1508 SHESS SB 338

1508

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PROJECTED COSTS FOR CONTROL OF FRIABLE ASBESTOS IN SCHOOL BUILDINGS

I. LEGISLATION

The Department of Environmental Conservation will request that legislation be introduced to appropriate funding for the detection and control of friable asbestos in school buildings. This funding would be used for training persons in the identification and sampling of friable material, taking samples, testing and analyzing the samples, and partial or complete renovation.

A. Supplemental Appropriation

A supplemental appropriation of $12,250 for the remainder of Fiscal Year 1981 will be used for sampling, testing and assessing exposure risks in Alaskan schools. The assumption is that school districts with possible friable asbestos wish to complete the sampling, testing and exposure assessment prior to the end of school in order to complete necessary renovation during the 1981 summer break.

B. Fiscal Year 1982 Appropriation

The Department of Transportation and Public Facilities estimates that approximately $500,000 is the minimum necessary to make repairs to school buildings with friable asbestos. If major renovations are necessary or more schools are found with asbestos, thereby requiring greater expenditures, additional funds will be needed.

II. TRAINING

The Department of Environmental Conservation will assure that all local school persons who inspect or sample material for deteriorating friable asbestos will be trained to do so according to the proposed 40 CFR Part 763. This will be accomplished by duplicating the 15-minute videotape produced by the Environmental Protection Agency and distributing copies to local school districts, central offices of the Regional Eduction Attendance Areas (REAAs), Bureau of Indian Affairs agency offices, Schools, and private schools. The videotape will supplement EPA's Guidance Manual on Asbestos Control in School Buildings, Parts I and II. It is possible that persons inspecting or sampling may have questions about procedures. Rather than having these people call Juneau for the answer, they should be able to call a close number. Therefore, DEC field sanitarians who did not participate in the January workshops held by EPA will view the videotape. In addition, Margo Partridge of EPA is assembling, at our request, a slide/cassette show supplementing the videotape. This too will be seen by the sanitarians. It is hoped that by viewing both of these productions and reading the Guidance Manual, field sanitarians can help answer any inquiries on techniques and processes for determining asbestos.

Personnel: No new staff is anticipated by any agency.

Time: 24 hours (3 person-days)

Field sanitarians may have to answer questions regarding clarification of the inspection and sampling procedures, but this activity would fall within their normal course of duties with very little additional time needed.

DEC Central office personnel must prepare the 48 videotapes and three slide shows for mailing and then mail them. DOE staff will assure that videotapes are received by participating districts and viewed by the proper individuals. Finally, when the tapes are no longer needed, participating schools and school districts should return them to the Juneau office for reuse or storage.

Cost: $800

$610	48 videotape cassettes
50	3 slide shows
115	postage

EPA's videotape is approximately 15 minutes long. Twenty-minute 3/4" blank video cassettes at $12.69 from Yukon Radio Electronics, under contract to the State. Forty-eight tapes would be needed to assure that training proceeds expeditiously. This figure includes:

- One videotape per REAA
- One videotape for each of the following boroughs and municipalities: Kodiak, Kenai, Matanuska-Susitna, Anchorage, Juneau, Fairbanks, Sitka, Ketchikan, (remainder of Southeast Alaska)
- Five videotapes for the five BIA field offices
- Five videotapes for the 25 private schools
- Five videotapes to be used as back up when weather and other difficulties hinder mail delivery
- Three video tapes for field sanitarians

III. INSPECTION AND SAMPLING

All school districts and private schools must inspect their buildings for friable material applied to walls, ceilings, pipes or structural parts of buildings. If friable material is found, 3 samples must be taken from each location with distinctive material. Forty-one schools were sampled during the DEC survey, although the possibility exists that non-friable material was also sampled. In the upcoming inspection and sampling program, these schools should be re-examined to clarify where earlier samples were taken. In most cases re-sampling is probably unnecessary.

Personnel: No new staff is anticipated by any agency.

Time: Since inspections and necessary sampling would occur during normal maintenance operations during the school year, maybe ½-hour will be necessary per building.

Cost: Each school or schooldistrict must provide the necessary postage to mail inspection forms and samples to the Department of Environmental Conservation.

IV. TESTING AND ANALYSIS

The Department of Environmental Conservation will assure that all samples of friable material are analyzed by a reputable laboratory using polarized light microscopy. A survey of laboratories across the country indicates that a larger quantity of samples can be analyzed more economically, per sample, than a smaller number. It would be economically advantageous, therefore, to have a single agency accumulate individual samples for shipment in bulk to labs for analysis. Local districts, therefore, should send their samples to DEC, which can then negotiate with labs for possible discounts.

When test results are received, DEC will evaluate the total results and send individual results to the respective school districts.

Personnel: No new staff is anticipated by any agency.

Time: 48 hours (6 person-days)

Cost: $11,450

Alaska has approximately 515 public, private and BIA day schools. In the Supplemental Information of its proposed regulations, EPA estimates that 12.7% of all schools in the country contain friable material, of which 73.6% is friable asbestos. That is, EPA estimates that 9.4% of all schools in the United State contain friable asbestos. Sanitarians in Alaska inspected 101 schools during winter and spring of 1980. Of these, 35 schools were sampled and 13 or 12.9% were found to contain asbestos from less than 1% to greater than 70%. From these figures, Alaskan schools may contain a higher percentage of asbestos than the average arrived at by EPA.

The number of schools containing friable material, thereby requiring samples, was estimated using the following calculations. Applying the figure of 12.9% to the 515 schools in Alaska, 66 schools presumably contain asbestos. Since this figure is higher than EPA's estimate, the 66 schools may be only part of the Alaskan schools which presumably contain friable material. Using the 73.6% figure stated earlier, 90 schools in Alaska may contain friable material. It is estimated, therefore, that this number of schools will require sampling.

According to the proposed regulations, three samples must be taken from each location with distinct friable material. Since all of these schools will have have at least one location requiring 3 samples, but only a portion will have 2 or more location requiring sampling, most likely 5 samples per school on a statewide basis should adequately cover the need for sampling and testing.

The cost, therefore, was computed in the following way:

515 schools x 12.9% = 66 schools + 73.6% = 90 schools x 5 samples

= 450 samples x $25.00 sample cost = $11,250 total sample cost + $200.00 postage = $11,450

V. RENOVATIONS

As with any renovation, partial or complete, local school districts or individual schools are responsible for assuring the project's completion. Each school district/individual school must identify the type and extent of the problem, make the bids, and oversee the contractor's progress and quality of work. Under some circumstances, the Department of Transportation and Public Facilities may take on some of these activities although what these circumstances are have not yet been decided. Further, if State money is involved, DOTPF acts as the granting agency.

There are three methods of rehabilitating buildings with friable asbestos:

(1) Encapsulation: The coating of asbestos material with a bonding agent, such as a rubber-based paint, as a sealant;
(2) Enclosure: The construction of a barrier, such as a suspended ceiling, between the asbestos material and the remaining room;
(3) Removal and substitution: The removal of asbestos material and subsequent replacement with a similar insulating, sound proofing material.

Each school or school district with deteriorating friable asbestos material must determine how extensive the potential or actual damage of asbestos damage is. To make this determination, school districts must use the Exposure Assessment Algorithm in Appendix A of 34 CFR Parts 230 and 231. Since the Exposure Assessment leaves much latitude in determining whether to encapsulate, enclose, remove, or simply deter action, the school district or school must exercise judgement in making the determination. DOTPF may assist districts when necessary, although this assistance has not yet been approved.

Personnel: No new staff is anticipated in any agency. Rehabilitation would be completed either by a contractor or a well-trained district maintenance person.

Time: (A) 4 person-days per school district with friable asbestos. This figure includes administrative time, bid processing, and monitoring construction activities.

(B) 5 person-days per DOTPF. This figure includes administrative time for grants as well as assistance in Exposure Assessment.

Cost: $500,000

Staff of the Department of Transportation and Public Facilities estimated the square foot costs for each approach. These figures are listed in Table I.

Because of the difficulty in determining where friable asbestos is located and how bad its deterioration is, DOTPF made only a stab at estimating costs. The department anticipates that a minimum of $500,000 will be needed for minor repairs, although the cost could be considerably higher. In the event that major repairs are necessary or more schools with asbestos are found, thereby necessitating greater expenditures, additional funds should be requested.

TABLE I

	APPROACH	METHOD	PROBLEMS	COST
(1)	Encapsulation	Apply rubber based paint to asbestos material.	Temporary measure--protection would last only for several years.	Around $1/sq. ft.
(2)	Enclosure	Construct a suspended ceiling.	If constructed in an air plenum, encapsulation might be an ineffective barrier.	Around $1.75-$2.50/sq. ft.
(3)	Removal	Using protective devices and clothing, asbestos material would be removed and properly disposed. Since removal could leave building unprotected, costs must include replacement as well.	Asbestos fibers could be released into the building environment if extreme precautions are not taken. This increases costs significantly. Disposal of the debris could be difficult if landfill refuses to accept the wastes. Under these circumstances, costs could skyrocket.	Around $5.00-8.00/sq. ft for removal; $5.00-$10.00/sq. ft. for fire proofing. Total cost would be $10.00-18.00/square foot.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SUMMARY AND RECOMMENDATIONS

FOR

ASBESTOS CONTROL LEGISLATION

NEED FOR ASBESTOS CONTROL

Many building materials used in past years had asbestos included because of its insulating qualities. However, since then it has become well known that asbestos can be cancer-causing and is virtually indestructable once introduced into the environment. In particular, asbestos-bearing materials which become worn or frayed can release asbestos into the air, which then can be breathed and eventually cause lung cancer. The actual effects do not become apparent until many years later, and by then it is too late to do anything.

A recent study of 101 schools in Alaska revealed that 13% of them had building materials, with asbestos included, which were in a condition in which the asbestos could pose a hazard to the school children. To make certain that this potential health hazard is corrected, funds are needed to make renovations to these buildings to assure that asbestos does not get introduced into the school environment. In addition, inspection and sampling at all schools within the state should be done.

LEGISLATION NEEDED

An appropriation is needed to do the following:

1. Supplemental for FY-81 of $12,250, to complete sampling and testing of all Alaskan schools. This would be handled by the Department, with the Dept. of Education and local school districts carrying out the actual inspections. These funds should be allowed to carry into FY-82.

2. Appropriation for FY-82, to complete any necessary sampling and to carry out the needed renovations in each identified school building. This would be appropriated to the Dept. of Transportation, with the Dept. coordinating and identifying the need for renovation throughout the local school districts. The appropriation requested is $500,000.

Attached is a more detailed summary of how the Departments of Environmental Conservation, Education, and Transportation/Public Facilities will work together in sampling and renovation as needed to protect public schools from asbestos contamination.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SUMMARY OF PROPOSED PROGRAM TO CONTROL ASBESTOS CONTAMINATION IN SCHOOL BUILDINGS

On October 21, 1980, a meeting was held to discuss control of asbestos in school buildings. Attending were Ellen Greenberg of the Department of Environmental Conservation (DEC), Bud Forrest, Wayne Longacre, and John O'Hara of the Department of Transportation and Public Facilities (DOTPF), and Lee Hayes of the Department of Education (DOE). The purpose was to arrive at an agreement on the activities to be undertaken by each agency and time frame so that asbestos contamination in school buildings would be halted within the shortest possible time and with the least cost and disruption of State and local agencies.

EPA's proposed regulations, 40 CFR Part 763, would require all public and private elementary and secondary schools in the United States to identify friable asbestos-containing materials in school buildings. Under the proposal agreed to by DEC, DOTPF, and DOE, of the three requirements relevant to this goal, local school districts, private schools and Regional Educational Attendance Areas (REAAs) would be responsible for inspecting and sampling all areas of their school buildings with deteriorating friable material. DEC would have the samples analyzed for asbestos content. Local school districts would retain records of all inspections, including sample dates, location and condition, and analysis of friable materials, notify employees of the location of friable asbestos-containing materials and ways to reduce exposure to asbestos, and notify the parent-teacher association of the inspection results.

After much discussion about the merits and demerits of even having an asbestos control effort, all agencies agreed to cooperate to identify friable asbestos and then correct it. Listed below are those activities agreed to be undertaken by each agency.

Personnel: No new staff is anticipated by any local or State agency.

Because the problem of asbestos contamination crosses agency lines, three State agencies and 81 local schools and school districts are involved. To alleviate the need for more personnel, each agency will assume a part of the program to control asbestos.

Time:

A) 12 hours (14 person-days) for the Departments of Environmental Conservation, Transportation and Public Facilities, and Education. This includes training personnel in asbestos inspection and sampling, preparation and analysis of tests, grant administration, and technical assistance.

B) ½-1 hour per school building for local schools and school districts. This is for the inspection and sampling of friable material.

C) 4 person-days per school district with friable asbestos. This is for administrative time, bid-processing activities, and monitoring construction activities.

Costs: A) $12,250 for the sampling, testing and assessing exposure risks in Alaskan schools.
B) $500,000 for the renovation of schools with friable asbestos.

Department of Education (DOE)

DOE will complete the plan required under the School Asbestos Detection and Hazard Act required by December 15, 1980. The plan must (1) describe how DOE will distribute informational materials on asbestos and this program in particular to school districts, (2) describe the content of the information to be sent out in #1 along with provisions for revisions, (3) describe how DOE will maintain records on the detection, control and removal of asbestos materials from school buildings, and (4) designate a State agency or other administrative unit to carry out the duties specified in the Act. This task doesn't directly affect the other tasks described in this summary, however, it is one other task which the agency must accomplish in addition to the others already identified.

