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See also separate
file folders for
SB 373 and
SB 374

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

REVIEW OF SB-338 AND SB-339
RELATING TO
FRIABLE ASBESTOS IN ALASKAN PUBLIC BUILDINGS

Presented Before the Senate Health and Social Services Committee

April, 1981

The Alaska Department of Environmental Conservation strongly supports the passage of SB-338 and SB-339, to provide effective diagnosis and correction of asbestos health hazards that might exist in Alaskan public buildings. Asbestos is an extremely toxic and cancer forming material, and even brief exposure where the material can be inhaled or ingested can pose a significant environmental hazard to public health. As a consequence any asbestos exposure hazard should be corrected immediately.

These bills, if passed, will for the first time provide resources to inspect, analyze, and make any needed renovations to protect against asbestos environmental hazards. The department would like to caution, however, that the proposed resources to establish an effective program are heavily dependent on the approaches taken. Our testimony and recommendations today will concentrate on clarifying the approaches, imposed by the bill, so that effective health protection measures can and will be established if the bills are enacted into law.

At the outset let me advise that we are not here to argue for another program to be established in DEC: Our real concern is that an effective program be conducted. You may wish to contemplate replacing ADEC with OSHA, retaining existing authorities of the bill in DOTPF and CRA. It is our view that that would be a more appropriate division of labor. What has really been needed is a reorganization of a potential problem and a means to provide testing and corrective measures.

BACKGROUND

The health hazards of asbestos are well known. It is virtually indestructable once introduced into the environment. It is lightweight and easily crumpled into small sizes which can remain suspended in the air for long periods of time. When inhaled, even in small quantities, it can eventually cause lung and other cancers. Until recently asbestos health hazards were normally associated with persons who daily worked around the substance and contracted the chronic and debilitating lung disease called asbestosis. This was normally considered an occupational health hazard and not a health risk to the general public.

More recently there have been findings that asbestos even in small concentrations can cause lung cancer, cancers of the chest, abdominal lining, esophagus, stomach, colon and other organs. It also acts as a potent cancer-forming agent in combination with cigarette smoking. Of considerable concern is that there often is a substantial period of many years between initial exposure and appearance of asbestos-caused cancer.

For a number of years asbestos was commonly used in many building materials. Most of these materials do not pose a health risk because the asbestos is tightly bound into the building material and cannot readily escape into the air. The materials which can cause a health problem, however, are those which can easily be crushed, worn or frayed. Typical problem materials are sprayed-on insulation on ceilings and walls, plastering materials, boiler and hot pipe insulation.

These materials are termed friable, and often must be removed, encapsulated, or enclosed to eliminate potential health hazards. The renovation process can be expensive, and a funding source for these projects should be readily available to assure that they are accomplished as soon as identification is made.

The department recently cooperated with the Departments of Health and Social Services, Education, and Transportation/Public Facilities to determine if potential asbestos hazards were present in Alaskan public schools. While this was a partial survey and results need to be reconfirmed, at least 13% of the schools had asbestos ~~to be~~ present in some of the sampled materials. There is a need, therefore, to follow up this initial survey with a more complete assessment of each of these schools, and to be able to correct any identified asbestos hazard that might be found as quickly as possible. The proposed legislation would provide this need as well as making the resources available for all stateowned facilities.

RECOMMENDATIONS

The department presented recommendations in March 1981 on how to train personnel, inspect facilities, and provide for correction of asbestos hazards in public buildings. Most recommendations became part of these two bills. However, some clarifications are needed to make certain that the department does not get committed to activities for which resources have not been budgeted. In addition, there now is more recent information on the need for asbestos material renovation.

There also are several other recommendations that the Department would like to present for the Committee's consideration, which if adopted should make both of these bills more effective in eliminating the health hazards posed by friable asbestos in public buildings.

Our comments and recommendations on these bills are as follows, and we have attached suggested language where appropriate for your use.

I. Recommendations for SB-339

(1) When the department originally made its recommendations on the needs for renovating school buildings, no major problems had been defined or uncovered. Since then extensive renovations in several schools have been identified which by themselves could cost up to \$2.5 million. As a consequence we recommend that SB-339 be increased by at least this amount.

(2) While the appropriation bill covers both public schools and "public facilities", the proposed funding does not appear to be enough. In the department's March 1981 recommendation concerning friable asbestos, it was recommended that \$500,000 be provided for state-owned facilities and an additional \$500,000 for local government-owned facilities.

This would make the total appropriation in this Section \$1,000,000, they have only \$500,000 in the proposed bill; we have added suggested language to make it clear that only state and local government-owned facilities are eligible for renovation funds under this bill.

(3) During the past several weeks a substantial amount of publicity has been given to the problem of asbestos in public facilities. After a recent meeting with the other departments involved with this program, some funds should be made available for providing public awareness and information on asbestos. This would include ways to inspect and sample for asbestos contamination, and how to correct problems. An additional sum of \$10,000 should be added, therefore, to Section 1 of SB-339 to adequately provide this service.

The \$33,250 included in Section 1 of SB-339 should be adequate to provide for analysis of asbestos samples and training materials. However it should be noted that the Kodiak School District recently submitted a bill for \$1,057.50 to cover their complete resampling of all schools within their district. As a consequence the department is somewhat concerned that the increased awareness of asbestos health hazards by school systems, state and local government officials may substantially increase the amount of sampling and its attendant costs that would be done. Therefore, the Department recommends that the amount for sample analysis be increased to \$50,000.

This amount should more than adequately cover all expected sample analysis costs, and any unexpended funds would automatically revert to the General Fund.

II. Recommendations for SB-338

(1) SB-338 identifies the responsibilities of the Department of Environmental Conservation, Education, and Transportation/Public Facilities to carry out the asbestos health hazard program. However, the Department of Community and Regional Affairs is not mentioned, even though SB-339 appropriates the vast majority of funds to this department for distribution.

A section identifying the Department of Community and Regional Affairs' responsibilities under the Act should be inserted in SB-338, since this is the department which will be handling and distributing any funds for renovation of facilities under these bills.

(2) Throughout SB-338, reference is made to "public facilities". However, the term is not defined and could easily be misinterpreted to include federal as well as privately-owned facilities leased to government or serve public purposes. To make the purpose of the bill clear, the Department recommends that Section (1)(b)(4) be added, to clearly exclude renovation costs on

these types of facilities. Suggested language is included in the attachment, as well as suggested substitutions for the word "public" in other portions of the bill.

(3) Section 18.28.010 clearly states the purpose of the bill. However, reference to federal legislation as is done in the last phrase does not appear needed, and the department recommends deletion of this phrase.

(4) Subsection (a)(5)(B) in Section I of SB-338 indicates that asbestos air sampling has been conducted in the state. However, the department does not know of any air samples that have been taken, particularly those indicating high levels of asbestos. We recommend that this subsection be deleted, unless other departments or persons know of such test data.

(5) Section 18.28.020 (5) of the bill is not totally correct, since the department does not have nor is projecting the resources to actually conduct testing. This is intended to be the responsibility of the building owner and/or occupant, with the Department providing training and guidance. The Department recommends that this subsection be revised accordingly. The Department would still continue, however, to be responsible for paying the costs of sample analysis.

A similar change should be made to Section 18.28.050(5), to reflect the responsibility of the applicable school district to conduct the sampling. Suggested changes to the bill are attached.

(6) A slight change is recommended in Section 18.28.020(8), which requires the department to provide information, testing, and analysis services upon request. Because the department has not requested any new positions to carry out this program, it is recommended that this subsection be modified to make it clear that the department is not responsible for actually conducting the testing, but to only provide information on how to conduct and assisting those doing the testing. Clarifying language is included on the attachment.

(7) Section 18.28.040(1) indicates that the Department of Transportation/Public Facilities will cooperate with the department in carrying out its responsibilities under the bill. It is recommended that the Department of Education also be identified in this subsection.

(8) A minor change to the act is suggested to Section 18.28.050(1), to require each school district to provide for appropriate training in the detection of friable asbestos problems, rather than require that they actually do the training. Training is stated earlier in the bill as a department function. Another minor addition which would be helpful, is to add a definition of the term, "friable asbestos". This will better assure that funds are properly used to their intended purpose.

III. Fiscal Note May be Needed

The department has not projected the need for additional personnel or travel to implement the bill, because the carrying out the inspection and testing is not intended to be done by department personnel. If the Committee wishes for the department to do these functions, it should be aware that a fiscal note will have to be prepared to reflect the need for at least two full-time positions for at least one year, if not two. A substantial amount of travel would also

be involved, with an approximate estimate of about \$125,000 to cover these functions. The department does not recommend this approach; rather, the building owners can and should be responsible for inspections and testing.

One other area which may require a fiscal note is to provide the needed public assistance, answering of the many questions that will come, and providing training needs under the bill. No additional positions will be needed, provided that one of the hazardous waste bills now being considered (SB-239 and HCS CSSB-29) pass with their attendant fiscal notes and positions.

if they do not, one additional position will be needed by the department, with sufficient travel to be able to support the program activities under the bill. This fiscal note is attached only as a precaution to assure that resources are available if the other bills do not pass.

With these changes, SB-338 and SB-339 should effectively allow all public agencies within the State of Alaska to inspect for and eliminate any identified health hazards caused by friable asbestos materials. The Department looks forward to carrying out the purposes of these bills, and in working with other departments and the general public to assure that public facilities are satisfactorily protected against these hazards.

We appreciate the opportunity to present testimony on this important legislation, and would be pleased to answer any questions or provide additional information that the Committee may need.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ATTACHMENT TO TESTIMONY ON
SB-338 and SB-339: RECOMMENDED CHANGES

FOR SB-339

1. MODIFICATION OF SECTION 1 OF SB-339, AS FOLLOWS:

"Section 1. The sum of [\$33,250] \$60,000 is appropriated from the general fund to the Department of Environmental Conservation for programs to train personnel of schools, public facilities, local governments and other institutions in inspection and sampling methods to assess asbestos health hazards, and to inform the public on ways to detect and correct those hazards."

2. MODIFICATION OF SECTION 2 OF SB-339, AS FOLLOWS:

"Section 2. The sum of [\$500,000] \$3,000,000 is appropriated from the general fund to the Department of Community and Regional Affairs for distribution to school officials in the state to renovate school buildings to eliminate asbestos health hazards."

3. MODIFICATION OF SECTION 3 OF SB-339, AS FOLLOWS:

"Section 3. The sum of [\$500,000] \$1,000,000 is appropriated from the general fund to the Department of Community and Regional Affairs for renovations of state and local government-owned facilities to eliminate asbestos hazards."

FOR SB-338

(4) DELETION OF SECTION (1)(a)(5)(B) OF SB-338, AS FOLLOWS:

"[(B) Asbestos concentrations far exceeding normal air levels are present in school buildings containing these damaged materials;]"

(5) MODIFICATION OF SECTION 1 (b) OF SB-338 AS FOLLOWS:

"(b) It is the purpose of this Act to

(1) provide testing and analysis of friable asbestos materials in school buildings, [and] all [other public] state and local government facilities, federal and privately owned facilities in the state.

(2) Same as in bill

(3) Same as in bill

(4) provide for the correction of asbestos health hazards in state and local government-owned facilities".

(6) DELETION OF THE PHRASE IN SEC. 18.28.010 OF SB-338 AS FOLLOWS:

".....in the state, [in order to insure state compliance with the Asbestos School Hazard and Control Act of 1980 (P.L. 96-270)]

(7) MODIFICATION OF SECTION 18.28.020 (5) OF SB-338 AS FOLLOWS:

"(5) establish guidelines for inspection and collection of samples of suspected friable asbestos, and [have them analyzed] provide for their analysis.

(8) MODIFICATION OF SECTION 18.28.020 (8) OF SB-338, AS FOLLOWS:

"(8) Provide information on asbestos health hazards and [testing and analysis services] proper means of inspection and analysis, and analyze specimens upon request by any local or state government of private business."

(9) MODIFICATION OF SECTION 18.28.020 (9) OF SB-338 AS FOLLOWS:

"(9) Coordinate with the Department of Community and Regional Affairs to administer state money appropriated to finance the asbestos health hazard program and "

(10) MODIFICATION OF SECTION 18.28.040 (1), OF SB-338 AS FOLLOWS:

"(1) Cooperate with the Department of Environmental Conservation and the Department of Education to insure inspection of schools and facilities in the state for asbestos health hazards and to insure that identified asbestos health hazards are eliminated and.."

(11) MODIFICATION OF SECTION 18.28.050 (1) OF SB-338 AS FOLLOWS

"(1) provide for the training of school personnel in the detection of friable asbestos in their respective school buildings;"

(12) SUBSTITUTION FOR SECTION 18.28.050 (5) OF SB-338 AS FOLLOWS:

"(5) Provide for the inspection of all school buildings within each jurisdiction and the taking of samples as may be needed, following guidelines established by the Department of Environmental Conservation to determine whether any asbestos health hazards exist.

(13) ADDITION OF A NEW SECTION 18.23.060 TO SB-338 AS FOLLOWS:

"Section 18.28.060. DUTIES OF THE DEPARTMENT OF COMMUNITY AND REGIONAL AFFAIRS. To assist in implementing the asbestos health hazard program, the Department of Community and Regional Affairs shall

(1) in cooperation with the Department of Environmental Conservation, administer state money appropriated to finance friable asbestos renovation projects

(2) distribute available funds as necessary to eliminate asbestos health hazards, from schools, state and local government owned facilities in the state."

(14) ADDITION OF A NEW SECTION 18.28.070 TO SB-338 AS FOLLOWS:

Section 18.28.070. For purposes of this Act,

(1) "friable asbestos" means any material that contains asbestos as one of its constituents and can be crumbled, pulverized or reduced to powder in the hand

MEMORANDUM

TO: JOE
FROM: NANCY
RE: ASBESTOS HEALTH HAZARDS

THE NEW DRAFTS OF THE BILL ARE IN YOUR PACKET. THEY HAVE BEEN CHANGED TO LIMIT THE SCOPE OF THE BILL TO REMOVAL OF ASBESTOS FROM SCHOOL BUILDINGS. THE DEPARTMENT OF EDUCATION WILL PASS THROUGH THE MONEY AS GRANTS TO SCHOOLS FOR THE IDENTIFICATION AND ABATEMENT OF ASBESTOS. THE DEPARTMENT OF LABOR WILL PROVIDE PERSONNEL, TESTS, KEEP RECORDS AND GUARANTEE OPTIMUM WORKER SAFETY IN ASBESTOS REMOVAL PROJECTS.

DRAFTING ATTORNEY, RUSS JOSEPHSON, CHOSE TO LEAVE PUBLIC FACILITIES IN THE DEPARTMENT OF LABOR SECTIONS (THERE IS A LETTER ON THIS ISSUE FROM HIM) BECAUSE HE FELT THAT WORKERS SHOULD BE PROTECTED WHERE EVER THEY WORK - NOT LIMITED TO SCHOOLS..

THERE ARE SUGGESTED AMENDMENTS FROM STEVE KADISH IN VIC FISCHER'S OFFICE IN YOUR FOLDER. THEY INCLUDE:

1. MOVING THE MONEY FOR SAMPLING AND TESTING TO THE DEPARTMENT OF LABOR, RATHER THAN GIVE IT TO D.O.E. TO DISTRIBUTE TO SCHOOLS. SOME SCHOOLS WHO HAVE ALREADY DONE EVALUATIONS HAVE CONTRACTED THIS WORK OUT TO PRIVATE FIRMS.
2. DELETING LANGUAGE IN DEPARTMENT OF LABOR SECTIONS RELATING TO THE ASBESTOS HEALTH HAZARD PROGRAM IN "SCHOOLS AND PUBLIC FACILITIES". (page 3, line 23 and 28; page 4, line 11 and 15.)
3. APPROPRIATION TO STUDY ASBESTOS HEALTH HAZARDS IN PUBLIC FACILITIES. HE DOES NOT ESTIMATE AN AMOUNT OR MENTION WHICH DEPARTMENT WOULD BE THE MOST LIKELY TO HANDLE THIS PROJECT.

