnecessary for one product might be of little or no value on the other.

I would like to call your attention now to the wording of A.B. 314 and to what we believe was intended and expected from the passge of this legislation.

The bill reads as follows:

"IF ASBESTOS CONTAINING MATERIALS ARE USED IN AN AIR DUCT SYSTEM WHICH IS INSTALLED IN ANY BUILDING IN THE STATE ON OR AFTER THE EFFECTIVE DATE OF THIS CHAPTER, SUCH MATERIAL SHALL BE OVER-COATED WITH A SEALANT ADEQUATE TO PRECLUDE EROSION OF ASBESTOS FIBERS."

The key words are

Overcoated, sealant, preclude and erosion.

We believe the intent of this bill to be obvious. The author didn't want people in offices, hospitals, hotels or institutions to be exposed to airborne asbestos fibers coming through the air supply system. This is a laudable desire and we fully concur.

We further believe that our product, Mono-Kote, falls within the meaning and intent of this legislation.

Yes, it has asbestos in it. 10% to 12%. But every fiber in the mix is overcoated with three times its weight in gypsum sealant which sets hard enough and adequately enough to preclude erosion of the asbestos fibers by any envisioned air velocities in plenum areas.

Mono-Kote as presently formulated and applied has been subjected to 100 miles per hour wind velocities for 87 hours without measurable amounts of material being eroded. We can't testify to the fact that there were no asbestos fibers removed during that test because we weren't looking for them at that stage of the game.

We do know that two modern buildings have been checked by two separate organizations and that in neither case was asbestos found which exceeded that found in ambient outside air.

No piece of legislation can be legally imposed on the citizenry if it goes beyond the point of being reasonable.

We don't think this legislation is or was intended to be unreasonable. It was simply intended to keep asbestos out of the air stream under normal operational conditions.

During my discussions concerning this matter it has been mentioned on more than one occasion that one of the points which should be considered is the matter of workmen entering a plenum area to make repairs. That either intentionally or unintentionally the asbestos containing material could be knocked off and asbestos might enter the air stream.

I submit gentlemen, there is nothing that can be put up there in those plenums that a workman isn't going to get through if his problem is on the other side. If it's sheet rock he'll use a knife. If it's lath and plaster he'll use a hammer and a pair of tin snips. If it's steel plate he'll use a cutting torch. Once he's through and it's then our material in his way out will come a shinglers hatchet.

We live with it everyday during the construction period. Something is in the way. Remove it.

What I'm trying to say is this:: There is no way to preclude all of the possible things that can happen during the life of a building. People have even been known to cut out half the concrete in a column to make room for a display case.

It must be kept in mind too that whatever is done is going to cost money. Sheet rock covering the fireproofing in a plenum would cost two or three times what the fireproofing does. Our buildings are costing more than we can afford right now. Let's not throw additional expense into them unnecessarily.

As a manufacturer our primary responsibility is to provide the best fireproofing materials we can make available for the protection of lives and property. This somehow has to be weighed against the possibility that because it contains some asbestos someone, may at some point in time, have a lung disease because of it. We believe that possibility to be very remote in view of the test results. However we will continue to try and get out all the asbestos so there will be no such possibility. In the meantime we suggest that all materials falling within the meaning of this bill be put on a performance basis. Let each producer have his product tested under actual field conditions by an independent qualified testing organization. If excessive asbestos fiber counts are found then let it be that producer's responsibility to submit his own choice of sealant and his product for controlled tests on a small scale.

When the responsible people have been satisfied that the sealant is performing properly the product could then be cleared for use as tested.

The suggested approach would I'm sure meet with some resistance. People don't like to spend money if they can avoid it. However all of us in the fireproofing business are used to spending considerably larger sums of money for Fire Tests which are an accepted prerequisite for use of our materials. I don't think that what we are suggesting is anything more than that.

I won't presume to offer any details for test procedures. We feel that part of it should be worked out by people who have the expertise and knowledge. We do offer our cooperation and assistance.

Thank you again Gentlemen for the opportunity you have given us to make our views known. It is very much appreciated.