DOE will distribute to all districts, private schools, and REAAs in the state all educational and informational materials including a memo describing the role of DEC and DOTPF and the required activities of local school districts. This should be completed within the next few weeks. Further, the department will confirm that the appropriate personnel of each school or school district has received the training materials and is prepared to inspect and sample each school. Finally, DOE will assure that all schools with friable asbestos in the state are sampled according to the proposed regulations 40 CFR 763.4, that is three samples for every distinct location with friable asbestos.

Department of Environmental Conservation (DEC)

DEC will continue as coordinating agency in the Asbestos Control in School Buildings program. This entails reaching agreement among involved agencies on assigned tasks, requesting meetings when necessary, assuring that tasks are accomplished expeditiously, and drafting memos and summaries of meetings and activities to date for in-house and general distribution.

DEC will make whatever funding requests are necessary to accomplish the ends of the program. A supplemental appropriation to cover training for personnel taking the samples and sample testing will be requested for the remainder of Fiscal Year 81 and an appropriation to provide for renovation will be requested for Fiscal Year 82.

DEC will assure that sufficient training materials, including videotapes are available for the 81 school districts, REAAs, BIA Agency Offices and private schools in the state. Further, the Department will assure that all asbestos samples are tested by a reputable lab. The Department will analyze test results for local school districts. Finally, DEC will request funding to cover the cost of video reproduction, testing, and renovation.

Department of Transportation and Public Facilities (DOTPF)

DOTPF has already estimated costs for remodeling ceilings and boiler installations in Alaskan schools with asbestos problems significant enough to

require correction. From the initial survey undertaken earlier this year, it was found that 12.9% of the schools contained asbestos from less than 1% to greater than 70%. Using this figure as a guide, DOTPF extrapolated costs based on where asbestos is likely to be located within the building, number of dollars per square foot for both removal and addition of substitute material, and a theoretical breakdown of urban/rural schools. Estimates are based on Anchorage costs.

DOTPF will verify, through its Facility Inventory conducted over the past several years, the completeness of sampling. Finally, DOTPF will act as the granting agency for grants made to local school districts for needed rehabilitation as a result of friable asbestos within their school(s).

In submitting its appropriation request, DEC will request that grant funds be appropriated directly to DOTPF for disbursal to local school districts. The money will be established as an Asbestos Control Fund. Should any money remain in the fund on June 30, 1983, it will revert to the General Fund.

Local School Districts

This includes all REAAs, local public school districts, BIA agency offices and private schools. There are 81 such schools and school districts in Alaska.

School district personnel will inspect schools within their district for friable asbestos. If material meets the criteria in the proposed 40 CFR Part 763, three samples of the material will be taken by local personnel. Samples will be sent to DEC for testing.

School districts whose samples indicate asbestos content will complete an Exposure Assessment, using Appendix I of the proposed 34 CFR Parts 230 and 231 as a guide. On the basis of the Exposure Assessment, the district will determine the necessity for complete or partial rehabilitation.

Should rehabilitation be necessary, the local school district is responsible for arranging with reputable contractors for the work to be done. All fees will be paid out of the Asbestos Control Fund to be established in the Department of Transportation and Public Facilities.

School districts will complete necessary forms detailing work undertaken and completed in the rehabilitation of and correction of friable asbestos.

IV. SUMMARY OF SAMPLE RESULTS

A. Results

Of the 41 schools and public buildings sampled, 15 or 36.6% were found to have at least some asbestos. Thirteen or 37.1% of the schools 35 contained some asbestos. Samples tested ranged from less than 1% to greater than 70%. Nine samples, or 14.3% of the total samples contained 10% or more asbestos. Eight, or 12.7% of the total samples, contained 2% or less asbestos. With the exception of the Northward Building (1%) and the North Star Borough Building (<1%), both in Fairbanks, all samples with asbestos were from schools.

Geographically, samples were taken from schools in Juneau, Fairbanks, Nome, Tok, Matanuska-Susitna Borough, Kenai Peninsula Borough, Kodiak Island Borough, Old Harbor, Ouzinkie, Bethel, Delta Junction, Tetlin, Gakona, and Trapper Creek. However, both the greatest number of samples and, in this case, the greatest amount of asbestos was found in schools from the Matanuska-Susitna, Kenai Peninsula, and Kodiak Island Boroughs.

Appendix A lists all samples and results. Appendix B lists samples with asbestos geographically.

B. Qualifications

1. Sampling consistency was not maintained. While some sanitarians took samples of anything that looked even remotely like friable asbestos, others took samples only from material which they could almost positively assure contained asbestos.

2. The number of samples within a given region varied considerably. Southeast sanitarians sampled only one school and Southcentral sanitarians sampled 47 locations within 27 schools, while Northern sanitarians sampled 9 locations within 7 schools. If we assume that the possibility of finding asbestos is roughly proportional to the number of samples collected, it is no wonder that the largest number of samples with asbestos came from the Southcentral Region.

3. Anchorage schools were not sampled, because that school district has been conducting its own survey. Margo Partridge said that the Anchorage School District found asbestos in at least one school, but I have not spoken with its staff to obtain results.

V. CONCLUSION

In spite of the above qualifications, the results clearly prove that asbestos deterioration is a problem in at least some Alaskan schools. On June 14, President Carter signed the School Asbestos Hazard and Detection Act of 1980. The act requires all State educational agencies to prepare a plan by December 15, 1980 to show, among other things, how informational material on the asbestos detection and control program will be distributed to schools and how records on detection and control activities will be maintained. The federal Department of Education is

Senator Parr —

Attached is the preliminary summary of the asbestos contamination problem in public buildings, as you requested. We should have the summary finalized this week, & would appreciate your thoughts on - whether we've included everything you wanted.

Based on our discussions with ADOT/PF, we will refine the cost data, and the approach to managing the solutions.

My telephone is 465-2660.

Thanks

Tom Hanna

MEMORANDUM State of Alaska

TO: C. Deming Cowles
Deputy Commissioner

DATE: February 13, 1981

FILE NO:

Thru: Glenn Akins

TELEPHONE NO:

FROM: Thomas R. Ha[illegible]
Chief, Air and Solid Waste

SUBJECT: Status of Asbestos Funding Needs-2/13/81

Since meeting with Senator Parr two weeks ago, we have been working with the Department of Transportation/Public Facilities to estimate fiscal needs for renovating all state-owned public facilities with possible asbestos contamination. Unfortunately, ADOT/PF cannot meet with me to come up with a suggested program and funding needs until next Wednesday. Until then, we will not be able to develop a detailed funding need requested by Senator Parr. We can, however, provide the following data to him now, to be followed by February 20 with the more specific data:

(1) The major identified friable asbestos contamination problems public schools. As indicated in our report already transmitted to Senator Parr, approximately 13% of the schools sampled were found to have asbestos containing materials that could affect public health. Only 101 of the 515 public schools existing in Alaska were sampled, however, and there will be a need for completing inspections and sampling of the remaining public schools at a cost of approximately $12,250.

(2) ADOT/PF has estimated that approximately $500,000 may be needed to make necessary repairs in school buildings found to have friable asbestos.

If major repairs are needed, this figure may be low.

(3) For all state-owned public facilities in the state, excluding the Anchorage area which has not yet been inventoried, ADOT/PF has indicated that no conditions were found that would require extensive renovation costs. ADOT/PF indicated that the only places found with asbestos contamination were in boiler rooms and pipe installations, neither of which would be a major expense. In fact, most of these corrections could be handled as a part of routine maintenance.

(4) ADOT/PF indicated that the Anchorage buildings may possibly have friable asbestos-containing materials because of their large size,

making it more feasible to use spray-on insulation materials. This will only be known as their inventory is completed, which should be this coming year. For purposes of providing funds through any legislative action that might be introduced this year, it may be appropriate to include a contingency amount of perhaps up to $500,000 to cover unidentified problem areas.

(5) The last area which Senator Parr requested an estimation of possible asbestos contamination is local government buildings. The results that ADOT/PF obtained from their inventory on state-owned buildings could be applicable to local government. Because there has been no extensive inventory of these buildings, some investigative effort would have to be made first, followed up with any sampling that might be needed. This will be talked over in more detail with ADOT/PF on Wednesday, but I would expect there to be a sampling need of about $5,000 and a contingency renovation need of approximately $500,000.

The above costs do not provide for either sampling or renovation of privately owned buildings local government buildings in which the public may have general access. To truly provide a service to protect public health in local government buildings as well as privately owned buildings, I suggest the following:

A. For Local Government Buildings: Provide for training to conduct inspections and take samples, and provide for sample analysis. If any samples are positive, provide technical assistance in determining renovation needs and best ways to correct the problems. Provide for funds as needed to encapsulate or remove the contaminated material. If funding is needed, it should be available. There should also be detailed inspection, sampling, and renovation criteria established to assure accurate identification of the problems and ways to select cost-effective methods to solve them. I would suggest that DOT/PF and our agency could develop these criteria. Building owners and operators would take responsibility for inspecting, sampling and renovating; the state would simply be providing technical assistance and public service.

B. For Privately Owned Facilities: It does not seem to be an appropriate state function to pay the costs of renovations in privately owned facilities. However, I would recommend that the state provide public awareness, training in inspection and sampling, and sampling analysis services free of charge to anyone willing to voluntarily to conduct their own inspection and sampling. It would then be up to the private individuals, and their consciences, in determining whether there is a problem and whether anything will be done to correct it. We would, of course, have information available to the public on how to conduct these activities.

(6) In talking with the Occupational Safety and Health (OSHA) Personnel, I found that they had only two inspectors for the entire state, and only conduct 100 inspections per year. As their own Enforcement Chief Ray Jorgenson acknowledged, there is simply no way that they can come close to adequately inspecting Alaskan facilities for basic OSHA requirements, much less for asbestos contamination.

This is unfortunate, since their requirements apply to every building in which there is an employee-employer relationship (in effect, they cover all the facilities in which we are concerned about asbestos contamination). Considering their lack of manpow , it does not appear realistic to rely on OSHA to carry out any major portion of an asbestos containment program. For this program, the best approach would appear to be public awareness, and encouragement of voluntary compliance by us and ADOT/PF, with responsibility for compliance placed at the local level wherever possible.

In summary, it appears that a fiscal need of between $1-5 million would be establish an effective asbestos containment program for public buildings. This would include sampling, public awareness, technical assistance and guidance, and actual funding of needed renovations for governmentally owned facilities. While some details of how to best to put together this program remain to be determined in next Wednesday's meeting with DOT/PF, we should be able to complete our recommendations within two days of that meeting.

It might be best to provide Senator Parr with this preliminary information now, to get his impressions on our suggested approach. Any additional ideas or areas which he would like to cover could then be incorporated in our fiscal projections and recommended ways of accomplishing the intended result. In particular it would be good to know whether he would want to consider inclusion of privately owned buildings in the cost projections.

I am looking forward to your comments and recommendations.

cc: Deena Henkins

...rgh (Penn.) Press, March 31, 1980

Asbestos: What's The Risk To Us?

By LEE HOTZ

Asbestos.

It's a word that, in a dead language, means indestructible.

Convicted as the key agent in the cancer deaths of countless workers who handled it for a living, asbestos also stands accused in the ever-increasing number of cancers among the general public.

Guilty or not guilty?

Researchers who have spent their professional lives documenting the dangers facing a generation of industrial asbestos workers can't agree on what risks confront the general public. It's unlikely they ever will.

Even less do they know what should be done.

"We've got to do something, but I'm not sure what," said Dr. Phillip E. Enterline, chairman of the department of biostatistics at the University of Pittsburgh's Graduate School of Public Health.

For a generation, asbestos was a miracle mineral that found some 4,000 different uses in products ranging from insulation to brake linings, from floor tiles to water pipes, curling irons, and even school modeling clay.

As long as such products are well-maintained, they pose only a potential hazard, Enterline emphasized. But it is a potential that is all too easily triggered.

"Once you disturb it, you can generate just about any level of asbestos exposure you want," he said. "Even if it's locked in concrete, it's always there, always a potential problem."

A bored high school color guard passed the time before drill practice by poking holes in the asbestos ceiling with their flagpoles.

That casual vandalism exposed them to levels of the cancer-causing fibers equal to those once found in asbestos factories and shipyards.

Physical fitness buffs at a local pool worked off flab swimming through an invisible rain of fibers gently drifting down from an asbestos-sprayed ceiling.

It only took small variations in temperature to expand and contract overhead steel joists and release the deadly shower.

The backyard mechanic who grinds his own brake drums; the home handyman ripping asbestos tape off his basement heating pipes; the young woman fluffing her hair with an asbestos-insulated blowdryer — all are exposed unknowingly to what medical researchers call the most lethal industrial carcinogen known to man.

"There are hundreds of thousands of fibers in my lungs and yours. But what does it mean?" Enterline said. "We know asbestos is bad. But I'm a statistician. I'm interested in just how bad it is."

When researchers established the link between exposures to airborne asbestos fibers and cancer in the early 1960s, they turned a thriving asbestos industry into the villain in an industrial nightmare.

They also raised disturbing questions of public health that go far beyond the medical problems plaguing the men who made their living handling the material.

Like tuxedoed security guards in a plush casino, cancer researchers watch the roulette wheel of mortality spin. When the small steel ball lands on the same number far too often, they scan the players suspiciously, then round up the usual suspects.

They deal in chance, odds, probabilities, constructing timetables of death. The most important words in their medical vocabularies:

If, maybe, perhaps.

To uncover asbestos as a cancer-causing agent, researchers such as Enterline and Dr. Irving Selikoff of the Mt. Sinai School of Environmental Medicine in New York sifted through the medical records of thousands of workers who had been exposed to astronomical levels of asbestos dust.