SINCE THERE HAS BEEN NO CENTRAL AGENCY COLLECTING INFORMATION ON THE CONDITIONS OF THE SCHOOLS IN THE STATE RELATING TO ASBESTOS, IT IS HARD TO JUSTIFY THE \$15 MILLION IN THE BILL AT THIS TIME. THERE ARE, HOWEVER, SCHOOL DISTRICTS WHO KNOW THAT THEY HAVE AN EXTENSIVE ASBESTOS PROBLEM THAT HAS NOT YET BEEN EVALUATED (JUNEAU AND KETCHIKAN HAVE TALKED TO ME ABOUT THIS SITUATION. JUNEAU HAS ASBESTOS IN ALL SCHOOLS IN THE DISTRICT, BUT ONLY ONE EVALUATION: HARBORVIEW ELEMENTARY FOR \$300.0. DARRELL HARGRAVES ESTIMATES UP TO \$5 MILLION FOR THE WHITECLIFF SCHOOL IN KETCHIKAN).

THERE IS AN ARTICLE UNDER "MEDIA" IN YOUR FOLDER CONCERNING FEDERAL RESPONSES TO ASBESTOS NEEDS. THEY HAVE DECIDED TO PUT IN MONEY FOR RENOVATIONS TO SCHOOLS ON FEDERAL LAND: 2.1 MILLION FOR BARTLETT IN ANCHORAGE AND MOUNT SPURR AT ELMENDORF: 2.2 MILLION FOR ADAK SCHOOLS. AND 250.0 FOR FAIRBANKS SCHOOLS.
AS YOU

THE GOVERNOR'S BUDGET HAS \$5 MILLION FOR STATEWIDE ASBESTOS ABATEMENT IN SCHOOLS, WITH NO LANGUAGE CONCERNING HOW THIS IS TO BE IMPLEMENTED BY THE DEPARTMENT OF EDUCATION.

THE HOUSE AND SENATE CAPITAL BUDGETS CONTAIN \$6.6 MILLION FOR THE ANCHORAGE SCHOOLS DISTRICT, AND \$1,385.0 FOR THE FAIRBANKS SCHOOL DISTRICT.

OTHER DISTRICTS IN ADDITION TO KETCHIKAN AND JUNEAU MENTIONED BEFORE ARE:

KODIAK	1,138,507	
PETERSBURG	107,000	
DELTA GREELY	99,700	
CORDOVA	120,000	(THEY HAVE BEGUN THE REMOVAL PROCESS)
NENANA	15,000	(5.0 ALREADY SPENT)
ANCHORAGE	10,000,000	
FAIRBANKS	1,385,000	
<u>ESTIMATES</u>		
KETCHIKAN	5,000,000	
JUNEAU	300,000	mimimum, possibly several million.

SCHOOLS WERE REQUIRED BY THE E.P.A. TO COMPLETE EVALUATION AND TESTING OF ASBESTOS PROBLEMS BY JUNE 30, 1983. HOWEVER, THERE WAS NO MONEY APPROPRIATED, AND THE E.P.A. ADMITS THAT THEY HAVE .1 OF A PERSON DEVOTED TO THIS EFFORT IN ALASKA. WORKSHOPS WERE CONDUCTED ON ASBESTOS IN ANCHORAGE, FAIRBANKS AND JUNEAU BUT INFORMATION FOR THE RURAL SCHOOLS WAS HARDER TO GET. THE SUPERINTENDENT FROM COPPER RIVER TOLD ME THAT HE HAD A GREAT DEAL OF TROUBLE GETTING INFO FROM THE E.P.A., AND THAT HE DID COMPLETE THE INVESTIGATION IN HIS SCHOOLS AS BEST AS HE COULD FROM THE INFO AVAILABLE BUT IS NOT SURE THAT TESTS WERE DONE PROPERLY.

MEMORANDUM

State of Alaska

TO: C. Deming Cowles
Deputy Commissioner

DATE: February 13, 1981

FILE NO:

Thru: Glenn Akins

TELEPHONE NO:

FROM: Thomas R. 
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 reports 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.

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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 manpower, 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

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

JAY S. HAMMOND, GOVERNOR

POUCH 0 - JUNEAU 99811

March 11, 1981

The Honorable Charles Parr
Senator
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

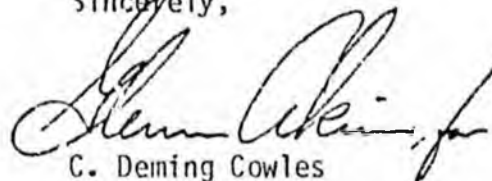
Dear Senator Parr:

As a result of working closely with other state agencies during the past month, the Department of Environmental Conservation has completed an assessment of the potential health hazards posed by building materials containing asbestos. This assessment was completed at your request, and is enclosed for your information and use.

As is described in more detail in the report, asbestos-containing materials which could be causing a health hazard have already been identified at several public schools. While these tests need to be reconfirmed, they do indicate the need to have some means to correct asbestos health hazards as soon as they have been confirmed. The report reviews the available information and recommends ways in which these health hazards may be quickly corrected as they are identified. Recommendations are also included to provide for widespread public awareness and inspection of all public buildings in the state.

We hope this information will satisfy your request and needs. We would be more than willing to provide any additional information you might need, and answer any questions you might have on this important environmental area.

Sincerely,



C. Deming Cowles
Deputy Commissioner

Enclosure

cc: Keith Specking
Office of the Governor

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FRIABLE ASBESTOS IN ALASKAN BUILDINGS
SUMMARY OF PROBLEM AND FUNDING NEEDS

March, 1981

For the past several years there has been nationwide concern that asbestos-building materials containing asbestos may be causing health hazards to building occupants. Asbestos is a well-known cancer causing material, and was widely used as an insulating material in many buildings prior to 1973. The concern is that asbestos from worn or friable material may be contaminating the air within those buildings and exposing the occupants to unnecessary health hazards.

Because of this concern, an inventory of public schools was initiated in 1979 as a combined effort of the state Departments of Health and Social Services, Education, Transportation/Public Facilities and Environmental Conservation. Some asbestos-containing materials were found. This report describes the results and corrective actions needed, and assesses the potential problems and solutions for all buildings in which the public has general access in Alaska.

FINDINGS:

1. While there are many building materials containing asbestos, most do not pose a health hazard, because the asbestos is securely bound within the material or otherwise contained so that it is unlikely to be released into the air. The asbestos material which is of greatest health concern is that which can be crumbled, pulverized, or reduced to powder in the hand, is worn and likely to be scuffed and frayed. This material is called "friable" asbestos.
2. Friable asbestos is usually found on overhead surfaces, steel beams, ceilings, and occasionally on walls and pipes.
3. 20% of the public schools in the state were inspected, and 13% of the schools inspected were found to have materials which could be hazardous. These samples must be checked to confirm the asbestos hazard. If they are representative of all schools in the state, there could be up to 66 schools needing some renovation to correct asbestos health hazards.
4. No potential problems have yet been identified in state-owned public buildings (excluding schools). However, those buildings in the Anchorage area have not been inspected.
5. No inventory has been made of local or federal government buildings.

6. Inspection and sampling of buildings is relatively easy and could be done by most anyone with a little training. Training could be quickly made available to anyone interested at little expense to the state.
7. Correction of identified health problems normally involves enclosure, encapsulation (coated with a sealant or otherwise coated over with another material) or removal. Corrective measures can often be very expensive.

RECOMMENDATIONS:

1. A fund of \$1,500,000 should be established to correct health related asbestos problems in public schools, state-owned or local government-owned buildings in the state. An additional \$33,250 is needed to provide for inspection, training, sampling and analysis of building material, which is a necessary first step in determining whether a problem exists. The funds should be appropriated for a two year period.
2. Sample analysis, and training in methods of inspection and sampling should be available to private enterprise and federal agencies when requested. However, costs of renovation of federal or private structures will be their responsibility, and not a state responsibility.
3. State involvement in the program should be limited to:
 - a) Providing public information on the asbestos health hazards, and training on how to inspect and sample (Department of Environmental Conservation).
 - b) Provide for sample analysis (Department of Environmental Conservation).
 - c) Establish guidelines and technical assistance on cost-effective renovation techniques (Departments of Environmental Conservation, and Transportation/Public Facilities).
 - d) Funds for training, sampling and analysis should be appropriated to the Department of Environmental Conservation. No additional positions would be needed, however, as long as resources from either SB-239 or HB-72 (relating to hazardous waste disposal) are appropriated.
 - e) Distribution of funds to cover any needed renovation is to be a simple administrative process, with minimal state oversight. A recommended approach would be for the Department of Community and Regional Affairs to distribute the funds on an as-needed basis. This would be only contingent on a cursory review and sign-off approval by the Department of Environmental Conservation, in cooperation with the Department of Transportation/ Public Facilities, to assure that cost effective renovation solutions are selected.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

BACKGROUND INFORMATION -- FRIABLE ASBESTOS IN ALASKAN BUILDINGS

March, 1981

INTRODUCTION

Many building materials used in past years have included asbestos because of its insulating qualities. However, it has become well known that asbestos can be cancer-causing and is virtually indestructible once introduced into the environment. In particular, asbestos-bearing materials which become worn or frayed can release asbestos into the air, which when inhaled can 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.

Until recently, asbestos health hazards were normally associated with chronic and debilitating lung disease called asbestosis, which in most cases followed long exposure to high levels of asbestos fibers. This was normally considered an occupational health concern and not a health risk to the general public. More recently, however, exposure to asbestos has been associated with lung cancer, a rare cancer of the chest and abdominal lining called mesothelioma, and cancers of the esophagus, stomach, colon and other organs. Asbestos also acts as a potent cancer-causing agent in combination with cigarette smoking. In all asbestos related diseases, there is a substantial period of many years between initial exposure and appearance of the disease. Even small concentrations of asbestos in the air can be a health hazard.

Asbestos is a general term for a number of closely related fibrous minerals. Its most valuable property lies in the indestructible nature of products fabricated from its fiber, is widely used as an insulating substance and is typically found around boilers and hot surfaces. For a number of years it was widely used as spray-on insulation for pipes, ceilings, and exterior walls, especially in large buildings, and some materials also have been troweled onto the receiving surfaces. The problem is when these materials are or become friable -- which are those surfaces which become worn, scuffed up, are crumbly, or can be crushed, or coming apart. It is this material which can pose a health hazard if asbestos is present. Fortunately it is relatively easy to inspect a building for these friable materials and if asbestos is suspected, to have samples taken and analyzed. However, there is no widely available training in Alaska, samples cost about \$25-\$50 to run, and renovation of any identified problem materials can be expensive.

ACTIVITY THUS FAR IN ALASKA

In March of 1979 the public health dangers of friable asbestos-containing materials were widely advertised throughout the country, largely as a result of the serious contamination found in the Yale University Library. Similar problems were also found in a number of public schools in other states. During 1979, the state Departments of Health and Social Services, Transportation and Public Facilities, Environmental Conservation, and Education began an inventory of Alaskan public facilities to determine if a friable asbestos problem existed in the state. An emphasis was placed on surveying public schools, and 191 schools were inspected

to see if friable asbestos problems were present. Samples were taken of 35 of the schools, and 13 were found to have asbestos in the sampled material. Results of this inventory are summarized in Attachment A.

Recently the Department of Transportation/Public Facilities reviewed their inventory results, and determined that there does not appear to be any widespread friable asbestos in state-owned facilities. The one possible exception is in Anchorage, where the state inventory has not been completed. This area is more likely than others in the state to have friable asbestos present, because the larger size of buildings would encourage construction techniques involving asbestos.

Friable asbestos could present a health problem to the general public in virtually all government buildings. These buildings are theoretically covered by the Occupational Safety and Health Standards, which also includes asbestos contamination. However as a practical matter, the present staffing of the Occupational Safety and Health Program is not sufficient to carry out any widespread sampling, analysis, and corrective measures friable asbestos in the state.

NEEDS

1. Public Schools: Extrapolating the results of the initial inventory to all of the 515 public schools in the state, 66 schools might need some form of renovation. Costs to provide for training and to conduct inspection/sampling amounts to \$800, and to analyze the samples would be \$11,450, reference Attachment A. Also, the Department of Transportation/Public Facilities estimated that \$500,000 should cover the anticipated renovation costs, provided that no extensive removal and renovation becomes necessary - if this occurs, costs could become substantially higher depending on specific situations.

2. 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 have been found which would require extensive renovation costs. The only places found to have asbestos contamination were in boiler rooms and pipe installations, neither of which would be a major expense and could be handled as part of routine maintenance.

However, ADOT/PF has also indicated that Anchorage buildings may possibly have friable asbestos-containing materials, because their larger size would have made it more feasible to use spray-on insulation materials. This inventory should be complete during FY-82. For purposes of providing funds through any legislative action that might be introduced this year, a contingency amount of perhaps up to \$500,000 should cover any problem areas that are found.

3. Local government buildings: There has no been inventory of these buildings, and some investigative effort should be made and followed up with any sampling that might be needed. Some asbestos contamination is likely to be found, and a contingency renovation fund of approximately \$500,000 should be provided to meet the majority if not all of the needs. An additional \$500 for training and \$15,000 for sampling, analysis and some travel to assist in training/inspections should also be provided.

4. Training/Analysis for All Other Buildings: Currently there is no widespread training or information available to the Alaskan public, particularly the private sector, to determine whether their buildings have asbestos health hazards. Sufficient training could be provided to the general public, through making available video tapes and instruction through all department/regional offices (\$500), provide for sample analysis and some travel to assist in the training and/or inspection as a public service (\$5,000). No estimates have been made or are recommended for covering the costs of privately-owned buildings - that would be the responsibility of the private owner.

SUMMARY OF COST NEEDS

Description of cost item	Training	Inspection/ Sample Analysis	Renovation Cost	Totals
Public Schools	\$ 800	\$11,450	\$500,000	\$512,250
State-owned Facilities	--	--	500,000	500,000
Local Government Buildings	500	15,000	500,000	515,500
Privately-owned Buildings	500	5,000	--	5,500
<hr/>				
Totals	\$1,800	\$31,450	\$1,500,000	\$1,533,250

RECOMMENDED APPROACH:

The extent of friable asbestos contamination in Alaska is not known, except in a few specific instances of public schools. Because of the extreme hazard that asbestos can pose to public health, a contingency fund is needed so that quick and effective solutions to any identified health hazard can be made immediately. The best way to provide this is to establish a contingency fund from which any local school district, state agency, or local government may request funds to correct identified friable asbestos problems. A contingency fund of \$1,500,000 should adequately accommodate these needs and should be set up for at least a two year period. Any remaining funds at that time would revert back to the General Fund.

Another major need is to provide for the training and sample analysis to support an effective inspection of buildings to which the public has general access. In addition, public information should be made widely available, so that persons are aware of the potential problems and services available to determine if their own buildings may have asbestos contamination. It is recommended that the Department of Environmental Conservation take responsibility for this function and have available in its regional and central offices the training and back-up information.

An additional need will be to establish some guideline information and criteria on the best ways to correct any identified problem. This information is recommended to be established jointly between the Departments of Environmental Conservation and Transportation/Public Facilities with existing resources, and would also receive a wide distribution throughout the state.