In two decades of research, they have helped recalculate the odds. But however well they have documented the risks of asbestos workers, they have yet to find any sure bets on the question of public health, Enterline admits.

"The trouble is we just don't know, we can only infer," explained Dr. Alison McDonald, professor of epidemiology at London University. In Pittsburgh recently on a research trip, she has specialized in the study of mesothelioma cancers since 1966.

The only known cause of that painful and usually fatal cancer is exposure to airborne asbestos fibers. The fibers also have been linked to lung cancer and cancer of the stomach, colon, rectum and throat.

"We can't say that environmental exposures cause mesothelioma," she explained carefully. "We can only say that occupational exposures do.

"Asbestos does produce an increase in the risk for the general public, but is it a measurable risk? We don't have any direct evidence."

The statistical studies so essential to detecting the work of a cancer-causing agent are best at measuring large risks among small groups of people, she said. Complicating investigations is the 20-year time lag between exposure and the stirrings of a cancerous growth.

(continued)

Researchers were able to pinpoint asbestos as an occupational hazard because the exposure levels were huge, easy to isolate and easy to link statistically to the equally large number of cancers among asbestos workers.

The very techniques so sharp in dissecting industrial risks are blunted by the sheer immensity of the task facing those who would analyze the public health problem.

"You'd need tremendous populations and nobody has the time, the patience or the facilities to do such research," Enterline said.

But knowing the levels of extended exposures, medical statisticians calmly calculate the cancer odds.

✓ For the general background level found in the air — 50 nanograms of asbestos fibers per cubic meter — 40 people per million may die. (A nanogram is one billionth of a gram.)

✓ At the levels present in a room with frayed asbestos insulation or in most asbestos workers' homes — 500 nanograms per cubic meter — 400 people per million may die.

✓ The levels generated by the vandalizing color guard with their flagpoles — about 50,000 nanograms — may cause as many as 40,000 deaths per million.

The lowest industrial exposures that Enterline worked with in his studies were between 75,000 nanograms and 375,000 nanograms per cubic meter.

As for the infamous hairdryer: "It is less than a one in a million chance of getting cancer in a lifetime of exposure," said Enterline, who prepared the statistics.

But then, that's one in a million on top of everything else," he added.

One little bit of that cancer may come from the hairdryer, one little bit from walking down Grant Street the day they sprayed the U.S. Steel Building, one little bit from the asbestos tile on the floor.

Since 1972, federal agencies have issued alerts about asbestos building materials and banned outright the use of asbestos sprays once commonplace in the construction industry.

Congress recently voted $330 million to help cover a $1.5 billion repair bill facing the nation's public schools, which are working to eliminate the material from their classrooms.

Warnings about hairdryers containing cancer-causing asbestos are now household literature.

Now the federal Consumer Product Safety Commission is preparing a massive survey of practically every common household appliance, except refrigerators, to determine if they, too, may contain the dangerous asbestos fibers.

The U.S. Environmental Protection Agency is pondering regulations that would force asbestos inspections of schools and commercial buildings.

Those may be the first steps toward banning the substance entirely.

In the meantime, researchers are not yet certain exactly how asbestos fibers cause cancer. Many believe the size and shape of the fibers themselves can cause cells to run amok in a cancerous growth.

"Scavenger cells in the lungs can digest fibers smaller than they are," Enterline explained. "But the longer ones ... under the microscope, the cells look like strings of beads clinging to the fiber."

Man-made fibers such as fiberglass — widely used as a substitute for asbestos in insulation products — have caused mesothelioma cancers when surgically implanted in lung tissue during laboratory experiments.

"But fiberglass is fragile, breaks easily and doesn't maintain the fiber length the way asbestos does," he said.

Others believe that it is some chemical characteristic of the five types of asbestos fibers unearthed from the mines in Canada and South Africa.

Preliminary results of a study now being conducted among mesothelioma victims indicate that the type of asbestos fiber is critical in causing that kind of cancer, Dr. McDonald said.

Both the cancer victims and the control group had equal amounts of white chrysotile asbestos fibers in their lungs, she explained, but the mesothelioma victims had an unusually large number of brown amosite asbestos fibers in the lungs as well.

Both types were common in asbestos insulation products.

Even as researchers painstakingly stretch toward some conclusions about asbestos they still don't know how it fits into a whole universe of cancer-causing substances present in the environment — at the latest count 700 ranging from arsenic and uranium to nickel and chrome.

At one extreme, some researchers believe that asbestos may be responsible for the ever-increasing rise in cancer deaths since World War II.

"You know lung cancer was a rare disease back in the forties," Enterline explained. "Now it's pretty well established that 200,000 people out of every million die of cancer.

"You can plot the rise in the use of asbestos against the rise in cancer deaths. But it's not that simple. Cigarette smoking, he points out, is responsible for about 30 percent of all lung cancers in this country.

At the other end of the spectrum is the more cynical belief that the public health risks are based on fragmentary, ambiguous research and grossly exaggerated by ambitious health officials with a taste for publicity and a need to increase departmental budgets.

"The problem is that most people are afraid to wait for medicine to make up its mind.

Health officials emphasize that as long as asbestos insulation or other products containing the lethal carcinogen are well-maintained, there is no danger.

But when that insulation — much of it installed decades ago — is torn or punctured, when a hairdryer blows asbestos fibers into a user's face, when in some way the fibers are exposed to float freely in the air, a hazard is created on that medical researchers can agree.

"In some cases, we may not live long enough to feel any effects. Low level exposures may be causing cancers in 30 years. We just don't like that in any way," Enterline said.

ALASKA HEALTH CARE ADVOCATES
BOX 1037 D.T. ANCHORAGE, ALASKA 99510
272-8734

MEMO

TO: Senator Parr
DATE: JANUARY 20, 1981
RE: ASBESTOS CONTAMINATION IN THE WORKPLACE AND SCHOOLS
FROM: SUSAN JOHNSON, DIRECTOR

> "...Exposure to asbestos has been identified over a long period of time and by reputable medical and scientific evidence as significantly increasing the incidence of cancer and other fatal diseases...medical science has not established any minimum level of exposure to asbestos fibers which is considered to be safe..." (Public Law 96-270, June 14, 1980)

OCCUPATIONAL EXPOSURE:

Documents maintained by both Local 97 of the International Association of Heat and Frost Insulators and Asbestos Workers (IAHFIAW) and the renowned Dr. Irving Selikoff, show that between 1967 and 1976 10 Local 97 members died from various cancers induced as a result of occupational exposure to asbestos. According to death certificates maintained by Local 97, another member died in 1965, another in 1979, and a third now has less than eight months left to live before his body is ravaged by cancer. Total deaths by mid-1981 - thirteen(13). The average life expectancy for a pipe coverer is about 15% less than someone in the general population. This, due primarily to past asbestos exposure, will continue at that rate unless something is done regarding present exposure.

A recent survey of Local 97 members which was conducted by Health Care Advocates (HCA) showed that on the average, members of Local 97 have spent 71% of their time in the trade (insulation) working in Alaska for Local 97; 20% of their time in the trade was spent working for other IAHFIAW locals Outside; 5% of their time was spent out of the trade (ie.military); and a known 4% of their time was spent working with asbestos in Alaska, before they became members of Local 97.

The average number of years spent working in the insulation trade for Local 97 members is 16; the average number of years spent working in the trade with Local 97 is 11 years and 6 months, (or 71% of their time in the trade.) Yet,

these men who are established, working residents of the state have, in effect, been denied the protection on the job awarded them by law, worker's compensation legally due them after inducing occupationally related cancers, and as a result of this, the psychological well-being afforded those who who are not haunted by impending occupationally-related death and disease.

Local 97 members can be defined as asbestos "workers", or those whose work has been most directly associated with asbestos. In Alaska, that work has consisted primarily of the application of asbestos as insulation, both thermal and acoustical, and work with asbestos during maintenance, repair, and removal of the material. However, there is a large group of asbestos workers, whose exact number is unknown, who have been defined as asbestos "breathers". In Alaska, that group includes all members of the various Building and Trades crafts, particularly the Boilermakers, Painters, Carpenters, and Laborers who have also worked directly with asbestos and fit into both the "worker" and "breather" category. The workers from the various Building and Trades crafts work in close physical proximity on any given job, and their exposure to toxic materials may occur simultaneously with only the degree of intensity at variance. Additionally, there are workers from other trades who are intermittently exposed to asbestos. Such workers include members of the Longshoremen, cannery workers, electrical workers (IBEW), automobile repair and brake repair workers.

The occupational health hazards, specifically asbestos, associated with the brake repairmen's job have come under close scrutiny recently. Most brakes (brake linings) contain considerable amounts of asbestos, often 50% or more. "...The potential for asbestos exposure (to brake repairmen) has been a matter of increasing concern ...initial clinical surveys indicate x-ray changes of asbestosis are not uncommon ...instances of mesotheliomas have been reported . ." (Dr. Irving Selikoff)

Today, in Alaska the largest proportion of asbestos-related work occurs during maintenance, repair, and removal of asbestos. As pointed out by Dr. Selikoff, who first established the link between asbestos exposure and cancer , 10,000 to 20,000 tons of asbestos were applied annually between 1890 - 1970 as thermal insulation to pipes, boilers, and other high temperature equipment. Alaska did not escape usage, nor did it's workers escape death from exposure. Maintenance, repair, and removal of this material presents enormous control problems, Dr.

Selikoff cautions, especially since proper procedures and precautions have yet to be fully developed for these activities. ("Occupational Respiratory Diseases; Asbestos-Associated Disease",in Public Health and Preventive Medicine, 1980)

The HCA survey of asbestos workers established that when working with asbestos,

- 55% of the workers never (0% of the time) had protective clothing provided, as legally required by the State and Federal Occupational Safety and Health laws
- 13% of the workers had respirators provided occassionally (1-49% of the time)
- 66% of the workers usually had respirators provided (50-75% of the time), and
- only 26% of the workers always had respirators (100% of the time) provided when working with asbestos

Additionally the effectiveness fo the respirators which are provided have been questioned by workers: why aren't U.S. Bureau of Mines approved masks/respirators provided when needed, as legally required. In 1979, the Department of Labor's Division of Industrial Hygeine cited "no respiratory equipment" as one of the most frequently violated state/federal occupational laws.

- 58% of the workers were never (0% of the time) provided vacum cleaners for clean-up activities

The failure to provide vacum cleaners, disposable coveralls (protective clothing) lockers to keep contaminated clothing isolated in (100% of the workers were never, or 0% of the time, provided lockers to isolate work and/or street clothing from each other) is significant for the following reasons:

Studies conducted by Dr. Irving Selikoff, and colleagues, document the deaths of wives, sons, and daughters of asbestos workers who were exposed to fibers brought home by the workers on their (dusty) clothes. Hundreds of asbestos worker family members have died from mesothelioma, a rare form of cancer for which <u>there is no known cure</u>.

The fibers , from workers clothing, hair, and so forth, settle in the home, become suspended in the air, and (of respirable size) eventually become lodged i.. the lungs of family members. The inhalation of fibers and its fatal impact on one's health is cumulative.

As noted before, employers do not provide lockers to isolate street clothing from work clothes, and contamination. Further, the eating area, (lunch/break shacks) constructed for workers is provided to workers both to eat in and to change clothes in. This only serves to exacerbate the problem.

WORKER'S AND OTHER COMMUNITY COMMENTS:

- "If you burn your hand in one state as the result of a known cause, you don't want to spend an unnecessary amount of time researching it in another state: you act to prevent it..." (Dr. John Middaugh, Anchorage epidemiologist)
- "I only have one-fourth of my lung left from this stuff..." (BA for Local 97)
- "(We need) more action on the state part to control working areas" (Asbestos worker)
- "Force the contractors to comply with the health laws" (Asbestos worker)
- "You need a police force in the Bush to get the employer to comply with the laws which are supposed to protect us..." (Dying asbestos worker)
- "I think I'm working with with asbestos on this ship...and I don't know what my rights are..." (Pile diver)
- "They tell me I'm going to get that stuff (asbestosis,cancer) because of you guys(asbestos workers)" (Boilermaker)
- "We used to spray paint asbentos right here in town (banks - approx. 8 years ago); every once in a while someone would say that stuff might be dangerous, but we did'nt know what our rights were...did'nt have protective clothing..." (Carpenter)
- "We need a lot more sanitary facilities on the job and more testing of insulation products besides asbestos, such as fiberglass, glues, and adhesives." (Asbestos worker) SEE ATTACHMENT ON Fiberglass
- "We need change rooms seperate from eating facilites...keep change rooms clean to avoid taking dusts and other hazardous materials home" (Asbestos worker)
- "We need more inspection and enforcement by O.S.H.A..." (Asbestos worker)
- "We need a stable funding source for D.O.S.H. so they can get the job of protecting workers done...D.O.S.H. can't be forced to fight for funding each year and try to do a good job protecting worker health...they should be guaranteed funding for a period of at least three years..." (BA,Laborers)

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH:

A basic philosophy of the Occupational Safety and Health Act is that inspections in the workplace have as their objective improved conditions in the workplace. In part, this objective is obtained by a multiplier effect - an inspection of an establishment in a particular industry will usually produce voluntary compliance activity by other employers in that industry. The ultimate value can not be found in it's punitive effect, but rather in its deterrent effect. If not faced with that possibility of an inspection, employers would loose most of their motivation for acnieving the goals of the Act.

The Alaska Division of Occupational Safety and Health does not include multi-site (employers with an out-of-state address) or non-fixed places of employment in their general scheduled selection system for inspections. In other words, all workers in construction, which inlcudes all Building and Trades workers, only have their work site inspected by an Industrial Hygienist if:

a/ the worker is hurt

b/ the worker files a formal complaint, which is signed by the worker (this can be particularly threatening to a worker who is afraid that his signature on a complaint will precipitate retaliatory firing)

c/ the employer requests an inspection

d/ safety officer makes a referral to an industrial hygienist

This effectively precludes preventing worker exposure to toxic materials and employer non-compliance with existing laws and occupational health regulations. Equally important, it negates that basic conceptual foundation which workplace inspections were built on.

According to chief D.O.S.H. staff, this results, in part, in a 64.8% failure rate for detecting asbestos-related hazards: 1,230 asbestos-related places of employment are not included in the genera scheduled inspection system because they are non-fixed or multi-site places of employment. The statistics for other high hazard industries and the D.O.S.H.'s ability to protect the worker are as compellingly frightening, and include most construction workers.

Craftworkers, operators, and laborers - or construction workers- comprise the largest category of Alaska wage and salary employees, or 32% of the workforce statewide. Employment for these workers is expected to increase by about 3,550 per year thru 1985 (Annual Planning Information, Alaska Department of Labor, FY 1981, p.25).

A D.O.S.H. is severely needed to assist in adequate protection of the worker, and the Alaska D.O.S.H. is in need of some support to adequatley fullfill that objective. As put by the BA for the Laborers, without a stable fianancial base which needs to eventually be expanded, it is impossible for the Industrial Hygienists to sufficiently execute their work, and provide meaningful protection for the worker.

The policies and procedures of the State D.O.S.H. should be scrutinized, with input and assistance from that Department, in respect to occupational health hazards, specifically asbestos exposure, and ideally exposure to all toxic materials in high hazard industries.

Some questions which should be asked of D.O.S.H. :

1. are asbestos laws and regualtions current
2. where can they be improved to better meet the needs of the worker
3. do they include matching enforcement policies
4. should inspections procedures be rethought and reworked to prevent occupationally related death and disease from asbestos, welding and toxic fumes, silica and so forth.
5. are there enough Industrial Hygienists to adequately implement the program
6. would it be more effective to develop a research and education component of the state plan, with the objective being increased worker participation in health and safety on the job, as is emphasized in other states ?

HEALTH HAZARDS ASSOCIATED WITH ASBESTOS EXPOSURE:

The latency period for asbestos-related diseases is 15-30 years, depending on the disease, and the intensity of exposure to asbestos. As noted by Dr. Selikoff, "it is disconcerting to hear a worker's colleagues say that the best they can do for him (a worker dying from as asbestos-related disease) is: 'to know when to take the mirrors from the wall...'."

1. Lung Cancer: This is one of the most serious health hazards for insulation work. According to Dr. Selikoff, it was responsible for one in five deaths among insulation workers. There are many who contend that lung cancer in asbestos workers is primarily caused by cigarette smoking:

Alaska Health Care Advocates January 20, 1981

FACTS: a/ asbestos workers who smoke cigarettes have 8x the chance of dying of lung cancer compared to other cigarette smokers of the same age who do not work in the trade

b/ asbestos workers who smoke cigarettes have 92x the risk of dying of lung cancer compared to similar men, who neither work with asbestos nor smoke cigarettes

c/ Lung cancer in asbestos workers as a group are, to a certain extent different than ususal lung cancer. Two-thirds are in the lower portion of the lung (where most scarring is seen on x-ray also); ordinarily only one-third are found here. Apart from such minor variations, they can be expected to be diagnosed and treated in the usual ways. The important thing is early diagnosis, if we are to hope for a cure."

(Industrial Hygiene Reports, Winter, 1972, Dr. Irving Selikoff, Director)

Mesothelioma: This is a very rare form of cancer in the general population; insulation workers contract mesothelioma 700 times more than in the general population. The lining of the chest and abdomen is the mesothelium and when the cancer attacks this tissue,it is called mesothelioma. THERE IS NO KNOWN CURE for mesothelioma The association between mesothelioma and asbestos is conclusive:

> "...There is now wide agreement that when mesothelioma is seen, asbestos exposure will likely have previously occurred, or conversely, when asbestos exposure has occurred, there is significant risk of later mesothelioma." (Dr. Irving Selikoff)

Gastro-intestinal Cancer: (stomach, colon, rectum) This is found 2-3x more in the asbestos worker than in the general popualtion.

Asbestosis: - or scarred lungs- the only cause of this is asbestos exposure. If one has asbestosis, then becomes ill with bronchopneumonia, the asbestosis could precipitate death. A person who had no asbestosis, but contracted the bronchopneuomnia would normally recover in three to four days.

- -

SMOKING DOES NOT INCREASE THE RISK OF DEATH TO ASBESTOS WORKERS OF MESOTHELIOMA, COLON-RECTUM, STOMACH, OR KIDNEY CANCER, OR ASBESTOSIS.

- -

Dose-Response Relationship:

There is a different dose-response relationship between the different types of

cancer and asbestos exposure.

Among family contacts of workers where the dosage would be relatively low, the rate of incidence mesothelioma will vary.

"There are some forebodings: x-ray surveys of wives and children of asbestos workers have a significant prevalence of asbestosis and instances of mesothelioma...exposure to asbestos is both cumulative and continuing once the fibers have been inhaled...each day's dose is added to that inhaled before and the retained fibers subsequently have an influence on the tissues in which they are imbedded..."

This concept is critical to understanding the necessity of protective measures on the job, the effectivness of the State Division of Occupational Safety and Health and the potential impact friable asbestos containing materials have on the health of school children and teachers.

Again, there is no known cure for mesothelioma. However, there are measures which can be taken to help the workers who have already been exposed to asbestos, and/or have induced another type of cancer.

In his most recent letter to HCA Director , Dr. Selikoff writes:

" ...May I suggest the following...surveillance programs: medical facilities that are available should be examined and judgements made as to how they might best be used ...the principal diseases for which prevention and early diagnosis are useful include: asbestosis, bronchogenic carcinoma, gastrointestinal cancer, cancer of the mouth and pharynx, larynx cancer, kidney cancer... there is very little we can do for mesothelioma if it occurrs...surveillance should also include an important educational component..."

WORKER'S COMPENSATION AND OCCUPATIONALLY-RELATED DISEASE:

Once the worker has induced an occupationally-related, or asbestos-associated disease, what is the feasability of compensation:

According to the Barth study just published (Worker Compensation and Work Related Illnesses and Diseases) there are great discrepancies between the compensation awarded for average work injuries and for occupational diseases. He discusses:

a/ the average amount of time a victim waits before recieving benefits for occupational diseases vs. the average amount of time a victim of an average work injury waits. Nationally, it is one year for occupational diseases vs. two months vs. the average work injury compensation

b/ the percentage of occupational disease awards; nationally, 60% of the claims are denied for occupational disease and only 10% of the average job injury awards are denied

c/ the number of occupational disease awards that are resolved in compromise and release agreements which involve small lump settlements which usually release carriers from further liability for income maintenance and health care costs; nationally, over 50% of occupational disease awards recieve such treatment and only 16% of all regular injury aswrds recieve such treatment

d/ the amount of compensation for the worker who has been totally disabled for life by occupational disease; nationally, only one-eighth of the workers income is replaced

e/ the flow of funds into and out of insurance company reserves; nationally, only 60¢ of every premium dollar is paid out as cash or medical benefits, therefore, 40¢ of every worker's dollar goes to pay expenses which include insurance company reserves, dividends, litigation costs, overhead, etc.

According to a progress report published by Dr. Irving Selikoff of the Mt. Sinai School of Medicine, for a comprehensive analysis on worker's compensation benefits for asbestos workers who have induced asbestosis, mesothelioma, and/or lung cancer, there are significant problems with worker's compensation. His preliminary report discusses 175 workers in 34 states who induced mesothelioma and applied for workers' compensation. He also discusses the experience of the surviving dependents who applied for compensation:

a/ only 37% applied prior to death
b/ only one-half recieved compensation
c/ one-half had claims pending at death
d/ average victim of mesothelioma was disabled less than 6 months prior to death, and worker compensation did not have sufficent time to process all the applications for benefits
e/ 40% of the survivors filed for claims for which the majority recieved a weekly cash award of about $80.00 and others recieved a lump sum averaging $20,000
f/ appoximately two-thirds fo the claims were contested and 84% required the services of an attorney

g/ three-fourths of the widows did not file for compensation and said they did not know they could file for benefits

h/ tort litigation including third party liability suits were filed by about 22% of the survivors of mesothelioma victims; three fourths of the suits settled at an average amount of $93,000.00 (less $35,000.00 for legal fees).

The conclusions which can and have been drawn thus far are that worker's compensation benefits are not easily accessible or adequate for occupational illness victims and/or their surviving dependents.

In Alaska,

* Bill Anderson, deceased: In December of 1975, Bill Anderson applied for for worker's compensation, and was denied compensation. The Worker's Compensation Board rejected the applicant's contention of asbestosis. Bill Anderson died, and the Board decided they had in fact, erred. Anderson had no living dependents. (Workers Compensation Board Decision and Order #73-12-0371)

* Henry Moore, deceased: In 1978, the widow of Mr. Moore was awarded an out-of-court settlement for $35,000.00, and the Company involved was released from any further fiduciary obligation to Mrs. Clara Moore. Mr. Henry Moore died of lung cancer due to occupational exposure to asbestos.

The whole issue of worker's compensation is inextricable from the issue of occupational health and asbestos contamination, and in terms of it's relationship to those issues, it should be studied in that context, and not treated as a special category.

PUBLIC HEALTH AND ASBESTOS CONTAMINATION:

Not only have Fish and Wildlife found 60 million asbestos fibers per pound of fish in the Yukon River, by Eagle, asbestos contamination has been discovered in the Alaskan School system.

ANCHORAGE: 64 schools were built or renovated between 1945 and 1978 (the years in which it was most likely schools would have used asbestos containing material). According to a 1979 written statement from the Anchorage School Safety Officer to EPA, Region X, Seattle, thirty-two schools were inspected for the presence of friable asbestos material. Supposedly, 7 of the 32 schools had bulk samples analyzed for asbestos, using the EPA recommended techniques (very important in order to accurately assess the severity of the problem).

Alaska Health Care Advocates January 20, 1981

According to Mr. Bibeau, Anchorage School Safety Officer, as of September 9, 1979, nearly 2 years ago, three (3) schools had friable asbestos containing materials. EPA (Environmental Protection Agency) recommended removal in West High, and encapsulation in another area of West High. These areas (Boy's/Girl's Locker room, and the mechanical space below the pool area) are areas where there is direct human exposure, specifically and particularly to school children and maintenance workers.

According to a conversation between Mr. Bibeau, the Business Manager, Mr. Tom Freeman, and HCA Director, Susan Johnson, no corrective action had been taken as of December,1980.

STATEWIDE: There has been no systematic detection program for either the schools or other public buildings such as hospitals undertaken. There was sampling and analysis of the material conducted in approximately 70 schools statewide. In those schools investigated, which occurred as a result of the efforts of the Department of Environmental Conservation (DEC), it has been proved there is serious cause for concern.

MATANUSKA-SUSITNA BOROUGH: of the 17 samples taken, 2 had an asbestos content above 40% (in Wasilla Elementary and Wasilla Junior High). All samples taken had an asbestos content exceeding 1%. The interior location was not identified which makes assessment of the problem a near impossibility if one is to accept EPA standards. For example, what is the accessibility to human contact and exposure, has there been water damage, and so forth. There are 7 EPA factors which allow one to prudently assess the extent of the problem.

KODIAK ISLAND BOROUGH: 3 of the 14 samples taken have an asbestos content of 50% or more - Peterson Elementary (2) and Kodiak High. The interior locations include a fresh air duct in a shop area used primarily by custodians, an auto-mechanic shop (lining to safety blanket) and welding room.
3 other Kodiak Island schools have an asbestos content of over 17% and include such high accessibility areas as school kithchens, cafeteria ceilings and classrooms.

KENAI-PENINSULA BOROUGH
Of the 11 schools smapled, 2 have an asbestos content over 10% and less than 35%; a third has an asbestos content of 1-2%.

As stated before, no sampling consistency was maintained and some of the sampling conducted was not conclusive. Some of the sanatarians only sampled those areas which they felt certain contained friable asbestos material while others sampled all areas which bore any semblance to asbestos at all. Additionally, there are numerous schools/public buildings which haven't been inspected, at all.

For those school districts where officials are aware of a problem, there are no existing surveillance or control programs maintained. To the best of our knowledge, no corrective action has been pursued. The only attempt at initial documentation of the problem is the sampling and analysis spearheaded by the Department of Environmental Conservation.

The exposure problem in the schools and public buildings requires a long-term solution. If there is asbestos in any school or public building, which is susceptible to any of EPA's critical factors, it requires a long term surveillance program in order to adequately protect the health of any of the users of the school/public buildings. The only exception to that is if there is a decision made to remove the asbestos.

WESTERN ALASKA BUILDING and CONSTRUCTION TRADES COUNCIL

AFFILIATED WITH

A.F.L. - C.I.O.

BUILDING AND CONSTRUCTION TRADES DEPARTMENT

David E. Chess
PRESIDENT
407 Denali Street
ADDRESS
ANCHORAGE, ALASKA 99501

Allen Pilto
SECRETARY
407 Denali Street
ADDRESS
ANCHORAGE, ALASKA 99501

January 20, 1981

Senator Parr
Alaska State Legislature
Pouch V (MS 3100)
Juneau, Alaska 99811

The Western Alaska Building and Construction Trades Council, Inc. unanimously passed the following resolution at our regular meeting held January 20, 1981.