Finally, a means of handling and distributing the grant funds for any needed renovation is recommended to be set up through the Department of Community and Regional Affairs since this department is already handling a large majority of state funds distributions to communities. The distribution of requested funds would be set up so that applications can be quickly and simply handled. It would involve nothing more than a simple review by the Department of Environmental Conservation (with assistance by Transportation/Public Facilities as needed) to determine that valid samples were taken and the problem adequately identified, effective renovation means have been selected and that they are cost-effective. This whole review procedure should take no more than 1-2 weeks and would not involve any review of specific renovation details -- that would remain the responsibility and obligation of the building owner.

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 (REAs) 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 disbursement 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.

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 Education Attendance Areas (REAs), 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 are \$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 1/2-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 at least one location requiring 3 samples, but only a portion will have two 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:

$$\begin{array}{rcccccccc} 515 & \times & 12.9\% & = & 66 & + & 73.6\% & = & 90 & \times & 5 \\ \text{schools} & & & & \text{schools} & & & & \text{schools} & & \text{samples} \\ & & & & & & & & & & \\ & = & 450 & \times & \$25.00 & = & \$11,250 & + & \$200.00 & = & \$11,450 \\ & & \text{samples} & & \text{sample} & & \text{total} & & \text{postage} & & \\ & & & & \text{cost} & & \text{sample} & & & & \\ & & & & & & \text{cost} & & & & \end{array}$$

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^{or} 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/s ft. for fire proofing. Total cost would be \$10.00-18.00/ square foot.



CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

P.O. BOX 4-1276
Anchorage, Alaska 99509

TELEPHONE (907) 562-2343

ANCHORAGE INDUSTRIAL CENTER
5633 B Street



February 16, 1984

Senator Joe Josephson
Pouch V (MS-3100)
Juneau, Alaska 99811

Dear Senator Josephson:

I have a copy of Senate Bill Number 373 and 374. This type of bill is very necessary to eliminate the asbestos problems we presently have in our schools and government buildings. The part of bill #374 that could be improved upon is Section #1. There are highly trained individuals within the state that could perform the service of going into a facility doing on-site inspections and showing the potential danger areas to the proper school or government representatives. These professionals could point out the problems in the buildings and make recommendations on how to eliminate the dangers of potential health hazards for all concerned, including our children.


We are not against training personnel from the facility in asbestos recognition and proper handling for their own protection, but we feel that complete facility inspections should be performed by experts who are trained in this field and experienced in doing this type of work--people who know where to look and what to look for.

I think you will find these inspections are reasonable in costs and will provide for more reliability than utilizing someone from each building that attends a one-time training seminar.

Please consider in your final bill the above suggestion that facilities utilize professionals in their on-site inspections.

Thank you so much.

Sincerely,


Eugene T. Yonkin
Executive Vice President

ETY:ml

xc: Senator Vic Fischer
Senator Tim Kelly
Senator Rick Halford
Senator Arliss Sturgulewski

News Miner
2/1/84

EPA: schools ignore law about asbestos warnings

WASHINGTON (AP)—Local school officials, worried about their budgets or about "panic and hysteria," are widely ignoring a federal law requiring parents to be notified about dangerous asbestos in their school buildings, a government study says.

The study by the Environmental Protection Agency said that study said.

In many cases, the study said, school officials did not want to notify parents because of the money the school district would have to spend if forced to clean up the asbestos hazard.

School officials "are reluctant to notify parents because they believe this will result in a redirection of limited operating funds and/or create unnecessary panic and hysteria," the study said.

But whatever the reason, the EPA study added, it is undermining the program to get rid of hazards from asbestos that face millions of schoolchildren.

"The success or failure of the asbestos in schools rule, which relies heavily upon public involvement, is the degree to which information is communicated to the public," the study said. "Poor public awareness has resulted in only slight activity on the part of the parent groups in schools."

The findings are included in an internal program review requested by EPA Deputy Administrator Al Alm and completed in December. A copy was obtained by The Associated Press.

The study involves asbestos insulation that once was widely used in schools and other public buildings. Health officials now say that some types of asbestos can flake into mic-

roscopic particles that can be inhaled, causing lung cancer or other lung diseases. There is no known safe exposure level.

Under federal law, school officials are required to inspect their buildings for hazardous asbestos and to notify parents and school employees if it is found. It is then up to the local officials to decide what to do.

The law covers more than 37,000 public, private and parochial school systems with more than 50 million students.

The EPA study was intended to find out how well the program was working. Some of its findings, including the conclusion that two-thirds of the nation's schools are in violation of some part of the law, have been reported earlier.

The EPA study did not blame school officials alone. It also found that the agency itself needed to devote more money and people to the program, including more than doubling the EPA inspection program.

"The agency has not issued a high-

level statement detailing the risks of exposure to asbestos and the importance of considering various abatement options," the study said. "The regions and the public have not been made fully aware and have received mixed signals on the seriousness of asbestos health hazards."

The congressional author of the asbestos in schools law, Rep. George Miller, D-Calif., focused on those shortcomings in his analysis of the report.

"This document, drafted by EPA's own experts, again confirms the shocking inadequacy of this administration's approach to a threat that endangers the health of millions of school children," Miller said. "It is apparent that at least some officials within EPA are trying to warn their agency about the consequences of the current policies."

Whatever the failings of the agency, however, the study indicated that school officials have not endorsed the program wholeheartedly.

THE LEGISLATURE OF THE STATE OF ALASKA
ELEVENTH LEGISLATURE

FISCAL NOTE

I. REQUEST

Bill/Resolution No. SB-338, SB-339
Title Act establishing an asbestos health hazard program
Requested by Parr Date 3/22/81

II. FISCAL DETAIL

Agency Affected Environmental Conservation, Department of
Program Category Affected Environmental Conservation
BRU, Program, or Subprogram(s) Affected Environmental Quality Management, Env. Quality Operatic
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
100 PERSONAL SERVICES			43.3	47.6	-	-
200 TRAVEL			40.0	44.0	-	-
300 CONTRACTUAL		4.0	25.0	27.5	19.0	-
400 COMMODITIES			1.0	1.1	-	-
500 EQUIPMENT			2.0	2.2	-	-
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC						
TOTAL		4.0	111.3	122.4	10.0	-

FUNDING (Thousands of Dollars)

GENERAL FUND		4.0	111.3	122.4	10.0	-
FEDERAL FUNDS						
OTHER (Specify Fund Source)						

POSITIONS

FULL TIME			1	1	-	-
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)

The requirements of SB-338 will obligate the Department of Environmental Conservation to oversee the establishment and carrying out of the entire asbestos health hazard program. This program will require the establishment of public information, inspection and testing guidance documents, identification of acceptable renovation techniques for correcting asbestos material hazards, providing of training materials and technical assistance to the general public in all matters involving friable asbestos materials in public facilities and schools.

It is projected that one additional full time person, located in either Anchorage or Juneau, will be needed to handle the administration and technical aspects of the program. This assumes that actual inspections and taking of samples are the responsibility of the individual building owners and/or occupants. Supporting

IV. DATE 4/15/81

PREPARED BY T. Hanna R. Hanna
AGENCY Dept of Environmental Conservation
PHONE 465-2666

Original. Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)

costs for this position, including a substantial amount of travel in the event that on-the-site assistance becomes necessary or advisable, are included in this fiscal note as follows:

1. PERSONAL SERVICES	
One position (Range 18) for 12 months	\$ 43.3
2. TRAVEL	
\$15.0 in direct support of the new position	
\$25.0 in support of regional field officers providing technical assistance to rural areas	\$ 40.0
3. CONTRACTUAL	
\$15.0 in direct support of the new position	
\$10.0 for professional services, public information	\$ 25.0
4. COMMODITIES	\$ 1.0
5. EQUIPMENT	\$ 2.0
	<hr/>
TOTALS	\$ 111.3

Costs for the administration of the asbestos health hazard program are not expected to continue for over two years, at which time the program purposes should be complete and the position terminated.

It should be noted that this position will not be needed, if one of the hazardous waste control bills now being considered by the Legislature are passed. Both of these bills (SB-239 and HCS CSSB-29) have fiscal notes which will provide the department with sufficient field personnel to be able to carry out the functions of this program as a function of the overall hazardous waste control efforts. If one of these bills pass, therefore, the resources in this fiscal note will not be used.

Introduced: 1/25/84
Referred: Health, Education and Social
Services and Finance

Funding Information
General Fund \$17,075,000
Other Funds -0-
\$17,075,000

1 IN THE SENATE *Sponsor Substitute* BY JOSEPH N

2 *FOR* SENATE BILL NO. 374

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 THIRTEENTH LEGISLATURE - SECOND SESSION

5 A BILL

6 For an Act entitled: "An Act making special appropriations for an asbest
7 health hazard ^{ABATEMENT} program; and providing for an effecti
8 date."

9 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

10 * Section 1. The sum of ^{\$200,000} \$75,000 is appropriated from the general fu
11 to the ~~Department of Environmental Conservation~~ ^{DEPARTMENT OF LABOR} for programs to tre
12 ~~personnel of schools, public facilities, local governments, and oth~~ ^{IMPLEMENT THE ASBESTOS HEALTH HAZARD ABATEMENT}
13 ~~institutions in inspection and sampling methods to assess asbestos heal~~ ^{PROGRAM}
14 ~~hazards.~~

15 * Sec. 2. The sum of \$15,000,000 is appropriated from the general fu
16 to the Department of ~~Community and Regional Affairs~~ ^{OF EDUCATION} for distribution
17 school officials in the state to renovate school buildings to elimina
18 asbestos health hazards.

19 * Sec. 3. The sum of \$2,000,000 is appropriated from the general fu
20 to the Department of ~~Community and Regional Affairs~~ ^{TRANSPORTATION AND PUBLIC FACILITIES} for renovations
21 public facilities to eliminate asbestos health hazards.

22 * Sec. 4. The unexpended and unobligated portions of the appropriation
23 made by this Act lapse into the general fund June 30, 1986.

24 * Sec. 5. This Act takes effect on the effective date of an Act estab
25 lishing an asbestos health hazard ^{ABATEMENT} program.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT



Alaska State Legislature

Senate Committee on State Affairs

Vic Fischer, Chairman • 1024 W. 6th Ave., Suite 204 C,
Anchorage, Alaska 99501
(907) 278-3654

Official Business

January 30, 1984

Nancy Dietrick
Senator Joe Josephson
Pouch V
Juneau, AK 99811

Dear Nancy,

I enclose a copy of a memorandum I sent to Senator V. Fischer on SB 373. I would appreciate if you would review it and let me know of your comments. If you agree that some changes are necessary, please let me know how you think it is best to proceed.

I am also sending the bill and my comments to the Alaska Health Project, Laborers Union, Public Employees Union, and the Asbestos Workers Union.

I am sorry that this took so long to get together. Speak with you soon.

Sincerely,

A handwritten signature in cursive script, appearing to read "Steve", with a long horizontal line extending to the right.

Steven Kadish



Alaska State Legislature

Senate Committee on State Affairs

Vic Fischer, Chairman • 1024 W. 6th Ave., Suite 204 C,
Anchorage, Alaska 99501
(907) 278-3654

Official Business

January 30, 1984

To: Senator Vic Fischer
From: Steven Kadish
Re: Asbestos Bill, SB 3/3

The following is a page by page listing of my comments, questions, and additions to the proposed asbestos legislation. There are three main thrusts behind my comments: (1) the proper maintenance of asbestos products is not addressed in this bill; (2) asbestos removal requires workers who have been trained specifically to handle these hazardous materials. I believe that an asbestos removal certification program is necessary to ensure that the asbestos containing materials are handled properly; (3) I am concerned about the number of agencies that are mentioned in this bill. Is it possible to combine the roles of the Departmental of Environmental Conservation and Department of Community and Regional Affairs? In any case, the lead agency should be given clear authority on this program.

I have enclosed a marked-up copy of the bill with the following changes:

p1, line 6. Add after the word hazard: abatement

p1, line 20-25. Delete

p2, line 1-3. Substitute the following language: The present federal and state programs to identify and abate asbestos health hazards in school buildings and public facilities are severely inadequate.

p2, line 12. Add after the word hazard: abatement

p2, line 13. Add after the word hazard: abatement

p2, line 9. Substitute for the word correction: abatement

p2, line 18. Insert the following: The asbestos health hazard abatement program shall apply to all work involving: (a) Demolition, removal, encapsulation, salvage, transportation, disposal, storage, or containment of asbestos products; (b) construction, alteration, repair, maintenance, or renovation conducted in environments which contain asbestos; ~~(c) installation of asbestos products.~~

p2, line 26. Insert: (2) provide training materials for school personnel and custodians of public facilities to enable them to safely work around and maintain from damage in day to day operations any asbestos products.

p2, line 27. Add after the word Agency: and other state and federal agencies

p3, line 15. Add after the word analysis: and maintenance procedures

p3, line 17-19. Question: Why isn't DEC both the overseeing agency and the agency that administers the funds (DCRA)? What the pros and cons of using DEC or DCRA in this way?

p3, line 28. Begin with: to ensure that procedures for maintaining asbestos products from damage in day to day operations are followed

p4, line 1. Substitute for the word controlling: abating

p4, line 2. Add after the word hazards: and for working around and maintaining from damage in day to day operations any asbestos product

p4, line 7-9. Question: Is this a function we may want DEC to perform as overseeing agency? Do we want to specifically request that DOE transfer this information to DEC?

p4, line 10. Question: Do we need to insert the following: (5) adopt regulations necessary to implement the provisions of this chapter.

p4, line 12. Add after the word hazard: abatement

p4, line 16. Add after the word hazards: to ensure that procedures for maintaining asbestos products from damage in day to day operations are followed

p4, line 18-20. Delete

p4, line 21. Question: Do we need to insert the following?: (3) adopt regulations necessary to implement the provisions of this chapter.

p4, line 27. Begin with: (2) provide for the training of school personnel in the maintenance from damage in day to day operations of asbestos products

p5, line 8. Delete the word: renovating

p5, line 9. the word renovations

p5, line 12. Question: Do we need to insert the following? (7) adopt regulations necessary to implement the provisions of this chapter.

p5, line 12-19. Question: Do we want these functions to be part of DEC as overseeing agency?

p5, line 20-23. Delete.

p5, line 24. Insert the following new section:

Duties of the Department of Labor. To assist in implementing the asbestos health hazard abatement program, the Department of Labor, in cooperation with the Department of Environmental Conservation, Department of Education, Department of Transportation and Public Facilities, and the Department of Community and Regional Affairs, shall

(1) establish guidelines for abatement of asbestos health hazards;

(2) review and approve all asbestos health hazard abatement programs relating to respirator use and employee training, including training materials;

(3) establish an employee certification program. Only employees that have successfully completed the Department of Labor approved certification program shall be able to perform asbestos abatement work. The certification program shall include a respiratory exam and a competency exam;

(4) establish guidelines and procedures to prevent damage to asbestos products in day to day operations; and

(5) adopt regulations necessary to implement the provisions of this chapter.

Insert to Definitions section:

"Asbestos" means chrysotile, amosite, crocidolite, fibrous tremolite, fibrous anthophyllite, and fibrous actinolite;

"asbestos product" means any product that produces airborne asbestos

Introduced: 1/25/64
Referred: Health, Education and
Social Services and
Finance

Please note -
written amendments and notes are
stereotyped.

BY JOSEPHSON, RODEY,
V. FISCHER, KELLY, HALFORD
AND STURGULEWSKI

1 IN THE SENATE

2

SENATE BILL NO. 373

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

THIRTEENTH LEGISLATURE - SECOND SESSION

5

A BILL

abatement

6 For an Act entitled: "An Act establishing an asbestos health hazard pro-
7 gram; and providing for an effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. FINDINGS AND PURPOSE. (a) The legislature finds that

10 (1) medical studies indicate that individuals who are exposed to
11 asbestos fibers have a significantly increased incidence of cancer and
12 other severe or fatal diseases, as compared with individuals who are not
13 exposed;

14 (2) medical evidence suggests that children may be particularly
15 vulnerable to cancer induced by exposure to asbestos fibers;

16 (3) medical science has not established a minimum level of
17 exposure to asbestos fibers that is considered to be safe;

18 (4) substantial amounts of asbestos have been installed in
19 school buildings and other public facilities in the state;

20 (5) a partial survey of Alaskan schools indicates that

21 (A) in many cases materials containing asbestos fibers have
22 become damaged or friable, causing asbestos fibers to be released into
23 the air; and

24 (B) asbestos concentrations may be present in school build-
25 ings containing damaged asbestos material;

26 (6) the presence in school buildings and public facilities of
27 friable or easily damaged asbestos creates an unwarranted health hazard to
28 school children, employees, and other individuals who are exposed to the
29 material;

1 (7) no systematic program presently exists to identify asbestos
2 health hazards in school buildings and public facilities or to remedy those
3 conditions.

4 (b) It is the purpose of this Act to

5 (1) provide for testing and analysis of friable asbestos ma-
6 terials in school buildings and other public facilities in the state;

7 (2) provide for the dissemination of information relating to the
8 health hazards caused by exposure to friable asbestos fibers;

9 (3) ensure ~~correction~~^{abatement} of identified health hazards from friable
10 asbestos materials in school buildings and other public facilities.

11 * Sec. 2. AS 18 is amended by adding a new chapter to read:

12 CHAPTER 28. ASBESTOS HEALTH HAZARD PROGRAM.

13 Sec. 18.28.010. PROGRAM ESTABLISHED. The asbestos health hazard ^{abatement}
14 program is established in the Department of Environmental Conservation
15 to coordinate efforts of state departments and agencies to eliminate
16 asbestos health hazards in schools and public facilities in the state
17 in order to ensure state compliance with 20 U.S.C. 3601-3611 (Asbestos
18 School Hazard Detection and Control Act of 1980). ^{See NOTES for insert for}
^{definition of Abatement program.}

19 Sec. 18.28.020. DUTIES OF THE DEPARTMENT OF ENVIRONMENTAL CON-
20 SERVATION. In order to eliminate asbestos health hazards in schools
21 and public facilities in the state, the Department of Environmental
22 Conservation shall

23 (1) provide training materials for school personnel and
24 custodians of public facilities to enable them to inspect and sample
25 material for the presence of friable asbestos;

26 (2) distribute information published by the United States
27 Environmental Protection Agency ^{on asbestos control & abatement measures}, with supplemental
28 videotapes, to city and borough school districts, regional educational
29 attendance areas, private schools, and state public facilities

1 custodians;

2 (3) distribute, retrieve, and store training materials
3 concerning inspection and sampling for friable asbestos;

4 (4) provide knowledgeable individuals to answer inquiries
5 and ensure quality control of sampling;

6 (5) establish guidelines for inspecting and collecting
7 samples of suspected friable asbestos and provide for analysis of the
8 samples;

9 (6) evaluate analysis results and distribute the results to
10 affected schools and public facilities;

11 (7) coordinate efforts by state departments and agencies
12 and by school and public facilities personnel to identify and elimi-
13 nate asbestos health hazards;

14 (8) provide information on asbestos health hazards and
15 proper means of inspection and analysis, and analyze specimens upon
16 request by any state department or agency or local government;

17 (9) cooperate with the Department of Community and Regional
18 Affairs to administer state money appropriated to finance the asbestos
19 health hazard program; and

20 (10) adopt regulations necessary to implement the provisions
21 of this chapter.

22 Sec. 18.28.030. DUTIES OF THE DEPARTMENT OF EDUCATION. To
23 assist in implementing the asbestos health hazard program, the Depart-
24 ment of Education shall

25 (1) cooperate with the Department of Environmental Conser-
26 vation and the Department of Transportation and Public Facilities to
27 ensure inspection of schools in the state for asbestos health hazards
28 and to ensure that identified asbestos health hazards are eliminated;

29 (2) revise, update, and distribute information on

1 ^{abating} procedures and standards for detecting and ~~controlling~~ asbestos health
2 hazards, to city and borough school districts and regional educational
3 attendance areas;

4 (3) distribute new information as it becomes available on
5 asbestos health hazards, to city and borough school districts and
6 regional educational attendance areas; and

7 (4) maintain records, files, and reports on asbestos health
8 hazards in city and borough schools and regional educational atten-
9 dance area schools.

10 Sec. 18.28.040. DUTIES OF THE DEPARTMENT OF TRANSPORTATION AND
11 PUBLIC FACILITIES. To assist in implementing the asbestos health
12 hazard program, the Department of Transportation and Public Facilities
13 shall

14 (1) cooperate with the Department of Environmental Conser-
15 vation and the Department of Education to ensure inspection of schools
16 and public facilities for asbestos health hazards and to ensure that
17 identified asbestos health hazards are eliminated; and

18 (2) provide technical assistance and guidelines for renova-
19 tion techniques to eliminate asbestos health hazards from public
20 facilities and from other buildings in the state.

21 Sec. 18.28.050. DUTIES OF SCHOOL OFFICIALS. To assist in imple-
22 menting the asbestos health hazard program, each city or borough
23 school district, private school, and regional educational attendance
24 area shall

25 (1) provide for the training of school personnel in the
26 detection of friable asbestos in their respective school buildings;

27 (2) maintain records of all inspections, including sample
28 dates, location, condition, and analysis of friable materials;

29 (3) notify school personnel of the location of friable

1 (2) "friable asbestos" means any material that contains
2 more than one percent of asbestos by weight as one of its constituents
3 and that can be easily crumbled, pulverized, or reduced to powder by
4 hand pressure when dry;

5 (3) "public facilities" means buildings owned by the state
6 or by a local government.

7 * Sec. 3. This Act takes effect immediately in accordance with AS 01.-
8 10.070(c).

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AS A UNIT IN THE ORIGINAL DOCUMENT.**

NOTE REGARDING THE FOLLOWING FRAME ON MICROFILM:

COMPLETE DOCUMENT IS AVAILABLE IN ORIGINAL FILES
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BEEN FILMED.

1 TO: ADK, AK GATEWAY, ALEUTIAN REGION, ANCHORAGE, ANNETTE ISLAND, BERING STRA
IT, BRISTOL BAY, CHATHAM, COPPER RIVER, CHUGACH, CORDOVA, CRAIG, DE

2 ATTN: SUPERINTENDENTS

3 SUBJ: ASBESTOS SURVEYS

4 ON JUNE 28, 1983 ALL PRIMARY AND SECONDARY SCHOOLS ARE
5 REQUIRED TO COMPLY WITH 40CFR PART 763 ASBESTOS; FRIABLE
6 ASBESTOS-CONTAINING MATERIALS IN SCHOOLS; IDENTIFICATION
7 AND NOTIFICATION. PLEASE SEND A COPY OF THE LOCAL EDUCATION
8 AGENCY - INSPECTION FOR FRIABLE ASBESTOS CONTAINING MATERIALS
9 TO EACH OF THE FOLLOWING:

10

11 STATE DEPARTMENT OF EDUCATION

12 POUCH - F

13 JUNEAU, ALASKA 99811

14 ATT: FACILITIES

15

16 EPA - AOO

17 2200 HOSPITAL DRIVE

18 SUITE 101

19 JUNEAU, ALASKA 99801

20

21 IF YOU HAVE ANY FURTHER QUESTIONS ON THIS REGULATION PLEASE

22 CONTACT KATHY PAZERA; EPA. 907-586-7819.

23

24 SINCERELY,

25 KATHY PAZERA

26 ENVIRONMENTAL PROTECTION AGENCY

27

28 JAMES E. TOZER

29 FACILITIES COORDINATOR

30 DEPARTMENT OF EDUCATION

RECEIVED
JUN 6 1983
AOO - JUNEAU

*Learn
Alaska*

The Instructional Telecommunications Network
Sponsored by the Department of Education and
University of Alaska

LearnAlaska FACT SHEET

MARCH 1983

- PAST June 1980: State Legislature establishes the LearnAlaska Network (LAN) to help make education and instruction available to all Alaskans.
- April 1981: Audio conferencing begins.
- January 1982: Instructional Television (ITV) broadcasts begin.
- PRESENT March 1983: LAN includes 183 audio conferencing sites and 175 ITV sites.

Sponsors and Responsibilities: The Department of Education (DOE) and the University of Alaska (UA) jointly set policies for the network.

DOE is responsible for securing and producing ITV programming for preschool through grade 12, training educators educators in uses of the Network, and providing adult education services.

The University of Alaska advises faculty and staff in using the Network, secures programming which includes telecourses for college credit, and produces instructional programming. The University manages the operations center for the ITV and audio conferencing systems.

The State Department of Administration installs and maintains equipment.

IS IT WORTH IT?

A few examples of use and resulting cost savings may help to determine the Network's contribution to instruction and education in Alaska. However, as defined by State Statute, the purpose of the LearnAlaska Network is instruction. As the purpose is not to provide entertainment, the value of the Network cannot be determined by comparison with entertainment services. Scope and use of the Network continue to grow. The major investment in hardware has been made. Ongoing operational costs are small by comparison.

Uses

Audio Conferencing

Example:	Alaska State Writing Consortium Audio Conference.
Participants	10 sites (Juneau, Healy, 2 in Fairbanks, Kotzebue, Homer, Chugiak, Barrow, Kodiak, and Anchorage)
Duration	60 minutes
Cost	\$360.00 Approximate cost for face-to-face conference: \$3,960 (more than 10 times the cost of the audio conference)

UA Instructional Use: Fall semester 1982: 1665 students completed courses in which audio conferencing was a major component. Many of these students live in rural communities and otherwise would not have taken the course or would have been limited to exchanges by mail.

Overall Audio Conferencing Statistics, July through December, 1983:

Total Conferencing Hours	5274
Average Number of Sites Per Conference	6.10
Average conferencing Time (minutes)	70.76
Average Cost Per Conference	\$212.01

Projected Use and Savings: The level of use projected for January through June of 1983 is 10,794 hours. Cost savings attributable to conducting these conferences via telecommunications as opposed to face-to-face meetings is in the neighborhood of \$3.0 to \$4.0 million.

ITV

Results of K-12 survey, November 1982: 93% of teachers at a random sample of 47 LeanAlaska sites consider ITV worthwhile; of current users, 87% are pleased with the quality of instruction on the Network.

University Courses, Fall Semester 1982: 547 students completed courses with a video component; most of these classes used audio conferencing as well. This total includes students in rural communities where traditional University services are not feasible.

PROGRESS Number of University unit students completed audio conferenced courses:

Spring Semester 1982:	1044
Number of students, Fall Semester 1982:	1665
	(increased by 59%)

Number of audio conferences, July-December 1981:	405
Number of audio conferences for same period 1982:	885
	(increased by 118%)

Number of communities served by audio conferencing, December 1981:	60
Number served, December 1982:	109
	(increased by 81%)

Several communities have more than one site.

Number of <u>communities</u> receiving ITV, December 1981	67
Number receiving ITV, December 1982	156
	(increased by 133%)

Number of University unit students enrolled for telecourses and live broadcasts, Fall 1982	547
Number of students, Spring 1982	390
	(increased by 40%)

K-12 use of ITV: Since January 1983, DOE upon request distributes monthly ITV guides to all teachers. This information accompanied by more available equipment is rapidly increasing ITV use among school districts. DOE currently provides 150 ITV series to support public instruction.

For further information about LearnAlaska contact:

Jane Pollard Demmert, Statewide Director
University of Alaska Instructional Telecommunications
Consortium
3 Bunnell
University of Alaska
Fairbanks, Alaska 99701
(907) 474-6337 UNET ID: SYJPDEMERT

Dr. William Bramble, Director
DOE Office of Educational Technology and
Telecommunications
Pouch F
Juneau, Alaska 99811
(907) 465-2887. EMS CODE: DOE/ETT

NANCY DIETRICH

ASBESTOS STANDARD

for

CONSTRUCTION INDUSTRY

Prepared by Building and Construction Trades Department AFL-CIO

Amend Section 1926.55 (c) to read: "... the requirements of 1926.58 of this title shall apply."

1926.58 ASBESTOS STANDARD FOR CONSTRUCTION

(a) Scope. This Section shall apply to all work involving:

- (1) Demolition, removal, encapsulation, salvage, transportation, disposal, storage, or containment of asbestos products;
- (2) construction, alteration, repair, maintenance, or renovation conducted in environments which contain asbestos;
- (3) installation of asbestos containing products; and
- (4) asbestos spill/emergency cleanup.

(b) Definitions.

- (1) "Action Level" means 50,000 fibers of asbestos per cubic meter.
- (2) "Ambient Air Levels" means atmospheres containing no more than 10 nanograms/M³ of asbestos.
- (3) "Asbestos" means chrysotile, cummingtonite-grunerite (amosite), crocidolite, fibrous tremolite, fibrous anthophyllite, and fibrous actinolite.
- (4) "Asbestos Fibers" means:
 - (i) for Phase Contrast Microscopy (PCM), all particles with an aspect ratio of 3 to 1 or greater and a length greater than 5 μ m;
 - (ii) for Transmission Electron Microscopy (TEM), asbestos particles with an aspect ratio of 3 to 1 or greater with substantially parallel sides.
- (5) "Asbestos Job" means each phase of an asbestos project where the work processes used or the rates of fiber release or fiber removal are different as determined pursuant to subsection (m)(4) or where the work is performed at non-contiguous locations. Each sub-contracted part of the project shall constitute at least one separate asbestos job. Each regulated area shall constitute a separate asbestos job.
- (6) "Asbestos product or process" means any product or process that produces airborne asbestos.

- (7) "Asbestos Project" means all work within the scope of this Section performed under or pursuant to a construction contract.
- (8) "Asbestos related work" means all work within the scope of this Section.
- (9) "Authorized Person" means "certified employees" assigned by an employer in accordance with 1926.32 (d) to enter into a regulated area.
- (10) "Category A products or processes" means asbestos products or processes which produce airborne levels of asbestos no greater than ambient air levels, as determined by the TEM method when performed by two independent certified laboratories.
- (11) "Category B products or processes" means asbestos products or processes which, as determined by the TEM method performed by two independent certified laboratories, produce airborne levels of asbestos no greater than an eight-hour time weighted average of 100,000 fibers per cubic meter or a ceiling level of 500,000 fibers per cubic meter.
- (12) "Category C products or processes" means asbestos products or processes that have not been tested for Category A or B determination using the TEM method or which, as determined by the TEM or PCM methods, produce levels of asbestos exposure greater than an eight-hour time weighted average of 100,000 fibers per cubic meter or a ceiling level of 500,000 fibers per cubic meter.
- (13) "Certified Employee" means an employee determined by performance and medical examinations in accordance with subsections (f) and (r) to be capable of performing asbestos related work.
- (14) "Certified Laboratory" means any laboratory which:
 - (i) meets OSHA and/or NIOSH quality control requirements for certified laboratories and
 - (ii) participates in and passes NIOSH review in the "Asbestos Round Robin" for certified laboratories sponsored by the NIOSH Proficiency Analytical Testing (PAT) program.
- (15) "Certifying Agent" means a manufacturer or employer who tests a product or process for Category A, B, or C asbestos related work.
- (16) "Competent Person" means a competent person as defined in Section 1926.32 (f), who also has the

ability to recognize areas or structures which have the potential to contain asbestos products.