Whereas: Health hazards associated with asbestos contamination and other toxic materials have been amply researched and confirmed by reputable medical and scientific evidence over the last twenty years, and

Whereas: We want to prohibit the poisoning of any more workers from asbestos or any other toxic materials, as well as see the public, particularly school children, adequately protected, and

Whereas: The effectiveness of the institutions charged with protecting the lives of workers on the job, and the public health is at question

Therefore be it resolved: That the Business Agents of Building and Trades go on record as acting to initiate and support a 6-8 week thorough assessment of the scope of the problems, to be conducted by an independent consultant to the legislature, qualified in occupational diseases this legislative session, and

Be it further resolved: That upon completion of the assessment of the problems the legislative report will identify and propose corrective measures at which time labor and the general public will have the opportunity to testify in support of or against the proposed corrective action(s).

Sincerely,

David E. Chess

David E. Chess
President

cc: Dwayne Carlson

Alaska Health Care Advocates January 20, 1981

THE ROLE OF THE STATE: PHASE ONE

Due to the compelxity and gravity of the asbestos problem in the state, we are proposing that a legislative investigation and analysis of asbestos contamination on the job and in the schools/public buildings is conducted in accordance with the following:

* A four to eight week intensive study is executed by an independent consultant to the legislature. The consultant should have experience in investigation and research, particularly occupational health/medical research, knowledge of worker's compensation, and some familiarity with other relevant systems, specifically labor and the school system

* The scope of the study should have as it's primary goal, documentation of the scope and depth of the problem, and the proposal of corrective measures

  * Who has been exposed - and how many
  * What is the extent of the exposure - past and present

* Who are the major institutions legally charged with protecting the worker and the public from toxic materials, specifically asbestos

* What has the role of: D.O.S.H., School System, Worker's Compensation, Medical Community , Public Health, Legal System been on both a
  * preventive level
  * after exposure and illness has occurred
* Why or why not ve these key institutions been effective - an analysis
  * State laws and enforcement policy
  * Comparison with State laws,enforcement procedures, commissions Outside
  * Confer with international experts, specifically Dr. Irving J. Selikoff and Dr. William J. Nicholson, Mt. Sinai School of Medicine
* Propose corrective actions
* Feasability of Special Task Force to direct the executi n of corrective actions(Phase II

Alaska Health Care Advocates January 20, 1981

Propsosed Budget: One Month

Salary: $ 150.00 - 300.00/day

Travel: $ 2,500.00 (Includes 2 Anchorage-Fairbanks, 1 Fairbanks-Juneau and trip to the schools in the Bush)

Telephone: $ 500.00 (Includes calls to Mt. Sinai School of Medicine, N.Y.C., New York)

Attachment A : FIBERGLASS - ANOTHER ASBESTOS ?

The major substitute for insulation work with asbestos is fiberglass, specifically thermal or acoustical insulation.

Dr. Mearl Stanton of the National Cancer Institute has done a number of studies on cancer induction (of fiberglass) in laboratory animals. Stanton experimented with different sizes fiberglass and found that when fiberglass is milled down to theesame size as asbestos particles, it did induce cancer.

The issue here is the size of the fibers as opposed to the chemical composition of the fibers and the ensuing carcinogenity (to inhalation). Dr. Selikoff addresses the Stanton hypothesis:

> "Clinically and in public health terms, the strength of the asbestos mesothelioma association is remarkable. It may reflect not a unique pathogenic influence of asbestos fibers in particular, but, rather, an example of a generic problem that asbestos has come to represent because of its industrial and commercial uses. Stanton suggests it is the size and shape of inorganic asbestos fibers that in some way resulted in neplastic change in mesothelial tissues, and that organic fibers of similar size and shape might do the same... there is growing concern that other "asbestoses" may unknowingly be introduced into industry, with identification of human neoplastic risk much too late, after many people have been exposed." (emphasis added)

ALASKA AND FIBERGLASS CONTAMINATION:

The Alaska Building Code (Uniform Mechanical Code, 1976 edition, paragraph 1005) allows the use of fiberglass as interior air duct insulation. What is the potential threat to the health of those who are exposed in hospitals (why sterilize equipment when invisible, but respirable, glass fibers contaminate the air), schools, and the workplace.

* Substitutes are available
* A law should be adopted prohibiting the use of fiberglass on the interior of air duct system's insulation.

Dr. Selikoff to Mr. William Exely, President of the Jacksonville Federation of Teachers, AFL-CIO, in 1970:

"I recommend that ventillating systems in public buildings, especially those in which children will spen any time, not be constructed in such a way as to allow the contamination of circulating air by inroganic micro-particles...it would be advantageous that procedures be recommended which would discourage the contamination

FIBERGLASS cont'd

of the air in public buildings with inorganic particles,including but not limited to, fibrous glass. The air breathed by children (who have long lives ahead of them) should be clean of contamination by foreign particles, especially those with a potential long life in the lung, should be discouraged..."

NOTE REGARDING THE FOLLOWING FRAME ON MICROFILM:

COMPLETE DOCUMENT IS AVAILABLE IN ORIGINAL FILES IN ALASKA STATE ARCHIVES. TITLE PAGE ONLY HAS BEEN FILMED.

federal register

Wednesday
September 17, 1980

Part V

Department of Education

Asbestos Detection and Control: Local Educational Agencies; Asbestos Detection and State Plan: State Educational Agencies

NOTE REGARDING THE FOLLOWING FRAME ON MICROFILM:

COMPLETE DOCUMENT IS AVAILABLE IN ORIGINAL FILES IN ALASKA STATE ARCHIVES. TITLE PAGE ONLY HAS BEEN FILMED.

federal register

Wednesday
September 17, 1980

Part VI

Environmental Protection Agency

Friable Asbestos-Containing Materials in Schools; Proposed Identification and Notification

96TH CONGRESS
1ST SESSION

H. R. 1435

To establish a program for the inspection of schools for the presence of asbestos materials, to provide funds for the testing and evaluation of potential hazards, to create a loan program to assist in the containment or removal of imminent hazards to health and safety, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 24, 1979

Mr. PERKINS introduced the following bill; which was referred to the Committee on Education and Labor

---

A BILL

To establish a program for the inspection of schools for the presence of asbestos materials, to provide funds for the testing and evaluation of potential hazards, to create a loan program to assist in the containment or removal of imminent hazards to health and safety, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Asbestos School Hazard Detection and Control Act of 1979".

FINDINGS AND PURPOSES

SEC. 2. (a) The Congress finds that—

(1) exposure to asbestos and materials containing asbestos has been identified over a long period of time and by reputable medical and scientific evidence as significantly increasing the incidence of cancer and other severe or fatal diseases, such as asbestosis;

(2) medical evidence has suggested that children may be particularly susceptible to environmentally induced cancers;

(3) medical science has not established any safe level of exposure to asbestos as a threshold above which the likelihood of developing illness occurs;

(4) substantial amounts of asbestos, particularly in sprayed form, were used in school buildings, especially during the period 1946–1972;

(5) partial surveys in some States have indicated that there exists in a number of schools asbestos materials which have become damaged or friable, from which asbestos is being or may be dislodged into the air;

(6) asbestos concentrations far exceeding the normal ambient air levels have been found in schools with damaged asbestos;

(7) the Department of Health, Education, and Welfare and the Environmental Protection Agency, as well as several States, have attempted to publicize the potential hazards to school children and employees from asbestos, but there does not exist any systematic or mandatory program for identifying hazardous conditions in schools, or for remedying them;

(8) there exists no health standard regulating the concentration of asbestos in the nonworking environment, such as a school;

(9) custodial workers, teachers, and other school employees may be exposed to hazardous concentrations of asbestos in school buildings; and

(10) without an improved program of information distribution, technical and scientific assistance, and financial support, many school districts and States will not be able to mitigate the potential asbestos hazards where they occur in their schools.

(b) It is the purpose of this Act to—

(1) direct the Secretary of Health, Education, and Welfare, in conjunction with other appropriate officials, to establish a task force to direct Federal efforts to ascertain the extent of the danger to the health of school children and employees from asbestos materials in the schools;

(2) require States to prepare a plan which establishes a program for the systematic inspection of all school buildings in order to identify the presence of asbestos or asbestos materials in hazardous conditions;

(3) provide scientific and technical assistance to the States and local school boards in conducting the survey, related tests and evaluations;

(4) provide loans for the mitigation of serious asbestos hazards which constitute an imminent danger to the health and safety of school children and employees;

(5) assure that no employee of any school district, State or local government, or Federal agency, suffers any disciplinary action as a result of calling attention to potential asbestos hazards which may exist in schools.

TASK FORCE

SEC. 3. (a) Within thirty days after the enactment of this section, the Secretary shall designate the members of an Asbestos Hazards School Safety Task Force (hereinafter referred to as "Task Force"). The Task Force shall be composed of persons with knowledge of the scientific and medical problems associated with exposure to asbestos, and of persons with knowledge of procedures and programs for the containment or removal of asbestos from buildings. Membership on the Task Force shall include a representative of the Office

of Education, the National Cancer Institute, the Environmental Protection Agency, the National Institute of Environmental Health Sciences, the Occupational Safety and Health Administration, and representatives of the public organizations concerned with education and health. In selecting membership from other Federal agencies or departments, the Secretary shall accept the persons nominated by the Secretary or Administrator of that Department or Agency. The Secretary shall designate a chairman of the Task Force.

(b) Members of the Task Force who are not full-time employees of the Federal Government shall be reimbursed for actual expenses incurred in conjunction with their service on the Task Force, and shall receive a per diem compensation at a rate not to exceed the maximum rate prescribed for grade GS-18.

(c) The Task Force shall convene, no later than thirty days after the appointment of its members, at the call of the chairman.

(d) The duties of the Task Force shall include—

(1) the preparation of educational materials for distribution to the States and local school boards in conjunction with the plan required in section 4 of this Act;

(2) the compilation and dissemination of medical, scientific, technological, and other materials, reports,

instructions, and information to State and local governments and to local school boards explaining the health and safety hazards associated with asbestos materials, the means of identifying, sampling, and testing materials suspected of containing asbestos;

(3) the review and approval of State plans and applications for reimbursements and loans pursuant to sections 5 and 6 of this Act;

(4) the establishment of criteria concerning the levels of hazards posed by asbestos in advanced stages of disrepair which may constitute an imminent danger to the health and safety of school children and employees, for the purpose of determining eligibility for loans pursuant to section 6 of this Act;

(5) making recommendations to the Secretary on the awarding of grants for technical assistance pursuant to section 5(c) of this Act.

STATE PLAN

SEC. 4. (a) No later than September 1, 1979, each State which desires to enable its schools to participate in programs under this Act shall submit to the Secretary a plan for the notification of administrators of all schools within that State's jurisdiction of the health hazards associated with exposure to asbestos, and recommended methods for the safe, orderly, and expeditious containment or removal, as deemed

necessary by competent scientific or medical individuals, of asbestos materials which pose an imminent hazard to the health and safety of persons utilizing such school buildings. Such plan shall include—

(1) a timetable for the identification, not later than January 1, 1980, of imminent asbestos health hazards in all schools situated within such State;

(2) a description of the procedures which are to be utilized in locating and identifying such hazards, in accordance with safety rules promulgated by the Secretary in accordance with section 7 of this Act;

(3) a timetable for the expeditious containment or removal of asbestos hazards which have been identified pursuant to paragraph (1) of this subsection no later than September 1, 1980, unless an extension has been granted by the Secretary due to extraordinary circumstances;

(4) procedures for maintaining records on the presence of asbestos materials in schools and future containment or removal activities; and

(5) the identification of a State agency or other administrative unit with the responsibility for the preparation of the plan and the administration of the control program which it describes.

(b) The Secretary shall approve a plan which meets the requirements of subsection (a) of this section, provided that it has been reviewed and approved by the Task Force. The Secretary may not approve any plan which has been rejected by the Task Force.

ASBESTOS HAZARDS DETECTION

SEC. 5. (a)(1) Units of local government with the responsibility for the administration and safety of schools may apply to the Secretary for a reimbursement from funds available for purposes of this section for up to one-half of the costs of surveying and testing school buildings in order to determine whether hazardous concentrations of asbestos or asbestos products exist in schools of that jurisdiction. Such application shall contain, in addition to supplemental information which the Secretary may require—

(A) a description of the proposed survey, including testing techniques;

(B) an estimate of the total cost of the survey;

(C) the identification of any party which may be engaged to conduct the testing, including a description of the party's professional expertise for such testing.

Any testing facility selected under clause (C) shall meet competency standards established by the Secretary.

(2) The Secretary shall designate, in conjunction with the Task Force, those costs which are reimbursable under paragraph (1) of this subsection. Such costs shall include—

(A) administrative costs of preparing and supervising the survey;

(B) costs of conducting visual inspections of school buildings;

(C) sampling of building and insulation materials;

(D) appropriate tests to determine the level of asbestos content in suspected materials; and

(E) air sampling and testing, if deemed essential to determining the likelihood of imminent danger.

(b)(1) The Secretary shall make payments from funds available under this Act for purposes of this section for a period of three years following the date of enactment of this Act.

(2) The one-half cost restriction contained in subsection (a)(1) may be waived upon a determination by the Secretary that the fiscal resources of the locality are limited to the extent that imposition of such restriction would prevent participation in the program.

(c) The Secretary may allocate up to 20 per centum of the funds available for purposes of this section for use in education and technical assistance programs.

(d) Recipients of grants under this section shall file a report with the Secretary no later than one hundred and twenty days after receipt of the grant describing the detection and testing activities which were undertaken, the results, and the plan for mitigating any imminent hazards which had been detected. The report shall include a detailed accounting of funds received from all sources, and funds expended.