- (17) "Containment" means the use of a suspended barrier or a lath system attached to or over an asbestos product.
- (18) "Demolition" means the wrecking or taking out of any load supporting structural member and any related razing, removing, or stripping of asbestos products.
- (19) "Encapsulation" means the coating, binding or resurfacing of walls, ceilings, pipes, or other structures to prevent asbestos from becoming airborne.
- (20) "Initial personal samples" means the first personal air samples taken by the employer when work commences in a regulated area. The samples must be taken on the basis of the greatest rate of asbestos fiber release and the rate of fiber removal (e.g. ventilation) which is expected to occur on the job.
- (21) "Fiber-Year" means the equivalent of 2000 hours exposure of an employee to 100,000 fibers of asbestos per cubic meter.
- (22) "Friable Asbestos" means any product that contains more than one (1) percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.
- (23) "High Efficiency Particulate Absolute (HEPA)" means a filtration system assuring that 99.9 percent of the asbestos particles of 0.3 μ m size passing into the system are not released.
- (24) "Independent Certified Laboratory" means any certified laboratory not controlled to any extent by a certifying agent or by the employer engaged in the asbestos related work for whom the samples are being analyzed.
- (25) "Installation" means the application of any asbestos product to, on, or in any structure or substrate.
- (26) "Maintenance" means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates where asbestos is present.
- (27) "Phase Contrast Microscopy (PCM)" means the use of an optical microscope with the following features:
- (i) Binocular head;
 - (ii) 10X Huygenian or equivalent eye piece;
 - (iii) illumination with adjustable intensity;
 - (iv) Patterson globe and circle reticle;

- (v) mechanical stage;
 - (vi) phase contrast condenser with a numerical aperture, equal to or greater than that of the objective;
 - (vii) 40- 45X phase contrast achromatic objective with a numerical aperture between 0.65 and 0.75;
 - (viii) phase ring centering telescope or Bertrand lens; and
 - (ix) stage micrometer with 0.01 millimeter subdivisions.
- (28) "Qualified Person" means a person with demonstrated basic knowledge of safety and health as outlined in Section 1926.32 (1) who, in addition, possesses formal training and experience in asbestos industrial hygiene practices related to construction including, but not limited to, air sampling methodology, respirator fit testing, and asbestos toxicology and control.
- (29) "Qualitative fit-test" means a test to determine whether a respirator effectively removes lung damaging particulates from the inspired air of a respirator user, based on the user's inability to taste or smell an appropriate odorous aerosol or other test agent when the test agent is sprayed on and around the respirator while it is worn by the respirator user.
- (30) "Quantitative fit test" means a test to determine whether a respirator effectively removes lung damaging particulates from the inspired air of a respirator user, based on the ratio resulting from measurement of the concentration of an appropriate test agent inside a respirator worn by the user as compared to the concentration of the test agent outside the respirator.
- (31) "Regulated Area" means any area where airborne levels of asbestos exceed the action level.
- (32) "Removal" means the taking out or stripping of asbestos.
- (33) "Renovation" means any modification to existing structures which contain asbestos.
- (34) "Repair" means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates where asbestos is present.
- (35) "Respirator" means NIOSH or MSHA approved respirators.

- (36) "Salvage" means work performed to recover, reclaim, or retrieve other substances or materials in and around asbestos.
 - (37) "Spill" means any uncontrolled release of asbestos fibers into the air.
 - (38) "Transmission Electron Microscopy (TEM)" means the use of a microscope capable of 100 KV of accelerating voltage, 1 nM resolution, and a magnification range of 300 to 100,000 times. The instrument shall be capable of selected area electron diffraction analysis on areas 300 nM diameter. The fluorescent screen shall have either a millimeter scale, concentric circles of 1, 2, 3, and 4 centimeter radii, or other devices to estimate the length and width of fibrous particles.
 - (39) "Wet Methods" means the application of water containing a wetting agent on any asbestos product.
 - (40) "Wetting Agent" shall mean 50 percent polyoxyethylene ester and 50 percent polyoxyethylene ether, or the equivalent, in a concentration of one ounce in five gallons of water.
- (c) Limitations on Use. No employer shall use any asbestos process or product whose manufacture, sale, or use has been proscribed by any federal law or agency regulation or rule.
- (d) Permissible Exposure Limits (PELs).
- (1) Time-Weighted Average (TWA). The eight hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed 100,000 fibers, longer than 5 micrometers, per cubic meter of air, as determined by the method prescribed in subsection (1).
 - (2) Ceiling Level. No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 500,000 fibers per cubic meter of air, as determined by the method prescribed in subsection (1).
- (e) Employer Reporting and Bonding Requirements. Employers engaged in asbestos related work are subject to the reporting and bonding requirements of this subsection. Copies of all reports shall be made available by the employer to employees and their designated representatives for examination upon their request.
- (1) Initial Reporting Requirement. Prior to engaging in any asbestos project an employer shall submit to OSHA in writing:

- (i) A list of the employer's previous asbestos-related work, including the location, types, and dates of such work and references to any citations issued by OSHA in connection therewith;
 - ~~(ii) a list of the asbestos products and processes to be used and the categories to which they have been assigned;~~
 - (iii) documentation that the employer is knowledgeable and proficient in the areas described in subsection (e)(4);
 - (iv) copies of competency exams used by the employer to certify employee competency in the areas described in subsection (f);
 - (v) identification by name and qualifications of all individuals or companies engaged by the employer to conduct personal air monitoring and bulk samples and sample analysis, medical examinations, record-keeping, decontamination, waste disposal, and employer and employee training;
 - (vi) a list of all personal protective equipment to be used;
 - (vii) copies of all written programs relating to respirator use, waste disposal, decontamination, emergency/spill, and employer and employee training, including training materials; and
 - ~~(viii) the names of all competent persons, as required by Section 1926.20 (b)(2), and of all qualified persons, as required by this Section, who will be present on the project.~~
- (2) Annual Project Update Reporting Requirement. For asbestos projects of one year or more duration an annual updated resubmission of the information in (e)(1) shall be required.
- (3) Project Completion or Quarterly Reporting Requirement. After completion of each asbestos project, or every three months, whichever is more frequent, the following information shall be submitted by the employer to OSHA in a standardized format, to be determined by OSHA, for each asbestos project:
- (i) name and business address of employer;
 - (ii) location of job site(s);
 - (iii) dates of job(s);
 - (iv) type(s) of work;
 - (v) changes in products, processes, or categorizations, if any;

- (vi) names and social security numbers of trainees and employees and the following information pertaining to each:
 - (A) copies of trainee training dates and hours and results received by trainees on employee certification exams;
 - (B) the beginning and termination dates of employment on the project;
 - (C) dates employees received medical and respirator fit-test examinations;
 - (D) dates employees were monitored for asbestos exposure and levels of asbestos exposure recorded; and
 - (E) dates employees were placed on medical removal pursuant to subsection (s) and exposure levels of such employees resulting in such removal.

(4) Employer Proficiency Requirements. Employers engaged in asbestos related work shall be proficient in:

- (i) Recognition of asbestos and its physical characteristics;
- (ii) health hazards of asbestos and the relationship between asbestos exposure and disease;
- (iii) assessing the risk of asbestos exposure through a knowledge of percentage weight of asbestos, friability, age, and deterioration, location and accessibility of material and dry and wet methods;
- (iv) respirators and their use, care, and selection and the degree of protection afforded, fitting, testing, maintenance and cleaning procedures, and other requirements in subsection (j);
- (v) appropriate work practices and control methods, including those in subsections (i), (j), (k), (n), (p), and (s);
- (vi) preparing a work area for asbestos work, which would include defining the regulated areas, isolating work areas to prevent bystander or public exposures, decontamination procedures, and deregulating procedures for preparing work areas after completion of work;
- (vii) establishing emergency/spill procedures;
- (viii) medical requirements as outlined in subsection (r) of this Section;
- (ix) personal monitoring as required by subsection (m) and the knowledge of PEL and Ceiling Levels;

- (x) establishing a decontamination area as required in subsection (i) and decontamination procedures as required in subsection (o);
 - (xi) federal agency rules and regulations pertaining to asbestos; and
 - (xiii) employee training and certification requirements and procedures.
- (5) Bonding Requirements. Employers engaged in asbestos related work shall be bonded in the amount of \$1,000 per employee performing such work for assurance of payment of medical examinations required to be provided by subsection (r) and of employee exposure monitoring required by subsection (m).
- (f) Employee Certification Requirements. Employees who perform Category B and C asbestos related work shall be certified by their employer. Employers shall not allow any non-certified employee to perform such work covered by this Section. To be certified, employees must be trained and examined as provided below.
- (1) Pre-certification Respirator Exam. To become certified, employees must complete a medical examination as outlined in subsection (r)(1)(ii), demonstrating their suitability to wear and use respirators issued by the employer. To remain certified, employees shall be reexamined annually.
 - (2) Pre-certification Competency Exam. To become certified, employees must demonstrate to their employer their skill in and knowledge of proper job-specific work practices and procedures for working with asbestos containing materials in the following areas:
 - (i) Recognition and physical characteristics of asbestos;
 - (ii) health effects of asbestos exposure;
 - (iii) OSHA and other federal laws and agency rules and regulations pertaining to the employee's asbestos related work assignment;
 - (iv) knowledge of the categorization scheme for products and processes established in this Section, the requirements governing work for Category B and C products and processes, and the specific categories assigned to products and processes pertaining to the employee's asbestos related work assignment;
 - (v) personal air monitoring requirements and procedures;
 - (vi) medical surveillance program requirements;
 - (vii) proper job-specific work practices, including work area preparation, decontamination, spill and emergency, and waste disposal procedures;

- (viii) respiratory protection, including selection, fitting and testing procedures, maintenance and cleaning, and OSHA requirements for an approved respiratory protection program, and other requirements of subsection (j);
- (ix) housekeeping and personal hygiene practices including the necessity of showers and procedures to prevent asbestos exposures to employee's family;
- (x) accurate interpretation of the information contained on signs and labels required in subsection (p).

Employees shall be reexamined in all the areas described above for each asbestos project or at least annually whichever is more frequent. Employees shall be reexamined in areas (iv), (vii) and (viii) for each asbestos job.

- (3) Pre-Job Training. Prior to employee certification, employers shall be required to provide training in the areas, described in subparagraph (vii) and (viii), above, and otherwise shall be responsible for providing such training and examinations as are required by this subsection for the certification of their employees. All such training and examinations shall be provided at the employers expense during the employee's regular work hours.
- (4) Instructor Qualifications. All training by the employer shall be provided by persons knowledgeable and experienced in the trade and trained in asbestos industrial hygiene practices related to construction.
- (5) OSHA Oversight of Employee Training Materials. Asbestos training materials and employee certification exams submitted by employers pursuant to subsection (e) shall be subject to review by OSHA and OSHA may require changes necessary to assure that employees possess the qualifications described in subsection (f).
- (6) Access to Training Materials, Exam Results. Trainees shall have access to general test results, individual graded exams, and all training materials, and the right to obtain copies of such documents. Employee representatives shall have access to all the above information, except for individually identifiable exams results, which shall be made available only with the employee's authorization.
- (7) Trainee Retesting. The employer shall allow trainees to be retested at reasonable intervals and shall adopt written procedures for this purpose which shall be made available to trainees or their designated representatives.

- (8) Job-specific Certification. Upon successful completion of the required pre-certification training and exams, the employee shall be issued a written job-specific certification by the employer. The employee shall present this certification to the qualified person before entering any regulated area.

(g) Qualified and Competent Person(s).

- (1) Designation of Qualified and Competent Person(s). The employer shall designate one or more qualified persons and one or more competent persons for each asbestos job. The qualified person shall demonstrate to the employer that he or she meets the requirements of subsection (e)(4). The competent person shall meet the qualifications in Section 1926.32(f). The qualified person may also be designated as the competent person.

- (2) Duties of Qualified Person. The qualified person shall, on behalf of the employer:

- (i) Set up and define all regulated areas;
- (ii) regulate entry to and exit from these areas;
- (iii) supervise and schedule all air sampling;
- (iv) verify that all employees are properly certified;
- (v) insure that proper work practices as defined by subsections (h), (i), (o), and (k) are utilized;
- (vi) insure that all asbestos products and areas are properly labeled in accordance with subsection (n);
- (vii) assist the employer in verifying, through air sampling as required in subsection (m), that all asbestos products and processes have been categorized properly and that such products and processes are used in accordance with the limitations imposed by their categorizations;
- (viii) monitor training in and the use of respirators and other personal protective equipment for proper use and compliance with subsection (j) and to insure proper fit;
- (ix) inspect all equipment for potential safety and health hazards, and, where applicable, for a sufficient and properly maintained local exhaust system; and
- (x) insure compliance with all other subsections of this Section.

- (3) Duties of Competent Person. The competent person shall, on behalf of the employer:

- (i) document the presence of asbestos on a construction job or project;

- (ii) inform the employer and employees of the presence of asbestos on a job or project.
- (4) Authority of Qualified and Competent Person(s). All individuals designated as qualified persons shall have the authority to prevent and correct hazardous conditions including the authority to suspend work and remove affected employees to a safe area until hazardous conditions are corrected.
- (h) Categorization of Products and Processes. Prior to performing any asbestos related work, all asbestos products and processes shall be assigned by the employer to categories A, B, or C in accordance with the definitions in subsection (b).
 - (1) Category Assignments.
 - (i) Employers are prohibited from using any asbestos product which has not been categorized in accordance with the definitions in subsection (b) by the manufacturer of such product, unless the employer independently categorizes such product in accordance with such definitions.
 - (ii) Products or processes shall be categorized as Category C where certifying agents have not determined, by personal sampling and TEM analysis performed by two independent certified laboratories in accordance with this Section, the proper category for any product or process.
 - (iii) Employers shall be responsible for verifying that manufacturer categorizations are correct for the work conditions under which the employer is using the products by air sampling, as required in subsection (m), and, where necessary, through written inquiries to the manufacturer and independent certified laboratories. Where the employer determines that the categorization is not correct for such work conditions, the employer shall be responsible for correctly categorizing the products.
 - (iv) Categorizations shall be based on testing of the product or process in laboratory and field conditions using two independent, certified laboratories. Testing shall require measurement of asbestos fiber release associated with quantified work rates and ventilation rates for each work practice required by the certifying agent for the categorization assigned any product or process. The required work practices

associated with a product or process categorization shall assure no exposure greater than the test fiber release rate, with statistical confidence limits at the 0.001 level ($p=.001$). Products and processes shall be recategorized at least every eighteen (18) months.

- (v) All demolition, encapsulation, salvage, containment, removal, renovation, maintenance, alteration, or repair work performed where asbestos products are present or where asbestos may be disturbed, and where employers have not determined the proper category, shall be classified as Category C work. However, in no case may any work specified in this subparagraph be Category A work.

(2) Duration of Categorization.

- (i) Changes in products or processes shall require recategorization by the certifying agent prior to their use.
- (ii) At any time that use of a Category A or B product or process causes airborne levels of asbestos to exceed 100,000 fibers per cubic meter, the product or process shall immediately be reclassified as Category C on the project where the monitoring was conducted until five consecutive days of monitoring results show a return to levels below 100,000 fibers M^3 .

(3) Effect of Categorization on Employer Requirements.