ASBESTOS HAZARDS CONTROL LOAN PROGRAM

SEC. 6. (a) There is hereby created an Asbestos Hazards Control Loan Program in the Department of Health, Education, and Welfare (hereinafter referred to as the Loan Program). The Loan Program shall be administered by the Secretary or his designee.

(b) Loans from the Loan Program shall be available only for the mitigation or removal of asbestos or asbestos materials which pose an imminent hazard to the health and safety of children or employees and which is situated in school buildings. Loans shall be limited to projects covering more than 2,500 square feet, in which the asbestos material is at a level specified by the Secretary.

(c)(1) Loans under this section shall be for a period not to exceed twenty years, shall be interest free, shall be used to provide not more than one-half the cost of the asbestos con-

tainment or removal, and shall be subject to terms and conditions established by the Secretary.

(2) The one-half cost restriction contained in paragraph (1) may be waived upon a determination by the Secretary that the fiscal resources of the locality are limited to the extent that imposition of such restriction would prevent participation in the program.

(d) Applicants for loans from the Loan Program shall submit an application which describes—

(1) the nature of the asbestos problem;

(2) the results of preliminary testing (conducted in accordance with professional scientific standards established by the Secretary, in consultation with the Task Force) which indicates the asbestos content of the affected material;

(3) the methods which will be used to contain or remove the asbestos materials, in accordance with section 7 of this Act.

(e) The Secretary shall establish a prevailing rate for containment or removal work performed with loan funds provided under this section, determined on the basis of prevailing wage rates in the location of such work.

(f) The Secretary is authorized to establish additional requirements or procedures which shall govern the loan application or award process.

(g) The Secretary shall make an annual report to the appropriate committees of the House of Representatives and the Senate which shall describe—

(1) the number of loans and the location of each applicant which have been made in the preceding year;

(2) the nature of the asbestos problem of each applicant;

(3) the type of containment or removal program which was undertaken;

(4) the estimated cost, and the actual cost of mitigation efforts;

(5) the number and description of applications which have been rejected.

SAFETY PROCEDURES

SEC. 7. (a) Within one hundred and twenty days after enactment of this section, the Secretary shall promulgate and distribute to the States safety standards and procedures for testing the level of asbestos in schools and for determining the likelihood of the leakage of asbestos into the school environment.

(b) All sealing, containment, or removal of asbestos materials pursuant to this Act, or future construction, modification, or demolition of schools which contain asbestos materials, shall be conducted in strict accordance with regulations and procedures established by the Occupational Safety and

Health Administration or procedures established by the Task Force. Any employee engaged in such activity must be notified in writing of the hazards of working with asbestos, and must utilize all safety procedures to minimize risk to his or her health.

(c) No child or school employee shall be permitted in the vicinity of any asbestos containment or removal activity, unless school authorities certify that there is no risk of exposure to the students or personnel.

NONDISCRIMINATION

SEC. 8. No employer who receives funds under this Act shall discharge or in any other way discriminate against or discipline any worker employed by him or her by reasons of the fact that such worker focuses public attention on the asbestos problem in his or her school district.

RETAINED RIGHTS

SEC. 9. Nothing in this Act shall in any way restrict the rights of any individual or group of individuals, or any public agency or government, to seek any legal redress in connection with the purchase or installation of asbestos materials in schools, or with regard to any claim of disability or [illegible] in connection with exposure to asbestos in a school setting. Nor shall this Act affect any litigation or petitions for administrative action under any statute existing prior to the enactment of this section. In the event that an action under section 6 of

the Toxic Substances Control Act of 1976 is successful and the obligation for mitigation and safety actions is deemed to be the total responsibility of the manufacturers, the Secretary is authorized and directed to seek to recover from such manufacturers any Federal funds, including administrative costs, expended for programs required by this Act.

DEFINITIONS

SEC. 10. As used in this Act, the term—

(1) "Secretary" means the Secretary of Health, Education, and Welfare, or his designee;

(2) "schools" means any building, structure, or facility which is primarily used as a school for children, either public or private;

(3) "asbestos or asbestos material" means any building materials, sprayed materials, insulation, or other substance which is composed entirely or in part of chrysotile, amosite, or crocidolite, and when they occur in fibrous habit, tremolite, anthophyllite, and actinolite;

(4) "imminent hazard to the health and safety" means, in regard to section 6, that the asbestos or asbestos material is, according to standards established by the Task Force and approved by the Secretary, friable or easily damaged, or within easy reach of students or otherwise susceptible to damage which could

result in the dispersal of asbestos fibers into the school environment (including damage from water or air circulation);

(5) "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands, the Commonwealth of the Northern Marianas, and the Trust Territory of the Pacific Islands.

AUTHORIZATIONS

SEC. 11. There are authorized to be appropriated for fiscal year 1980 and for each of the succeeding fiscal years for the purposes and programs established by this Act, such sums as are necessary.

96TH CONGRESS
1ST SESSION

H. R. 1524

To establish a program for the inspection of schools for the presence of hazardous asbestos materials, to create a fund for the testing and evaluation of potential hazards, to create a loan program to assist in the containment or removal of imminent hazards to health and safety, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 25, 1979

Mr. MILLER of California (for himself, Mr. WEISS, Mr. THOMPSON, Mr. CORRADA, Mr. MAGUIRE, Mr. PHILIP BURTON, Mr. SIMON, and Mr. RICHMOND) introduced the following bill, which was referred to the Committee on Education and Labor

---

A BILL

To establish a program for the inspection of schools for the presence of hazardous asbestos materials, to create a fund for the testing and evaluation of potential hazards, to create a loan program to assist in the containment or removal of imminent hazards to health and safety, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. This Act may be cited as the "Asbestos School Hazard Detection and Control Act of 1979".

SEC. 2. (a) FINDINGS.—The Congress finds that—

(1) exposure to asbestos and materials containing asbestos has been identified over a long period of time and by reputable medical and scientific evidence as significantly increasing the incidence of cancer and other severe or fatal diseases, such as asbestosis;

(2) medical evidence has suggested that children may be particularly susceptible to environmentally induced cancers;

(3) medical science has not established any safe level of exposure to asbestos as a threshold above which the likelihood of developing illness occurs;

(4) substantial amounts of asbestos, particularly in sprayed form, were used in school buildings, especially during the period 1946–1972;

(5) partial surveys in some States have indicated that there exists in a number of schools asbestos materials which have become damaged or friable, from which asbestos is being or may be dislodged into the air;

(6) asbestos concentrations far exceeding the normal ambient air levels have been found in schools with damaged asbestos;

(7) the Department of Health, Education, and Welfare and the Environmental Protection Agency, as

well as several States, have attempted to publicize the potential hazards to schoolchildren and employees from asbestos, but there does not exist any systematic or mandatory program for identifying hazardous conditions in schools, or for remedying them;

(8) there exists no health standard regulating the concentration of asbestos in the nonworking environment, such as a school;

(9) custodial workers, teachers, and other school employees may be exposed to hazardous concentrations of asbestos in school buildings;

(10) without an improved program of information distribution, technical and scientific assistance, and financial support, many school districts and States will not be able to mitigate the potential asbestos hazards where they occur in their schools.

(b) PURPOSES.—It is the purpose of this Act to—

(1) mandate the Secretary of Health, Education, and Welfare, in conjunction with other appropriate officials, to establish a task force to direct Federal efforts to ascertain the extent of the danger to the health of schoolchildren and employees from asbestos materials in the schools;

(2) require States to prepare a plan which establishes a program for the systematic inspection of all

school buildings in order to identify the presence of asbestos or asbestos materials in hazardous conditions;

(3) provide scientific and technical assistance to the States and local school boards in conducting the survey, related tests, and evaluations;

(4) establish an Asbestos Hazards Detection Fund from contributions provided by manufacturers of asbestos, from which will be provided the nonlocal share of moneys for inspection, sampling, and testing programs;

(5) provide loans for the mitigation of serious asbestos hazards which constitute an imminent danger to the health and safety of schoolchildren and employees;

(6) assure that no employee of any school district, State or local government, or Federal agency, suffers any disciplinary action as a result of calling attention to potential asbestos hazards which may exist in schools.

TASK FORCE

SEC. 3. (a) Within thirty days after the enactment of this section, the Secretary shall designate the members of an Asbestos Hazards School Safety Task Force (hereinafter referred to as "Task Force"). The Task Force shall be composed of persons knowledgeable of the scientific and medical problems associated with exposure to asbestos, and of persons knowledgeable of procedures and programs for the con-

tainment or removal of asbestos from buildings. Membership on the Task Force shall be composed of, but not limited to, a representative of the United States Office of Education, the National Cancer Institute, the Environmental Protection Agency, the National Institute of Environmental Health Sciences, the Occupational Safety and Health Administration, and representatives of the public organizations concerned with education and health. In selecting membership from other Federal agencies or departments, the Secretary shall accept the persons nominated by the Secretary or Administrator of that department or agency. The Secretary shall designate a Chairman of the Task Force.

(b) Non-Federal members of the Task Force shall be reimbursed for actual expenses incurred in conjunction with their service on the Task Force, and shall receive a per diem compensation at a rate not to exceed that of a GS-16.

(c) The Task Force shall convene no later than thirty days after the appointment of its members, at the call of the Chairman.

(d) The duties of the Task Force shall include—

(1) the preparation of educational materials for distribution to the States and local school boards in conjunction with the plan required in section 4 of this Act;

(2) the compilation and dissemination of medical, scientific, technological, and other materials, reports, instructions, and information to State and local governments and to local school boards explaining the health and safety hazards associated with asbestos materials, the means of identifying, sampling, and testing materials suspected of containing asbestos;

(3) the review and approval of State plans and applications for reimbursements and loans pursuant to sections 5 and 6 of this Act;

(4) the establishment of criteria concerning the levels of hazards posed by asbestos in advanced stages of disrepair which may constitute an imminent danger to the health and safety of schoolchildren and employees, upon which will be based eligibility for loans pursuant to section 6 of this Act;

(5) making recommendations to the Secretary on the awarding of grants for technical assistance pursuant to section 5 of this Act.

STATE PLAN

SEC. 4. (a) No later than September 1, 1979, each State shall submit to the Secretary a plan for the notification of administrators of all schools within that State's jurisdiction of the health hazards associated with exposure to asbestos, and recommended methods for the safe, orderly, and expedi-

tious containment or removal, as deemed necessary by competent scientific or medical individuals, of asbestos materials which pose an imminent hazard to the health and safety of persons utilizing such school buildings. Such plan shall include—

(1) a timetable for the identification of imminent asbestos health hazards in all schools situated within such States: *Provided*, That the procedure for identifying such hazards shall be completed no later than January 1, 1980;

(2) a description of the procedures which shall be utilized in locating and identifying such hazards, in accordance with safety rules promulgated by the Secretary in accordance with section 7 of this Act;

(3) a timetable for the expeditious containment or removal of asbestos hazards which have been identified pursuant to subsection (1) of this section and in accordance with regulations promulgated by the section: *Provided*, That such removal shall be completed no later than September 1, 1980, unless an extension has been granted by the Secretary due to extraordinary circumstances;

(4) procedures for maintaining records on the presence of asbestos materials in schools and future containment or removal activities;

(5) the identification of a State agency or other administrative unit with the responsibility for the preparation of the plan and the administration of the control program which it describes.

(b) The Secretary shall approve a plan which meets the requirements of subsection (a) of this section: *Provided*, That it has been reviewed and approved by the Task Force. The Secretary may not approve any plan which has been rejected by the Task Force.

ASBESTOS HAZARDS DETECTION FUND

SEC. 5. (a) There is hereby created an Asbestos Hazards Detection Fund (hereinafter referred to as the "fund") in the Department of Health, Education, and Welfare The fund shall be administered by the Secretary, or by his designee. All moneys accruing to the fund shall be deposited in the Treasury of the United States, together with all interest accruing thereon. Withdrawals from the fund shall be made only by the Secretary for purposes authorized under this Act.

(b) PAYMENTS INTO THE FUND.—(1) Any company which was engaged in the mining, manufacture, or importation of asbestos between the years 1946 and 1972 shall make payments into the fund. The total of contributions to the fund shall not exceed $30,000,000. Each company's financial obligation to the fund shall be a percentage equivalent to its

proportion of asbestos mining, manufacture, or importation during the period 1946–1972 (adjusted to 1979 value). Each company shall pay into the fund no less than one-third of its total obligation in each of the three years subsequent to the enactment of this Act.

(2) Each manufacturer of asbestos products shall make available to the Secretary an audit with an accurate accounting of (i) the amount of asbestos products it produced in the period 1946–1972; (ii) a description of the products and their use; and (iii) other pertinent data as the Secretary may require.

(3) The Secretary and the Attorney General of the United States are authorized and directed to subpena the records described in subsection (2) of this section, together with any and all supplemental data which either may deem necessary to assure than an accurate payment is made by each company into the fund. All information received by the Secretary under this Act from an asbestos manufacturer shall remain confidential with the Secretary.

(c) PAYMENTS FROM THE FUND.—(1) Units of local government with the responsibility for the administration and safety of schools may apply to the Secretary for a reimbursement from the fund for up to half of the costs of surveying and testing school buildings in order to determine whether hazardous concentrations of asbestos or asbestos products

exist in schools of that jurisdiction. Such application shall contain, in addition to supplemental information which the Secretary may require—

(i) a description of the proposed survey, including testing techniques;

(ii) an estimate of the total cost of the survey;

(iii) the identification of any party which may be engaged to conduct the testing, including a description of the party's professional expertise for such testing: *Provided*, That any testing facility shall meet competency standards established by the Secretary.