- (i) Category A. While using only Category A products or processes employers shall be exempted from medical surveillance, monitoring, qualified person, employee certification, and training requirements, and related recordkeeping requirements, of this Section. All other provisions of this Section shall apply.
- (ii) Category B. While using any Category B product or process employers shall be subject to all requirements of this Section. Air monitoring requirements shall vary as described in subsection (m).
- (iii) Category C. While using any Category C product or process employers shall be subject to all the requirements of this Section.

(i) Work Practices.

- (1) Prohibitions. The following work practices are prohibited:

- (i) Spray application of asbestos products;
- (ii) blowing asbestos dust with air hoses and all dry sweeping and dry clean up methods;
- (iii) dry removal of asbestos, without prior written approval from OSHA following submission by the employer of his or her work practices plan showing why wet methods are not feasible and the alternative control measures which the employer intends to use;
- (iv) use of any hand or power tool which results in airborne release of asbestos and to which a local exhaust is not attached;
- (v) removal of personal protective equipment in a regulated area;
- (vi) smoking, eating and drinking in a regulated area;
- (vii) use of encapsulation and containment where the asbestos product does not have bonding integrity;
- (viii) use of any practice which is specifically prohibited by any manufacturer or governmental agency;
- (ix) use of more than two employees on one airbox when air supplied respirators are used;
- (x) use of more than 50 feet of air supply respirator hose for an employee;
- (xi) use of less than 70 psi at the air supply regulator.

(2) Requirements.

- (i) All processes where airborne asbestos is released shall employ wet methods except where prohibited due to electrical hazards or where the integrity of the product will be compromised.
- (ii) Local exhaust ventilation attached to a HEPA collection system shall be used for all processes employing hand operated or power tools where airborne asbestos is released.
- (iii) All asbestos waste products shall be wetted prior to cleanup. Government-approved asbestos vacuum cleaners with HEPA filters shall be employed to clean up asbestos dust. Where vacuuming cannot be employed, wet cleaning methods shall be employed.
- (iv) Asbestos products shall not be removed from bags, cartons or other containers without being wetted, unless they are enclosed and/or ventilated effectively as required by this subsection and subsection (n)(7).
- (v) If a regulated area is required, a barrier shall be constructed which prevents any asbestos from leaving the regulated area, except as provided in subsections (n) and (k)

- with respect to outdoor regulated areas and spills. All seams and joints of the barrier shall be continuously sealed and a negative pressure shall be maintained within the regulated area at all times.
- (vi) Respirators shall be worn at all times in the regulated area. Single use dust mask respirators shall be worn under supplied air or powered air purifying respirators. Respirators shall only be removed in accordance with the requirements of subsection (o).
 - (vii) A decontamination area shall be set up outside the regulated area which will consist of a change room, shower area, clean room, and equipment area. Change rooms shall be provided between the regulated area and the showers for disposal of work clothes. Warm showers with a mixing valve and soap shall be provided between the change rooms and clean rooms. Clean rooms shall have lockers for street clothes.
 - (viii) Employees shall periodically examine disposable worksuits while in the regulated area for rips or tears which may occur during performance of work. Rips or tears in the hood or shoulders of the suit shall require employees to exit the regulated area at once. Rips or tears in the lower body of the suit shall be closed immediately by the wearer or other employee in the regulated area with masking tape.
 - (ix) An unused set of disposable work clothes shall be provided for wear to any person each time he or she enters the regulated area.
 - (x) When a spraying method is used to apply a wetting agent, only airless spray equipment at a low nozzle pressure setting shall be employed.
 - (xi) Clothing, personal protective equipment, including respirators, and other asbestos contaminated tools, materials, and equipment which are to be removed from the decontamination area shall be sealed in impermeable bags or containers and labeled in accordance with subsection (p).
 - (xii) All surfaces in the work area shall be cleaned with either water or a HEPA filter vacuum. After cleaning, the employer shall wet clean all surfaces again 24 hours later.
 - (xiii) Job completion requirements shall be in accordance with Appendix A of this Section (Chapter 4 of EPA Guidance for Controlling Friable Asbestos Containing Materials in Buildings).

(j) Respirator Program Requirements. The employer shall maintain a respiratory protection program to train his or her employees in the proper use of respirators as described below. The program shall include plans necessary to insure the safe routine, nonroutine, and emergency and rescue uses of respirators.

- (1) Pre-job Training. Each employer shall provide, prior to the commencement of an asbestos job, training for all employees required to wear respirators. This training shall include:
 - (i) An explanation of the operation, uses, limitations, and protection factors associated with all selected respirators;
 - (ii) explanations and discussions of the respiratory hazards present on the particular job, including estimates of anticipated exposure levels;
 - (iii) explanation of the consequences of respirator misuse, nonuse, or failure;
 - (iv) the reason for selecting the particular types of respirators for the hazards and the function, capabilities, and limitations of the selected respirators;
 - (v) an explanation of why engineering controls are not being applied or are not adequate and of the effort being made to reduce or eliminate the need for respirators;
 - (vi) instruction in inspecting, donning, checking the fit of, and wearing the respirator;
 - (vii) an opportunity to handle the respirator, learn how to don and wear it properly, check its seals, wear it in a safe atmosphere, and wear it in a test atmosphere;
 - (viii) an explanation of how maintenance and storage of the respirator is carried out;
 - (ix) instructions in how to recognize and cope with emergency situations;
 - (x) instructions as needed for special respirator use;
 - (xi) discussion and explanation of regulations concerning respirator use.
- (2) Recordkeeping. Each employer shall record the names, social security numbers, dates, hours and subject matters of training and competency exam results of each employee trained pursuant to paragraph (1), above.
- (3) Medical Examination. The employer shall provide, at no cost to the employee and during work hours, a medical examination to determine employee capability to wear and use a respirator as described in subsection (r)(1)(ii).

- (4) Respiratory Program Appraisal. Each employer shall annually review the effectiveness of his or her respiratory protection program and shall make changes, not inconsistent with this Section, as are necessary to make the program more effective.
- (5) Fit Testing. The employer shall use quantitative and qualitative fit test methods as required below. The results of quantitative and qualitative respirator-fitting tests shall be used to select specific types, makes, and models of negative pressure respirators for use by individual respirator wearers. Employees shall be offered a selection of at least three sizes of respirators, to assure best and most comfortable fit. The employer shall provide fit testing during work hours and at no cost to the employee, as follows:
- (i) Prior to the commencement of any asbestos project or annually, whichever is less frequent, quantitative fit test for all employees required to wear negative pressure respirators;
 - (ii) daily qualitative fit tests for all employees required to wear respirators;
 - (iii) quantitative fit test, if the employer changes the brand, size, or model of negative pressure respirator to be used by the employee.
- (6) Required Respirators.
- (i) All asbestos related work performed at greater than one million fibers per cubic meter shall require use of supplied air respirators. A single use dust mask respirator approved for lung damaging dusts shall be worn under the supplied air respirator.
 - (ii) All asbestos related work performed at less than one million fibers per cubic meter, but greater than 50,000 fibers, shall require use of powered air-purifying respirators with high-efficiency filters. A single use dust mask respirator approved for lung damaging dusts shall be worn under the powered air-purifying respirators with high-efficiency filters.
 - (iii) All spill/emergency work shall require the use of supplied air respirators. A single use dust mask respirator approved for lung damaging dusts shall be worn under the supplied air respirator.
 - (iv) When supplied air-respirators are used, breathing air shall conform to Section 1910.134(d), and shall contain no more asbestos than 10 nanograms per M³.

(k) Spill/Emergency Procedures.

(1) Spill Clean up Crew. On every asbestos job, the employer shall designate a team of employees as a spill/emergency clean-up crew. These employees shall be certified in accordance with subsection (f) and, in addition, shall be trained by the employer to be capable of handling asbestos products to the point of disposal.

(2) Procedures. If asbestos is spilled, the following emergency procedures shall be instituted:

- (i) All employees shall be evacuated immediately from the area of the spill and no employee shall enter except members of the spill/emergency crew until the spill is completely cleaned up.
- (ii) The qualified person shall be notified immediately and will in turn contact the members of the spill/emergency clean-up crew. The area of the spill shall be cordoned off by the qualified person and shall become a regulated area subject to the requirements of subsection (n). The regulated area shall be at least fifteen feet in all directions from the spill, except where a physical barrier exists.
- (iii) All exposed employees shall shower and change into clean clothes as required in subsection (i).
- (iv) All spills shall be cleaned up in accordance with subsection (i) using HEPA vacuum cleaners and disposed of in accordance with EPA regulations.
- (v) Blowdown or dry sweeping of asbestos waste and spills are prohibited.
- (vi) Air-supplied respirators shall be worn by all members of the spill/emergency crew.
- (vii) Visual inspection and air monitoring shall be done after clean-up is complete according to EPA guidelines (Chapter 4 of Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, reprinted in Appendix A).

(3) Asbestos Exposure Assumption. Asbestos exposures resulting from a spill shall be presumed to have exceeded 500,000 fibers per M³ for those employees initially exposed to the spill.

(4) Medical Examinations. The employer shall provide medical examinations as required in subsection (r) for all employees exposed to a spill.

- (5) OSHA Notification. Employers shall notify OSHA, within four hours of the spill, of the occurrence and condition of the spill, the number of employees exposed, and the corrective measures taken.
- (6) Spills on Non-asbestos Projects. When a spill occurs on a project other than an asbestos project, all employers on the project shall comply with subparagraph (i), above, and the employer responsible for the area in which the spill occurs shall comply with subparagraphs (iii) through (vii) and paragraphs (3), (4), and (5) of this subsection. In addition, the responsible employer shall provide a clean up crew meeting the requirements of paragraph (1), above, to perform the function described therein.

(1) Analytical Methods.

- (1) Optical Microscopy. All samples analyzed using optical microscopy shall be analyzed according to NIOSH P&CAM 239. For concentrations less than 100,000 fibers per cubic meter, counting accuracy shall be improved in the following ways:
 - (i) Longer sampling times, if possible;
 - (ii) larger sampling volumes;
 - (iii) counting 150 or more fields;
 - (iv) counting more than one wedge from each filter;
 - (v) using a second counter for each sample.
- (2) Transmission Electron Microscopy. All samples analyzed using transmission electron microscopy shall be analyzed according to the EPA Provisional Methodology EPA-600/2-77-178 as modified by Yamate and Beard (NBS Special Publication 619, pp.183-189).
- (3) Microscopy and Category Determination. Electron microscopy shall be used for Category A and B determinations. Optical or electron microscopy shall be used for all other monitoring.

(m) Monitoring Requirements and Strategies.

- (1) Sample Type, Number, Duration, and Time. All samples shall be personal samples gathered from the employee's breathing zone, except samples taken to determine the boundaries of an outdoor regulated area or for monitoring efficiency of ventilation equipment as described in subsection (n) or to determine job completion as described in subsection (i). The number of samples taken and the duration of the samples shall conform with the guidelines in the NIOSH Occupational Exposure Sampling Strategy Manual (NIOSH Publication Number 77-173).

- (i) Ceiling Samples. Sampling for ceiling limits shall require at least three samples of maximum fifteen minute duration to be taken during expected peak air concentration times.
 - (ii) Eight hour TWA Sampling. Sampling to determine eight-hour TWA exposure levels shall require at least two four-hour samples or one eight--hour sample for low airborne concentrations and continuous sampling for as large a portion of the day as is feasible for high airborne concentrations.
 - (iii) Sampling times shall be determined in consultation with the employee being sampled and his or her designated representatives.
- (2) Laboratory Analysis. Samples shall be analyzed by certified laboratories. All samples shall be sent for analysis at the end of each work shift.
- (3) Category B and C Sampling Requirements. For Category B and C products and processes, initial personal samples shall be taken when each asbestos job commences for all employees exposed to airborne asbestos and for all persons entering into a regulated area. Initial samples shall be taken at times which include, but are not limited to, times when asbestos fiber release is greatest and fiber removal provided by ventilation is lowest (peak air concentration times). Initial sampling for all Category C products and processes shall be conducted for five consecutive days for each employee. All Category C products or processes shall require five consecutive days of sampling prior to any change in categorization.
- (i) If five consecutive days of personal sampling show exposure levels greater than or equal to one million fibers per cubic meter, the employer shall provide air supplied respirators for each employee, in accordance with subsection (j)(7), and the employer shall be required to sample employees daily, throughout the entire workshift, in accordance with paragraph (3) of this subsection. If five consecutive days of sampling show exposure levels below one million fibers per cubic meter, then changes in sampling frequency or respiratory protection may be made in accordance with the appropriate subparagraphs (ii) through (iv), below.

- (ii) If five consecutive days of sampling show exposure levels less than one million fibers per cubic meter but the greater than or equal to 100,000 fibers per cubic meter and supplied air respirators are used by employees, employers shall only be required to sample employees once a week when exposure is expected to be at a maximum, in accordance with paragraph (3) of this subsection. If any weekly sample shows exposure levels equal to or exceeding one million fibers per cubic meter, then subparagraph (i) shall immediately apply.
 - (iii) If the initial samples or five consecutive days of sampling show exposure levels less than one million fibers per cubic meter but greater than or equal to 100,000 fibers per cubic meter and supplied air respirators are not used by employees, then employers shall be required to sample employees daily, throughout the entire workshift in accordance with paragraph (3) of this subsection. If any weekly sample shows exposure levels equal to or exceeding one million fibers per cubic meter, then subparagraph (i) shall immediately apply.
 - (iv) If the initial sample or five consecutive days of sampling show exposure levels less than 100,000 fibers per cubic meter and supplied air respirators are used by employees, the employer shall only be required to sample employees once a week at times when exposure is expected to be at a maximum in accordance with paragraph (3) of this subsection. If any weekly sample shows exposure levels equal to or exceeding 100,000 fibers per cubic meter, then the appropriate subparagraph, (i) through (iii), for the exposure level and respirators used shall immediately apply.
- (4) Sampling for Category A Work. The employer shall not be required to monitor category A products or processes.
- (5) Additional Sampling Requirements. Resampling, in accordance with initial sampling requirements, shall be required whenever changes occur in work processes or conditions which affect exposure. Employers shall honor all reasonably based requests for additional sampling from employees, their designated representatives and from OSHA.

(n) Regulated Areas.

- (1) Boundaries. Boundaries of all regulated areas shall be posted in accordance with subsection (p). For outdoor construction, the regulated area boundaries shall be in the form of a barricade and temporary enclosures shall be built wherever feasible. Where temporary enclosures are not used as the barricades, continuous area air monitoring shall be required to determine the outer limit at which the barricade must be erected.
 - (2) Entry/Exit. There shall be only one entry point to a regulated area and entry shall be restricted to the employer, authorized persons, and qualified and competent persons.
 - (3) Control of Entry/Exit. Entry to and exit from a regulated area shall be controlled by the qualified person.
 - (4) Construction of Regulated Area. Construction of regulated areas shall comply with EPA requirements for asbestos abatement projects.
 - (5) Demolition. During demolition, the entire construction project area shall be considered a regulated area.
 - (6) Exposure Monitoring. Exposure monitoring shall be conducted for each employee in a regulated area in accordance with subsection (m).
 - (7) Ventilation. HEPA negative pressure ventilation shall be employed in enclosed regulated areas. Air sampling shall be conducted for at least an eight hour period for every 40 hours of ventilation system operation at the exhaust outlet to ensure the efficiency of the HEPA filters.
 - (8) Declassification of Regulated Area. A regulated area shall not become a deregulated area until area air monitoring results, required for job completion in accordance with subsection (i)(2)(xiii), demonstrate exposure levels less than or equal to ambient air levels of asbestos.
- (o) Contamination Prevention and Decontamination Procedures. Procedures for entering and exiting regulated areas shall conform to the guidelines described in Appendix B of this Section (Appendix D of the EPA Guideline Series publication number EPA-450/2-78-014 Asbestos-Containing Materials in School Buildings: A Guidance Document, Part 2) and to the additional requirements of this subsection.