(2) The Secretary shall designate, in conjunction with the Task Force, those costs which are reimbursable under subsection (1) of this section. Such costs shall include—

(i) administrative costs of preparing and supervising the survey;

(ii) costs of conducting visual inspections of school buildings;

(iii) sampling of building and insulation materials;

(iv) appropriate tests to determine the level of asbestos content in suspected materials; and

(v) air sampling and testing, if deemed essential to determining the likelihood of imminent danger.

(3) The Secretary shall make reimbursements from the fund for a period of three years following the date of enact-

ment. Moneys remaining in the fund at that time shall be returned, on a proportional basis, to the contributing asbestos manufacturers.

(4) Subject to the approval of the Secretary, a contributor may provide asbestos testing and analysis services for school districts or other entities which require such testing, in lieu of a portion of its contribution, not to exceed 50 per centum of such contribution. Rates for such analysis and testing shall be established by the Secretary at a rate equal to the prevailing fee for such services.

(5) The Secretary may allocate up to 20 per centum of the moneys from the fund for use in the education and technical assistance programs authorized by this Act.

(6) Recipients of grants under this section shall file a report with the Secretary no later than one hundred and twenty days after receipt of the grant describing the detection and testing activities which were undertaken, the results, and the plan for mitigating any imminent hazards which had been detected. The report shall include a detailed accounting of funds received from all sources, and funds expended.

ASBESTOS HAZARDS CONTROL LOAN PROGRAM

SEC. 6. (a) There is hereby created an Asbestos Hazards Control Loan Program in the Department of Health, Education, and Welfare (hereinafter referred to as the "loan

program"). The loan program shall be administered by the Secretary or his designee.

(b) Loans from the loan program shall be available only for the mitigation or removal of asbestos or asbestos materials which pose an imminent hazard to the health and safety of children or employees and which is situated in school buildings. Loans shall be limited to projects covering more than two thousand and five hundred square feet, in which the asbestos material is at least per centum asbestos.

(c) Loans under this section shall be for a period not to exceed twenty years, and shall be interest free, under terms and conditions established by the Secretary.

(d) Applicants for loans from the loan program shall submit an application which describes—

(1) the nature of the asbestos problem;

(2) the results of preliminary testing which indicates the asbestos content of the affected material: *Provided*, That such testing shall meet professional scientific standards established by the Secretary and the Task Force;

(3) the methods which will be used to contain or remove the asbestos materials, in accordance with section 7 of this Act.

(e) The Secretary shall establish a prevailing rate for containment or removal work performed with loan funds pro-

vided under this section. The Secretary shall not award a loan for an amount in excess of the prevailing wage in any location.

(f) The Secretary is authorized to establish additional requirements or procedures which shall govern the loan application or award process.

(g) The Secretary shall make an annual report to the appropriate committees of the House of Representatives and the Senate which shall describe—

(1) the number of loans and the location of each applicant which have been made in the preceding year;

(2) the nature of the asbestos problem of each applicant;

(3) the type of containment or removal program which was undertaken;

(4) the estimated cost, and the actual cost of mitigation efforts;

(5) the number and description of applications which have been rejected.

(h)(1) Upon the making of any loan from the loan program under this section, and to the extent such loan remains outstanding, the United States shall be subrogated to any legal rights to recover such amount or assert a claim against any person or organization relating to the subject matter of a loan made from the loan program. Any recipient of a loan

from the loan program shall execute and deliver instruments and papers and take whatever steps are necessary to secure such rights to the United States in order to entitle the United States to the benefits of a judgment by a court and pursuant to under this Act No loan shall be made under and until such steps have been taken. Except as provided for herein to the extent that the loans remain due and owing, any purported limitation on the right of the United States to set as consigned or to become subrogated to the rights of the recipient of a loan from the loan program shall be without any effect

(2) If the United States recovers from any person or organization any amount by the exercise of rights subrogated or assigned in subsection (1), the recipient of the relevant loan shall be entitled to forgiveness of any loan amounts still due and owing, but only to the extent that such recovery exceeds the costs of obtaining recovery plus interest that would have been charged if the relevant loan had been made at prevailing commercial rates

SEC. 3. Within one hundred and twenty days after enactment of this section, the Secretary shall promulgate and distribute to the States model standards and procedures for testing the level of asbestos in schools and for determining the likelihood of the presence of asbestos under the school surface

enactment

(b) All sealing, containment or removal of asbestos materials pursuant to this Act, or future construction, modification, or demolition of schools which contain asbestos materials, shall be conducted in strict accordance with regulations and procedures established by the Occupational Safety and Health Administration or procedures established by the Task Force. Any employee engaged in such activity must be notified in writing of the hazards of working with asbestos, and must utilize all safety procedures to minimize risk to his or her health.

(c) No child or school employee shall be permitted in the vicinity of any asbestos containment or removal activity, except if school authorities certify that there is no risk of exposure to the students or personnel.

NONDISCRIMINATION

SEC. 8. No employer shall discharge or in any other way discriminate against or discipline any worker employed by him or her by reasons of the fact that such worker focuses public attention on the asbestos problem in his or her school district.

RETAINED RIGHTS

SEC. 9. Nothing in this Act shall in any way restrict the rights of any individual or group of individuals, or any public agency or government, to seek legal redress under any State or Federal statute in connection with the purchase or instal-

lation of asbestos materials in schools, or with regard to any claim of disability or death in connection with exposure to asbestos in a school setting except as provided in section 6(b) of this Act. Nor shall this legislation affect any litigation or petitions for administrative action under any statute existing prior to the enactment of this section. In the event that an action under section 6 of the Toxic Substances Control Act of 1976 is successful and the obligation for mitigation and safety actions is deemed to be the total responsibility of the manufacturers, the Secretary is directed to seek to recover from such manufacturers any Federal funds, including administrative costs, expended for programs required by this Act.

DEFINITIONS

SEC. 10. As used in this Act, the term—

(a) "Secretary" means the Secretary of the Department of Health, Education, and Welfare, or this designee.

(b) "schools" means any building, structure, or facility which is primarily used as a school for children, either public or private.

(c) "asbestos or asbestos material" means any building materials, sprayed materials, insulation, or other substance which is composed entirely or in part of chrysotile, amosite, or crocidolite, and when they

occur in fibrous habit, tremolite, anthophyllite, and actinolite;

(d) "imminent hazard to the health and safety" means, in regard to section 6, that the asbestos or asbestos material is, according to standards established by the Task Force and approved by the Secretary, friable or easily damaged, or within easy reach of students or otherwise susceptible to damage which could result in the dispersal of asbestos fibers into the school environment (including damage from water or air circulation);

(e) "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands, the Commonwealth of the Northern Marianas, and the Trust Territory of the Pacific Islands.

AUTHORIZATIONS

SEC. 11. There are authorized to be appropriated for the fiscal years 1980, 1981, and 1982, for the purposes and programs established in this Act, such sums as are necessary

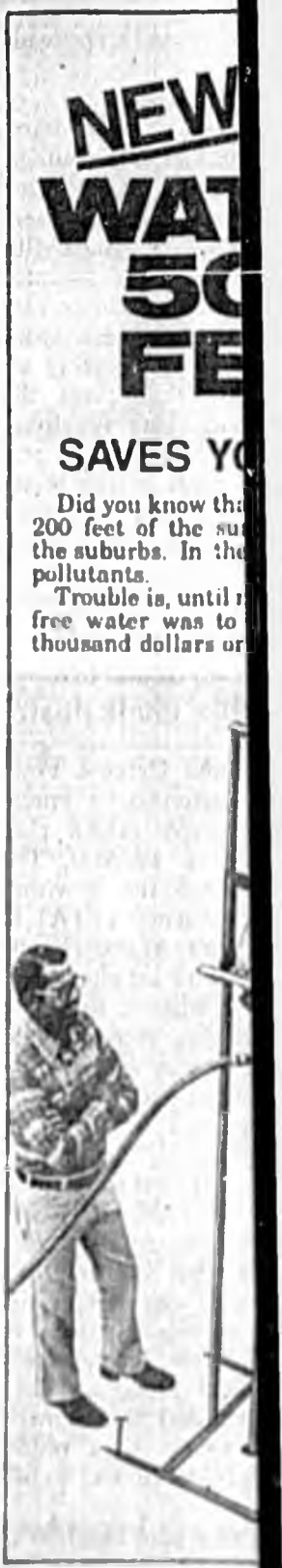
Asbestos: Pervasive Threat to the Public

Even limited exposure can cause lung disease and two forms of cancer.

CAROL KEOUGH

BECAUSE ASBESTOS is fireproof and does not conduct heat, it was included in the construction materials of many public and private buildings. As a result, asbestos is everywhere. It's in acoustical ceilings, fireproof roofing shingles, floor tiles, pipe insulation and automobile brake linings. It has been sprayed on walls and ceilings of many public buildings, including schools. But asbestos isn't the innocent fireman's friend it seems to be.

Danger occurs when the tiny asbestos particles escape into the air. When breathed or swallowed, they present a very real threat to health.



Exposure to it can cause three deadly diseases.

Joseph Califano, Secretary of Health, Education and Welfare, warns that of the estimated 11 million people who have worked with asbestos during the past 35 years, half of them will die because of it. Yet, the health danger is not limited to asbestos workers. The general public is also exposed to the fibers, which work their way into the lungs, causing asbestosis – a disease that clogs the lungs with fibers, making breathing extremely difficult; lung cancer; and mesothelioma, a cancer of the lining of the stomach or lung that usually kills a few months after it is diagnosed.

In some schools, asbestos flakes coat the desks and windowsills like chalk dust.

The Environmental Defense Fund (EDF), a Washington-based group, claims that millions of school children are exposed to asbestos. The group has petitioned the Environmental Protection Agency (EPA) to inspect the nation's 87,000 public schools for sprayed-on asbestos coatings on ceilings, insulation, fireproofing and soundproofing. According to the group, asbestos was widely used in school construction from the 1940's until the EPA banned the spray in 1973.

In some schools the white dust of flaking asbestos coats the desks and windowsills like chalk dust. New York City officials found that 8 of the thousand schools in their system had elevated levels of asbestos particles in the air. And in New Jersey, some schools tested were found to have particles that exceeded the allowed amount by 100 times. As a result, some schools were closed and pupils transferred.

The exposure of school children to asbestos is especially insidious because the diseases caused by asbestos take about 30 years to develop. Said EDF scientist Joseph Highland, "If I were a parent who observed the ceiling flaking, I would keep my children out of school."

But schools may be only the tip of the iceberg. In New York, public buildings – including the famous Madison Square Garden and the lower floors of the World Trade Center – have been found to contain asbestos. It seems clear that workers in many buildings across the country would be affected by asbestos particles.

The problem is not limited to public buildings and schools. Handymen renovating their homes often are exposed to asbestos. The worker around the house should know that there is little danger of inhaling asbestos particles that are tightly held within a building product, like a floor or ceiling tile. The danger arises when that product is worn or broken so that the fibers can escape into the air. The government recommends that anyone working with asbestos materials first wet them down to help contain the particles, and wear a dust mask.

Exposure to asbestos should not be taken lightly. According to the Department of Health, Education and Welfare, people with only a month's exposure to asbestos have developed asbestos-related diseases. In fact, wives who merely washed clothing that was coated with asbestos contracted the diseases. And one Santa Barbara, California, man developed mesothelioma 20 years after his only exposure, which lasted one day.

Scientists say that a short-term solution for asbestos flaking is to spray the surface with a sealant that is impervious to the weather. As a long-term solution, they recommend that asbestos be banned in this country, and a substitute be developed. Asbestos has already been banned in Sweden, and Denmark has outlawed asbestos insulation. □

INTEROFFICE MEMO

TO: Joe Beauchamp, Director
Maintenance/Construction

FROM: Bob Thornton
General Foreman

DATE: 04-09-81

SUBJECT: Asbestos in Schools

The following is a list of known locations of asbestos material in our schools that may require attention:

Dimond High School (all located in pool area)

Approx.	780 sq. ft.	Downstairs lobby
Approx.	1,152 Sq. Ft.	Mechanical room
Approx.	136 sq. ft.	Boiler room
Approx.	1,898 sq. ft.	Rifle Range
Approx.	468 sq. ft.	Lounge
Approx.	336 sq. ft.	Hall
Total	4,470 sq. ft.	

None of the material at Dimond is readily accessible to students. The rifle range is scheduled for remodeling and the problem there should be handled under that contract. The remainder is above the ceilings and in isolated areas. I feel that most of this material should be, as EPA puts it, encapsulated.

The total square footage at Bartlett Begich is 363,390 square feet. It is above the ceiling and is not easily accessible to students. I feel that this too should be encapsulated.

West High School (all located around pool area)

Approx.	128 sq. ft.	storage room ceiling
Approx.	5,500 sq. ft.	Mechanical room below pool
Approx.	2,100 sq. ft.	Boy's locker room ceiling
Approx.	1,600 sq. ft.	Girl's locker room ceiling
Total	9,328 sq. ft.	

The ceilings in the locker rooms are accessible to students. The storage room ceiling and mechanical room are not easily accessible to students. I suggest that the mechanical room material be encapsulated and that the ceiling areas be replaced.

(Cont'd)

These projects will require funding and contracts let. There are, possibly, qualified contractors in Alaska but not to my knowledge. After reading the recommended specifications I received approximately three (3) weeks ageo, I know our people are not qualified.

After reading the specifications (attached) from EPA, I feel that we would need approximately $2,000,000 budgeted to accomplish this work. Also, this work will have to be completed during the summer months when the schools are closed.

The total square footage for all these schools is 377,188 square feet. At an estimated cost of $5 per square foot this totals $1,885,940. The additional money is for engineering and design and replacement of the ceiling at West High School. It should also cover the separate air monitoring contract.

BT:cl
attachment

planned.

full text of the EPA asbestos
at the regulations and
e answered by the NESHAPS
ndix B.

AOHS

ce practices and the airborne
ich asbestos workers can be
lations apply to removal,
are operations involving

limits on the amount of
h a worker may be exposed on
our period the average
tration level (also known as
e (twa)) to which a worker
exceed two fibers longer than
e centimeter of air (2f/cc). At

BREATHING ASBESTOS DUST MAY CAUSE SERIOUS BODILY HARM

See Appendix C for the full text of the OSHA asbestos regulations. Questions about the regulations and compliance problems can be answered by the OSHA Regional Offices listed in Appendix D. Information on contractor training and occupational safety is also available from these OSHA offices and the NIOSH Regional Offices listed in Appendix E.

Contract Specifications

The following general specifications are recommended for removal and encapsulation contracts. Some of these specifications are also appropriate for enclosure contracts. If these recommended specifications are incorporated into contracts and strictly enforced, the building environment will be protected against contamination.

Contractors should be encouraged to receive training and to train their workers in safe work practices and in proper removal, encapsulation, and enclosure methods. Contractor and worker training can be required in the contract.

1. Regulations

Contractors shall comply with the requirements of the EPA regulations, National Emission Standards for Asbestos, and the OSHA regulations on asbestos, Section 1910.1001 [and any applicable State and local government regulations] which are incorporated by reference.

2. Scope of Work

A. The Contractor shall furnish all labor, materials, services, insurance, and equipment necessary to carry out the [removal operation, encapsulation operation] in accordance with the EPA and OSHA regulations [and any applicable State and local government regulations].

B. The Contractor shall be responsible for obtaining approval for a waste disposal site in compliance with Section 61.25 of the EPA regulations.

C. Contractors shall post the EPA and OSHA regulations [and any applicable State and local government regulations] at the job site.

3. Worker Protection

A. The Contractor shall provide workers with approved respirators. The Contractor shall provide a sufficient quantity of filters approved for asbestos so that workers can change filters during the work day. Filters shall not be used any longer than one (1) work day. The respirator filters shall be stored at the job site in the change room and shall be totally protected from exposure to asbestos prior to their use.

B. Workers shall always wear a respirator properly fitted on the face in the work area.

C. Contractors shall instruct and train workers in proper respirator use.

D. Workers shall wear disposable, full-body coveralls and disposable head covers and footwear in the work area. Footwear may be disposable. Non-disposable footwear shall be left in the work area at all times until disposal at job completion.

E. The Contractor shall set up a change room and a shower outside of the work area.

F. All workers without exception shall:

(1) Remove street clothes in the change room and put on the disposable coveralls and head covers, and respirator before entering the work area.

(2) Remove the disposable coveralls, head covers, and footwear in the work area before leaving the work area. Still wearing their respirators, proceed to the showers and remove their respirators while showering with soap and water.

(3) Shower at the end of each day's work before entering the change room to change into street clothes.

G. Workers shall not eat, drink, smoke, chew gum, or chew tobacco in the work area. To eat, drink, or smoke, workers shall remove the disposable work clothes and footwear in the work area before leaving the work area. Still wearing their respirators, workers shall proceed to the showers and remove their respirators while showering with soap and water. Workmen shall then dress into a new, clean disposable coverall to eat, smoke, or drink. The new coverall can be worn to reenter the work area.

H. The Contractor shall provide a respirator and disposable coveralls, headcover, and footwear to any official representative of the school who inspects the job site.

I. All persons entering the work area shall wear an approved respirator and disposable coveralls, head cover, and footwear.

Worker Dressed in Protective Clothing

4. Work Area Preparation

A. The Contractor shall set up a decontamination facility outside of the work area which will consist of a change room, shower area, and equipment area. The decontamination facility shall be subject to the approval of the official representative of the school.

B. The Contractor shall isolate the work area for the duration of the work by completely sealing off all openings and fixtures in the work area including, but not limited to, heating and ventilation ducts, doorways, corridors, windows, skylights, and lighting with plastic sheeting taped securely in place.

C. The Contractor shall build double barriers of plastic sheeting at all entrances and exits to the work area so that the work area is always closed off by one barrier when workers enter or exit.

D. All floor and wall surfaces in the work area shall be covered with plastic sheeting taped securely in place to protect from water damage [or damage by sealants].

E. Before the work is begun, the Contractor shall wet clean all removable items and equipment not located on the asbestos material, remove them from the work area, and then return these items and equipment to the work area after the job has been completed and the area has been decontaminated.

F. The Contractor shall cover all non-removable items and equipment in the work area with plastic sheeting taped securely in place.

G. After work area isolation, the Contractor shall take out all detachable electrical, heating, ventilation equipment, and other items located on the asbestos material, clean them before covering with plastic sheeting taped securely in place, and return them to their proper place after the job has been completed and the work area has been decontaminated.

H. The Contractor shall remove all heating, ventilation, and air conditioning system filters, pack them in sealable plastic bags (6-mil minimum) for burial at the approved waste disposal site and replace them with new filters.

I. The contractor shall establish emergency and fire exits from the work area. Emergency procedures shall have priority.

5. Method of Removal

A. The asbestos material shall be sprayed with water containing a wetting agent to enhance penetration. The wetting agent shall be 50% polyoxyethylene ester and 50% polyoxyethylene ether (Aqua-GRO*), or the equivalent, in a concentration of one (1) ounce in five (5) gallons of water. A fine spray of the amended water shall be applied to reduce fiber release preceding the removal of the asbestos material. The material shall be sufficiently saturated to prevent emission of airborne fibers in excess of the exposure limits prescribed in the OSHA regulations referenced in these specifications.

B. The asbestos material shall be removed in small sections by two-man teams on staging platforms. Before beginning the next section, the material shall be packed while still wet into sealable plastic bags (6-mil minimum) and placed into fiber or metal drums or skips for transport. Bags, drums, and skips shall be marked with the OSHA label prescribed by the OSHA regulations referenced in these specifications. The outside of all containers shall be clean before leaving the work area.

C. All plastic sheeting, tape, cleaning material, clothing, and all other disposable material or items used in the work area shall be packed into sealable plastic bags (6-mil minimum) and placed into metal or fiber drums or skips for transport. The drums and skips shall be marked with the OSHA label prescribed by the OSHA regulations referenced in these specifications.

D. The Contractor shall transport the sealed drums or skips to the approved waste disposal site. The sealed plastic bags may be dumped from the drums into the burial site unless the bags have been broken or damaged. The damaged bags shall be left in the drum and the entire contaminated drum shall be buried. Uncontaminated drums may be recycled.

6. Decontamination of Work Area

A. The Contractor shall clean all surfaces in the work area with water and/or with a High Efficiency Particulate Absolute (HEPA) filtered vacuum. (A HEPA vacuum will fail if used on wet material.) After cleaning the work area, the Contractor shall wait 24 hours to allow for settlement of dust, and then wet-clean all surfaces in the work area again. After completion of the second cleaning operation, the Contractor shall perform a complete visual inspection of the work area to ensure that the work area is dust free. The Contractor shall take two air samples within 48 hours after completion of all cleaning work. (Minimum volume of air sample is 240 L)

B. If the official representative of the school finds that the work area has not been decontaminated, the Contractor shall repeat the cleaning and air monitoring until the work area is in compliance.

C. After the work area is found to be in compliance, all entrances and exits are unsealed and the plastic sheeting, tape, and any other trash and debris is disposed of in sealable plastic bags (6-mil minimum) and buried in the approved waste disposal site.

* Mention of trade names or specific products does not constitute endorsement by EPA

7. Air Monitoring

A. Throughout the entire [removal, encapsulation] and cleaning operations, air monitoring shall be conducted to ensure that the Contractor is complying with the EPA and OSHA regulations [and any applicable State and local government regulations]. The [illegible] shall provide an air monitoring technician to take air samples at the job site at no cost to the [illegible].

B. Air monitoring will be conducted according to the method prescribed by Section 1910.1001(f) of the OSHA regulations.

C. Air monitoring shall be performed to provide the following samples during the period of asbestos [removal, encapsulation]:

Areas to be Sampled	*Minimum Number of Samples for Each Work Day*	*Each Sample Minimum Volume Liters*
Work Area	2	120 L.
Outside Work Area	1	120 L
Outside Building	1	240 L.

D. Samples should only be taken after actual [removal, encapsulation] work has proceeded.

Removed Material in Drum With Plastic Liner

PLEASE NOTE

THE ORGINAL FILE CONTAINS AN ~~OVERSIZED~~ ILLEGIBLE DOCUMENT THAT IS UNSUITABLE FOR FILMING. PLEASE REFER TO THE ALASKA STATE ARCHIVES TO VIEW THE ORIGINAL.

TESTIMONY ADDRESSED TO THE UNITED STATES HOUSE OF REPRESENTATIVES COMMITTEE ON EDUCATION AND LABOR SUBCOMMITTEE ON COMPENSATION, HEALTH AND SAFETY

SAN FRANCISCO, CALIFORNIA, OCTOBER 23-24, 1978

ENVIRONMENTAL CANCER: A CLOSER LOOK

by Phillip L. Polakoff, M.D.; DIRECTOR, WICES(?)

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPT. OF HEALTH AND SOCIAL SERVICES

OFFICE OF THE COMMISSIONER

POUCH H 01
JUNEAU, ALASKA 99811
PHONE: 465-3030

Document# 37-81

February 19, 1981

Honorable Charles H. Parr
Alaska State Senate
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Parr:

In the past twenty years, it has been recognized that exposure to asbestos in significant amounts may be harmful to humans so exposed. The latent period between exposure and development of problems is somewhat related to the amount of exposure and in those individuals receiving large exposure, the latent period is around twenty years, up to probably forty years for exposure in smaller amounts.

The recognition of medical problems related to asbestos occurred initially in people employed in the mining of asbestos, handling asbestos, and working with asbestos in terms of insulation in shipyards. In the 1950's, as a result of the recognition of very great danger to children in schools because of fire hazards, asbestos was used extensively in ceiling tiles and covering of pipes, etc. By the late 1960's asbestos had generally been excluded from construction where it would be possible for the fibers to enter the air and be inhaled by people in the community.

I would like to try to answer some of the questions which you specifically raised:

In regards to the extent of which asbestos is seen as a cause of cancer, we have fairly good records in Alaska concerning cancer in the Native population and there has not been one reported case of mesothelioma, which is cancer of the pleura especially related to asbestos. We do not have good figures concerning mesothelioma in the non-Native population, but it is a very uncommon tumor. There is good evidence that exposure to asbestos combined with a cigarette smoking history increases the risk of lung cancer so that certainly people who have had a history of major exposure to asbestos should be advised to discontinue smoking.

As far as the possibility of increased incidence of gastrointestinal cancer related to asbestos exposure, there may be a slight increase in people who have had heavy exposure.

Concerning what action the Department of Health and Social Services has taken, in 1978 we contacted the Bureau of Indian Affairs Engineering Department in Juneau about the use of asbestos in B.I.A. schools, and were informed that while it had been used in older schools, most of these schools had been renovated/replaced, and the newer schools had not used asbestos. As far as we were able to determine at that time there had been no reported cases of cancer of the lung developing in people who had attended schools where asbestos had been used; however, since the exposure in this environment would be small and the latent period for the development of cancer would be 20+ years, it is highly unlikely that a good correlation could ever be developed. In addition in 1975 relating to pipeline construction, the Section of Communicable Disease Control took chest x-rays and did pulmonary function studies on members of the insulators' union who were going to be working on the pipeline at the request of the local union group.

In regards to the responsibility divided between the Departments of Health and Social Services and Environmental Conservation, logically the Department of Environmental Conservation is concerned with promulgating regulations concerning the construction of buildings and schools where asbestos could potentially be a problem, and monitoring environmental sources such as air quality and asbestos mining operations. The Department of Health and Social Services' responsibility is in evaluating the potential for significant disease as a result of previous exposure and doing anything possible to reduce the incidence of disease.

In regards to this, we have given considerable thought to the problem and have been in contact with Dr. Edward Gaensler, who is in charge of the Chest Program at Boston City Hospital and who has been interested in the asbestos problem for a number of years. I would like to emphasize the following, I think significant, points:

1. There has never, or hardly ever, been a case of mesothelioma cured. This is an almost invariably fatal disease and there is no program of surveillance that offers a realistic possibility of reducing the risk of this rare complication of significant asbestos exposure.

2. The result of close surveillance of individuals with a history of heavy exposure to asbestos combined with a history of cigarette smoking has had very little effectiveness in improving the salvage rate by earlier recognition.

3. The risk in people who have had heavy asbestos exposure of developing serious complications is not overwhelming. 12,000 Johns-Manville insulation workers and miners have been followed for 15 years with an average of one pulmonary cancer developing annually.

In looking at the problem from a statewide standpoint, it is our opinion that asbestosis is not a significant problem in Alaska. The insulation workers are pressured through their union to use masks and take other precautionary measures, and are followed with x-rays and pulmonary testing. Any attempts to develop a regulatory program for people who have been exposed to small quantities in the past through attending schools where asbestos was used would not be productive and effective, not only because of the long latency period but also because of their low risk.

If the Committee would like the testimony of an objective, professional expert who is universally highly regarded in the field of asbestosis, we would be glad to ask Dr. Edward Gaensler, Chief of the Chest Department at Boston City Hospital, to testify before the Committee. We also would be pleased to explore any further questions the Committee may have.

Sincerely,

Helen D. Beirne

Helen D. Beirne
Commissioner