- (1) Workclothes donning and removal procedures must be followed each time an employee passes from the clean room to the regulated area or from the regulated area to the clean room. Employees passing from the regulated area to the equipment room, for any reason whatsoever, shall first thoroughly vacuum their suits and respirators, but shall not remove them.
- (2) All donning or removal of workclothes shall be accomplished using a "buddy" system, involving two employees assisting and checking the donning or removal procedure for each other.
- (3) In the clean room, prior to entry to the regulated area, employees shall don single use dust mask respirators approved for use with lung damaging dust. Single use dust mask respirators shall not be removed until after showering is completed and the respirator has been thoroughly wetted.
- (4) Prior to entering a regulated area, employees shall be examined by the qualified person to assure that all connections are properly made and that respirators, suits, gloves, and booties are properly donned and sealed.
- (5) Prior to leaving the regulated area for exit to the clean room, employees shall vacuum all loose residue from the suit and wet the suit with water from a hose or spray bottle.
- (6) Prior to showering, employees shall remove air-supplied respirators or powered air-purifying respirators, being careful not to remove nor disturb the single use dust mask respirator worn beneath. Air-supplied respirators or power air-purifying respirators shall be sealed in plastic bags for cleaning later. Employees shall enter showers while wearing the single use dust mask respirators.

(p) Signs and Labels.

(1) Signs.

- (i) Warning signs shall be clearly posted on all boundaries and at all entry points to regulated areas, including any storage, disposal, or collection points.
- (ii) Signs shall be printed in large, bold letters on a contrasting background. The sign shall be readable from a distance of 20 feet. The sign shall state:

DANGER--ASBESTOS
CANCER AND LUNG HAZARD
KEEP OUT

(iii) Signs shall be bilingual in the languages which predominate in the workforce area and shall include symbols to assist comprehension wherever necessary.

(2) Labels.

(i) Labels shall be affixed on all asbestos products and to all containers containing asbestos products, including waste containers. Where feasible, installed asbestos products shall contain a visible label.

(ii) Labels shall be printed in large, bold letters on a contrasting background. The label shall state:

DANGER--ASBESTOS
CANCER AND LUNG HAZARD

ONLY CERTIFIED EMPLOYEES SHALL HANDLE THIS PRODUCT
USE OR DISPOSE OF ONLY WITH RECOMMENDED WORK PRACTICES
[Description of recommended and prohibited work practices and maximum work rates and minimum ventilation rates appear here. These shall include the test conditions in effect for determining categorization, the product or process category, and the required work rates, ventilation rates, and work practices which must be met to retain categorization.]

(iii) Signs shall be bilingual in the languages which predominate in the workforce area, and shall include symbols to assist comprehension where necessary.

(q) Recordkeeping.

(1) Exposure, Medical and Worker Compensation Records.
Employers shall cause to be maintained complete and accurate records of employee exposure monitoring, medical examinations, and health related workers' compensation proceedings for all employees who have performed asbestos related work. Records shall be retained by employers for at least 30 years beyond the last date of employment by that employer.

- (2) Training Records. Employers shall maintain all employee training records for one (1) year beyond the last date of employment by that employer.
- (3) Employee Access to Records. The employer shall provide every employee and former employee access to his or her own personally identifiable records which the employer is required by this Section to maintain. Such access shall be in accordance with Section 1910.20
- (4) Employee Copies of Records. Copies of all personally identifiable exposure, medical, and training records shall be provided to employees at no cost.
- (5) Third Party Access and Confidentiality. Authorized representatives of OSHA, NIOSH, and other appropriate health related governmental agencies shall have access to all personally identifiable exposure, medical, and training records, for the purpose of promoting the objectives of this Section and on the condition that such records shall not be disclosed to anyone outside the agency, or to anyone within the agency who does not need such records for accomplishment of such purpose. The employee's physician, attorney, family members, or designated representative shall have access to these records with the written consent of the employee. Access to these records without the personal identifiers shall be provided to all employee designated representatives without written consent. These records shall be made available to these parties upon request at a reasonable cost and within a reasonable time period.
- (6) Asbestos Inventory Records. Employers contracting or subcontracting asbestos related work shall establish, maintain, and transfer to owners written records of the presence and location of any asbestos or asbestos products in any workplace, place of employment, or structure where employees or future employees are or will be employed.

(r) Medical Surveillance. Employers shall provide to employees, at no cost and during work hours, comprehensive medical examinations by a physician of the employee's choice in accordance with the provisions below. With the exception of the examinations provided in subparagraph (r)(1)(ii), employees shall not be required to submit to medical examinations.

- (1) Examination Protocol. The examinations shall include, at a minimum:

- (i) Examinations as described in paragraph (r)(2) to detect asbestos-related disease, monitor general health condition and provide a baseline and continuing documentation for future reference for all asbestos exposed employees. These examinations shall consist of a history to elicit symptomatology of upper and lower respiratory and gastrointestinal diseases; a physical examination of the respiratory and gastrointestinal systems; a 14-inch by 17-inch posterior-anterior chest X-ray; right and left anterior oblique chest X-rays; and pulmonary function tests, including forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1). For employees over 40 years of age, a rectal examination and stool guaiac test for occult blood shall also be included. All x-rays shall be read by certified B readers; and
 - (ii) An examination to determine an employee's fitness to wear and use a respirator. This examination shall consist of pulmonary function tests, including forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1); a history to elicit symptomatology of upper and lower respiratory diseases; and a physical examination of the respiratory system. This examination must be completed prior to an employee's commencement of asbestos related work and thereafter no less frequently than annually. The employer shall be responsible for assuring compliance with this subparagraph.
- (2) Examination Triggers.
- (i) For all persons employed on the effective date of this Section, the examination described in subparagraph (r)(1)(i) shall be provided within thirty (30) calendar days of the effective date of this Section, and thereafter as required by subparagraphs (r)(2)(iii) and (iv).
 - (ii) For employees, commencing asbestos related work after the effective date of this Section, the examination described in subparagraph (r)(1)(i) shall be provided prior to the commencement of such work.
 - (iii) For employees less than 40 years of age with less than 20,000 hours of employment in the building and construction industry, the medical examination in subparagraph (r)(1)(i) shall be provided every three years after the initial examination.

- (iv) For employees 40 years of age or older or with 20,000 hours or more of employment in the building and construction industry, the medical examination described in subparagraph (r)(1)(i) shall be provided annually; except that the right and left anterior oblique chest X-rays need only be performed every three years. A rectal examination and a stool guaiac test for occult blood shall be performed annually.
 - (v) The medical examination described in subparagraph (r)(1)(i) shall be provided for all employees exposed to asbestos spills.
 - (vi) The employer is not required to provide an examination if the employee has been examined in accordance with this paragraph within the past one year period.
- (3) Examination Certification. Examinees shall be provided a written certification upon completion of each examination, signed by the physician, stating when the exam took place and at what date that certification will expire. This certification must be carried by the employee while engaged in asbestos related work. OSHA inspectors shall have the right to check certifications.
- (4) Anti-discrimination Provisions. Except as is necessary to determine an employee's fitness for work, employers shall not condition the hiring of employees, or otherwise discriminate against employees, on the basis of when or whether a person is or would be entitled to an examination under this subsection.
- (s) Medical Removal Protection. Employees on any asbestos project exposed to levels of asbestos above 2 million fibers per cubic meter for three or more samplings or with accumulated exposure to asbestos of 10 fiber-years or greater within the past 12 months as determined by sampling outside the respirator shall be reassigned for the duration of the project to work areas where there is no asbestos exposure. Employees so reassigned shall suffer no loss of wages or reduction of their wage rates. For the purpose of calculating cumulative dose, where sampling is weekly, employees' sample results shall be their exposure level during the entire work week. Employers shall report the name, social security number, date of removal, and cumulative dose resulting in removal to OSHA within one (1) week from the date removal is required by this subsection.

(t) Notification Requirements and Procedures.

(1) Prior to commencing asbestos related work, employers shall provide to all their employees and to all other employers on the asbestos project written notification of the following:

- (i) the date when such work will commence;
- (ii) the type of work to be performed and the potential for exposure;
- (iii) locations of regulated areas and restrictions attendant to such areas;
- (iv) emergency spill procedures.

(2) The employer shall provide written notification to all his or her employees and to all other employers on the asbestos project when such work is completed.

(3) A copy of all notifications described herein shall be posted on the jobsite beside the OSHA poster. In addition, a copy of these notifications shall be submitted to OSHA along with the name and address of the exposing employer, location of the asbestos project and number of employees on the asbestos project.

(u) Separability. If any provision of this Section, or application of such provision to any person or circumstance, shall be held invalid, the remainder of this Section, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

**PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT**

Send to all school districts and private schools

NOTE: Under TAP, in 1979 all schools were sent copies of Guidance Document 1 & 2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 13 1982

THE ADMINISTRATOR

Dear School Administrator:

On May 27, 1982, the Environmental Protection Agency (EPA) published a rule in the Federal Register (47 FR 23360-23389) requiring all public and private elementary and secondary schools in the United States to identify friable asbestos-containing materials, maintain records, and notify employees of the location of the friable materials which contain asbestos. When friable asbestos-containing materials are found, schools must provide the employees with instructions on reducing exposure to asbestos, and notify the school's parent-teacher association.

Since 1979, EPA has operated a Technical Assistance Program (TAP) to help schools identify and correct potential hazards due to asbestos in schools. However, many schools did not respond to EPA's effort under the TAP. EPA is now requiring all schools to identify friable asbestos-containing materials and notify employees and parent-teacher organizations of their presence. These actions must be completed by June 28, 1983.

To assist schools in complying with the rule, we are enclosing a copy of the rule along with copies of "Asbestos-Containing Materials in School Buildings: A Guidance Document, Parts 1 and 2." Should you need a copy of any forms for this rule or other general information, please contact the Industry Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Rm. E-511, 401 M Streets, S.W., Washington, D.C. 20460. Phone: Toll free, 800-424-9065. In Washington, D.C., call 544-1404. Outside the Continental U.S., call Operator-202-554-1404. If you need technical assistance, please contact the appropriate Regional Asbestos Coordinator listed in the rule on page 23361.

RECEIVED

AUG 1 1982

COMPLIANCE BRANCH
EPA-REGION K

Sincerely,

A handwritten signature in dark ink, appearing to read "D. G. Bannerman".

Douglas G. Bannerman
Acting Director,
Industry Assistance Office

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Private schools
for requests

Office copy

DATE: 2 August, 1982

SUBJECT: Identification and Notification requirements for Friable Asbestos-Containing Materials in Schools

FROM: A. B. Christensen, Asbestos Technical Advisor, Region X

A. B. Christensen

TO:

Each public school district has been mailed a separate package containing copies of "Asbestos-Containing Materials in School Buildings: A Guidance Document", Parts I & II (the orange colored booklets) and the new Regulation dated Thursday May 27, 1982, "Friable Asbestos-Containing Materials in Schools: Identification and Notification" (which requires inspection of all public and private schools for the presence of friable asbestos-containing material).

The responsibility for compiling and maintaining records in each school district (Local Education Agency) is placed on the individual districts. This mailing is designed to assist you to fulfill the requirements. You may find much of the work was already accomplished under the "Voluntary Asbestos Survey Program".

To assure each district and school have in their file the required information, we have made up some "check-off" lists for your use. One blank copy for the district and blank copies for the individual schools in the district are attached. For those districts and schools that are not complicated by the presence of any friable materials it will be a simple matter to fill in the blanks which apply. Those districts and schools which have friable materials are, obviously, required to complete inspections and analysis and to comply with the additional requirements of the rule as outlined on the "check-off" list and spelled out in the regulation. Please retain a copy of the "check-off" list with your file.

The check lists are made out to try to cover every situation so please bear with the seeming duplication on the second page of each list.

Should you require copies of any of the following reference materials:

- (1) Guidance Documents, Parts I & II,
- (2) Mathematical formula referred to in Part I, Chapter 7, page 14 (The Algorithm),
- (3) Polarized Light Microscopy (PLM) laboratory listing,
- (4) Any other pertinent information, please call or write direct to:

Environmental Protection Agency
School Asbestos Program M/S 524
1200 Sixth Avenue
Seattle, WN 98101 / (206) 442-7255

3200 Hospital DR
Suite 101
Juneau, AK 99801

386-7619

Your assistance to complete the identification of friable asbestos-containing materials in your school district is appreciated.

Recordkeeping required by Chapter 1 of Title 40, Code of Federal Regulations, Part 763 - ASBESTOS Subpart F - Friable Asbestos-Containing Materials in Schools; Identification and Notification

Cover Sheet

LOCAL EDUCATION AGENCY
INSPECTION FOR FRIABLE ASBESTOS-CONTAINING MATERIALS

Cover Sheet

Name and Address of the Agency (School District)

Local Education Agencies shall inspect each school building which they lease, own, or otherwise use as a school building, to locate all friable material. Inspection shall consist of looking for and touching all suspect material, including surfaces behind suspended ceilings or other non-permanent structures which may be entered during normal building maintenance or repairs.

Listing of All Schools Under Agency Authority	Inspected for Friable Materials		Contains Friable Materials	
	Yes	No	Yes	No
1.				
2.				
3.				
4.				
5.				
6.				

(Attach additional listing to include all schools in agency)

Record of Friable Materials in schools which were sampled and analyzed

School	Sampled Yes or No Analyzed	Analysis Results	Total Area Analyzed Material (FR-able Area)
1.			
2.			
3.			
4.			
5.			
6.			

(Attach additional listing to include all schools in Agency which contain Friable Asbestos-Containing Materials)

For each school which contains friable asbestos-containing materials, the total number of school employees who regularly work in that school

Administrative	Faculty	Custodial
----------------	---------	-----------

Warnings and Notifications

(a) Local Education Agencies shall post in the primary administrative and custodial offices and in the faculty common rooms of each school under their authority a completed copy of the Notice to School Employees unless no friable asbestos-containing material is present in the school. The Notice shall remain posted indefinitely in any school which has friable asbestos-containing material.

Date Posted _____ Copies Attached - Yes _____ No _____

(b) Local Education Agencies shall provide to all persons employed in school buildings under their authority which contain friable asbestos-containing materials a written Notice of the location, by room or building area, of all friable asbestos-containing materials in the school

Date Notice Provided _____ Copies Attached - Yes _____ No _____

(c) "A Guide for Reducing Asbestos Exposure", shall be provided to all custodial or maintenance employees.

Date Guide Provided _____

(d) Local Education Agencies shall provide notice of the results of inspections and analysis in each school in which friable asbestos materials are found to the appropriate parent-teacher association of that school. If there is no parent-teacher association for the school, the Local Education Agency shall notify directly the parents of the pupils.

Date Notice Provided to: PTA _____ Parents _____

(e) Each Local Education Agency shall complete and retain in the administrative office of the Local Education Agency the form "Inspections for Friable Asbestos-Containing Materials".

Copy Completed - Yes _____ No _____

CERTIFICATION:

I hereby certify that this Agency has complied with the EPA Regulation 40 CFR, 763.100 through 763.117, "Asbestos-Containing Materials in Schools; Identification and Notification", and that the information on this form is, to the best of my knowledge, true and complete.

Signature	Typed or Printed Name
Typed or Printed Title	Date

Please send copies of this form completed to:

- (1) State Department of Education, Pouch F, Juneau, AK 99811, ATTN: Facilities
- (2) EPA M/S 524 EPA-900
1200 6th Ave. 3200 Hospital Dr.
Seattle, WN 98101 Suite 101
Juneau, AK 99801

Recordkeeping required by Chapter 1 of Title 40, Code of Federal Regulations, Part, 763-ASBESTOS Subpart F - Friable Asbestos-Containing Materials in Schools; Identification and Notification

Cover Sheet

INDIVIDUAL SCHOOL INSPECTION
FOR FRIABLE ASBESTOS-CONTAINING MATERIALS

Cover Sheet

Name and Address of the School

Local Education Agencies shall inspect each school building which they lease, own, or otherwise use as a school building, to locate all friable material. Inspection shall consist of looking for and touching all suspect material, including surfaces behind suspended ceilings or other non-permanent structures which may be entered during normal building maintenance or repairs.

Listing of All Buildings Used by School	Inspected For Friable Materials	Friable Materials Present/ Not Present
1.		
2.		
3.		
4.		
5.		
6.		

(Attach additional listing to include all buildings - (§763.103 (h)))

FOR EACH SCHOOL BUILDING WHICH CONTAINS FRIABLE MATERIALS, THE FOLLOWING INFORMATION MUST BE MAINTAINED IN THAT SCHOOL'S ASBESTOS FILE:

1. A blueprint, diagram, or written description of the building which identifies clearly the location(s) and approximate area(s) in square feet of each sampling area of such material(s), the locations at which samples were taken, and the identification number of each sample, and which shows clearly whether each sampling area of friable material contains asbestos, including an estimate of its percent asbestos content as determined by calculating the average of the percent asbestos content of all samples taken in the area
2. A copy of all laboratory reports and all correspondence with laboratories concerning the analysis of samples taken.
3. For each school, copies of the "Guide for Reducing Asbestos Exposure", and one copy of "Asbestos-Containing Materials in School Buildings: A Guidance Document, Parts 1 & 2.

Page 2 (Continued - Identification and Notification of Friable Asbestos-Containing Material in Schools

Warnings and Notifications

(a) Local Education Agencies shall post in the primary administrative and custodial offices and in the faculty common rooms of each school under their authority a completed copy of the Notice to School Employees unless no friable asbestos-containing material is present in the school. The Notice shall remain posted indefinitely in any school which has friable asbestos-containing material.

Date Posted _____ Copies Attached - Yes _____ No _____

(b) Local Education Agencies shall provide to all persons employed in school buildings under their authority which contain friable asbestos-containing materials a written Notice of the location, by room or building area, of all friable asbestos-containing materials in the school.

Date Notice Provided _____ Copies Attached - Yes _____ No _____

(c) "A Guide for Reducing Asbestos Exposure", shall be provided to all custodial or maintenance employees.

Date "Guide" Provided _____

(d) Local Education Agencies shall provide notice of the results of inspections and analysis in each school in which friable asbestos-containing materials are found to the appropriate parent-teacher association of that school. If there is no parent-teacher association for the school, the Local Education Agency shall notify directly the parents of the pupils.

Date Notice Provided To: PTA _____ Parents _____

CERTIFICATION:

I hereby certify that this school has complied with the EPA Regulation 40 CFR 763.100 through 763.117, "Asbestos-Containing Materials in Schools; Identification and Notification", and that the information on this form is, to the best of my knowledge, true and complete.

Signature	Typed or Printed Name
Typed or Printed Title	Date

Asbestos loses 'miracle' lustre

Twenty years ago the word "asbestos" meant progress, indestructibility; a nearly perfect component for building materials to insulate and to fireproof.

Today the mention of asbestos may bring a grim response and thoughts of cancer and lung disease. What was once thought of as a miracle material is now known to be extremely harmful, especially when it is dispersed into the air and inhaled.

What is asbestos?

Asbestos is a naturally occurring material that can be separated into fibers. It is very lightweight and nearly indestructible. Before the early 1970's, asbestos was widely used as a component in thermal, electrical, and acoustical insulation, fireproofing, ceiling tiles, and decoration. These applications were most cost effective in large buildings like schools, factories and office buildings.

What are the harmful effects of asbestos?

The danger to human health from asbestos occurs when minute fibers are breathed and become lodged in the lungs. Asbestos containing materials are often friable which means the fibers can be readily separated from the material in which it is used and become airborne. Fireproofing or insulation which is damaged and crumbling can release invisible asbestos fibers into the air.

Cancers of the chest and lungs and other organs have been positively associated with asbestos exposure. There is no known "safe" exposure. Even brief contact could result in irreversible damage that may not be detected until many years after exposure.

When the health effects of asbestos exposure were documented, many corrective programs were initiated for workers who handle it and for the public who may be unknowingly exposed at their school or workplace. In Alaska, several state and federal agencies regulate asbestos exposure, handling and disposal. Following is a brief summary of agency responsibilities.

Schools and Public Buildings

The U.S. Environmental Protection Agency regulates inspection of schools for identifying asbestos containing materials.

The superintendent of each school district in Alaska has been instructed to inspect all school buildings in the district for friable asbestos by June 23. Each type of friable material located in the school buildings must be tested for asbestos content. Samples must be tested using Polarized Light Microscopy.

School districts are required to keep a record of all the inspections and results from each school building. If asbestos containing material is found in a school, additional information on the location and quantity of this material must be kept on file at the administrative office of the school and at the school district office. The school district must notify employees and the parent-teacher association about the presence

of asbestos containing materials.

Asbestos Disposal

The U.S. EPA has regulations which regulate handling

and disposal of asbestos. Materials containing friable asbestos must be specially contained and wetted. Landfills or disposal sites must meet certain specifications in order to accept the material.

"Top of the World Writers"

ALASKA PRESS WOMEN
AWARD

JANA BALMAIN

SECOND PLACE

FEATURE, INTERNAL PUBLICATION

"ASBESTOS IN ALASKA SCHOOLS"

ALASKA EDUCATION NEWS

April 30, 1983
Date

Kathleen Kereksian
President



UBTL
ANALYTICAL CHEMISTRY
BULK ASBESTOS ANALYSIS

Field Sample #	UBTL Lab #	Amosite %	Chrysotile %	Crocidolite %	Anthophyllite %	Tremolite %	Fibrous Glass/Rock Wool %	Other Fibrous Constituents %	Fibrous Constituents Type
29	CB 00849	NO	ASBESTOS DETECTED					95% ± 5%	FIBROUS CELLULOSE
30	CB 00850	NO	ASBESTOS DETECTED					95% ± 5%	FIBROUS CELLULOSE
31	CB 00851		<1%					95% ± 5%	FIBROUS CELLULOSE
32	CB 00852	NO	ASBESTOS DETECTED					95% ± 5%	FIBROUS CELLULOSE
33	CB 00853	NO	ASBESTOS DETECTED					95% ± 5%	FIBROUS CELLULOSE
34	CB 00854	NO	ASBESTOS DETECTED				<1%	<1%	FIBROUS CELLULOSE
35	CB 00855		~5%				<1%	<1%	FIBROUS CELLULOSE
36	CB 00856		1-2%			<1%		<1%	FIBROUS CELLULOSE
37	CB 00857	NO	ASBESTOS DETECTED				<1%	<1%	FIBROUS CELLULOSE
38	CB 00858	NO	ASBESTOS DETECTED				45% ± 5%	45% ± 5%	FIBROUS CELLULOSE
39	CB 00859	NO	ASBESTOS DETECTED					70% ± 5%	FIBROUS CELLULOSE
40	CB 00860	NO	ASBESTOS DETECTED					95% ± 5%	SYNTHETIC FIBER
41	CB 00861		<1%					95% ± 5%	FIBROUS CELLULOSE
42	CB 00862		1-2%					<1%	FIBROUS CELLULOSE

S.M. Stark
Analyst

J.C. Hall
Reviewer

J.M.P.
Laboratory Supervisor

Corporate/Agency Name KODIAK ISLAND BOROUGH SCHOOL DISTRICT

Date 3/4/81

UBTL Identification Number 81-99

UBTL
ANALYTICAL CHEMISTRY
BULK ASBESTOS ANALYSIS

Field Sample #	UBTL Lab #	Amosite %	Chrysotile %	Crocidolite %	Anthophyllite %	Tremolite %	Fibrous Glass/Rock Wool %	Other Fibrous Constituents %	Fibrous Constituents Type
43	CB 00863		1-2%					<1%	FIBROUS CELLULOSE
44	CB 00864	NO	ASBESTOS DETECTED				40% ± 5%	30% ± 5%	FIBROUS CELLULOSE
45	CB 00865		30-40%					<1%	SYNTHETIC FIBERS
46	CB 00866		60% ± 5%					30% ± 5%	SYNTHETIC FIBERS
47	CB 00867		60% ± 5%					30% ± 5%	SYNTHETIC FIBERS

S. M. Stark
Analyst
SMT
Laboratory Supervisor

J. Hult
Reviewer

MAIN JUNIOR HIGH

SAMPLE #

36 Ceiling, hallway, acoustic spray

presented 6-83

37 Ceiling material

38 Ceiling tile, room #209

39 Wall, bandroom hallway

presented 6-83

40 Dust collector bag, woodshop

" "

41 Pipe insulation, boys locker room

" "

HIGH SCHOOL COMPLEX

SAMPLE #

42 Library, plenum, above suspended ceiling, wet

43 Library, plenum, above suspended ceiling, dry

44 Ceiling tile, voc ed wing

45 Welding shop, solder table top

46 Art room, kiln gloves

47 Fire Blanket, auto shop

**PLEASE NOTE: THE PRECEDING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.**

Bill Farrell - Cordova 99574

- Bids came in \$34.0 - \$108.0
estimates from engineers (get 10%)
80.0 - 120.0 minimum.
- State C.I.P. could get 50% reimburse
in 2 yrs.
- This summer, there will be lots of
asbestos removal
- in bill - allow reimbursement for
removal / renovation work.
- one approved dump site in State.

Given that the state has a vested interest in every child's ed, and the Department is moving aggressively toward program improvement how can the state guarantee improvement under this bill?

Will this bill minimize the conflict between state and private schools?

Introduced: 1/25/84
Referred: Health, Education and
Social Services and
Finance

BY JOSEPHSON, RODEY,
V. FISCHER, KELLY, HALFORD
AND STURGULEWSKI

1 IN THE SENATE

Sponsor Substitute

2

FOR SENATE BILL NO. 373

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

THIRTEENTH LEGISLATURE - SECOND SESSION

5

A BILL

6 For an Act entitled: "An Act establishing an asbestos health hazard ^{ABATEMENT} pro-
7 gram; and providing for an effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. FINDINGS AND PURPOSE. (a) The legislature finds that

10 (1) medical studies indicate that individuals who are exposed to
11 asbestos fibers have a significantly increased incidence of cancer and
12 other severe or fatal diseases, as compared with individuals who are not
13 exposed;

14 (2) medical evidence suggests that children may be particularly
15 vulnerable to cancer induced by exposure to asbestos fibers;

16 (3) medical science has not established a minimum level of
17 exposure to asbestos fibers that is considered to be safe;

18 (4) substantial amounts of asbestos have been installed in
19 school buildings and other public facilities in the state;

20 ~~(5) a partial survey of Alaskan schools indicates that~~

21 ~~(A) in many cases materials containing asbestos fibers have~~
22 ~~become damaged or friable, causing asbestos fibers to be released into~~
23 ~~the air; and~~

24 ~~(B) asbestos concentrations may be present in school build-~~
25 ~~ings containing damaged asbestos material;~~

26 (5) the presence in school buildings and public facilities of
27 ~~materials or easily damaged~~ asbestos creates an unwarranted health hazard to
28 school children, employees, and other individuals who are exposed to the
29 material;

(6) The present federal and state programs to identify and abate asbestos health hazards in school buildings and public facilities are ~~inadequate~~ severely inadequate. ~~no systematic program presently exists to identify asbestos~~

1
2 health hazards in school buildings and public facilities or to remedy those
3 conditions.

4 (b) It is the purpose of this Act to

5 (1) provide for testing and analysis of ~~friable~~ asbestos ma-
6 terials in school buildings and other public facilities in the state;

7 (2) provide for the dissemination of information relating to the
8 health hazards caused by exposure to ~~friable~~ asbestos fibers;

9 (3) ensure ^{ABATEMENT} [correction] of identified health hazards from ~~friable~~
10 asbestos materials in school buildings and other public facilities.

11 * Sec. 2. AS 18 is amended by adding a new chapter to read:

12 CHAPTER 28. ASBESTOS HEALTH HAZARD ^{ABATEMENT} PROGRAM.

13 Sec. 18.28.010. PROGRAM ESTABLISHED. The asbestos health hazard ^{ABATEMENT}
14 program is established in the ^{DEPARTMENT OF LABOR} [Department of Environmental Conservation]
15 to coordinate efforts of state departments and agencies to eliminate
16 asbestos health hazards in schools and public facilities in the state,
17 ~~in order to ensure state compliance with 20 U.S.C. 3601-3611 (Asbestos~~
18 ~~School Hazard Detection and Control Act of 1980).~~

19 Sec. 18.28.020. DUTIES OF THE DEPARTMENT OF ^{LABOR} ENVIRONMENTAL CON-
20 SERVATION. In order to eliminate asbestos health hazards in schools
21 and public facilities in the state, the Department of Environmental
22 Conservation shall

23 (1) provide ^{For competent and adequate} ~~training materials for school~~ personnel ~~and~~
24 ~~custodians of public facilities to enable them~~ to inspect and sample
25 material for the presence of ~~asbestos~~ asbestos;

26 (2) ~~distribute information published by the United States~~
27 ~~Environmental Protection Agency, on asbestos control, with supplemental~~ ^{and U.S. Occupational Health and Safety Administration}
28 ~~videotapes to city and borough school districts, regional educational~~
29 ~~attendance areas, private schools, and state public facilities~~

- (5) review and approve all asbestos training materials to respirator use and employee training, including training to establish an employee certification program. Only employees that have successfully completed the Department of Labor approved certification program shall be able to perform asbestos abatement work. The certification program shall include a respiratory exam and a competency exam; and
- (10) establish guidelines and procedures to prevent damage to asbestos products in day to day operations; and

1 ~~custodians;~~

2 ~~(1)~~ ⁽²⁾ distribute, retrieve, and store training materials
3 concerning inspection and sampling for ~~friable~~ asbestos;

4 ~~(2)~~ ⁽³⁾ provide knowledgeable individuals to answer inquiries
5 and ensure quality control of sampling;

6 ~~(3)~~ ⁽⁴⁾ establish guidelines ~~for~~ ^{FOR THE ABATEMENT OF ASBESTOS} and ~~for~~ ^{for the} inspecting and collecting
7 samples of suspected ~~friable~~ asbestos and provide for analysis of the
8 samples;

9 ~~(4)~~ ⁽⁵⁾ evaluate analysis results and distribute the results to
10 affected schools and public facilities;

11 ~~(5)~~ ⁽⁶⁾ coordinate efforts by state departments and agencies
12 and by school and public facilities personnel to identify and elimi-
13 nate asbestos health hazards;

14 ~~(6)~~ ⁽⁷⁾ provide information on asbestos health hazards and
15 proper means of inspection and analysis, and analyze specimens upon
16 request by any state department or agency or local government;

17 ~~(7)~~ ⁽⁷⁾ cooperate with the Dept. of Education and DOTPF
18 ~~(8)~~ ⁽⁸⁾ cooperate with the Department of Community and Regional
19 Affairs to administer state money appropriated to finance the asbestos
20 health hazard abatement program; and

21 (10) adopt regulations necessary to implement the provisions
22 of this chapter.

23 Sec. 18.28.030. DUTIES OF THE DEPARTMENT OF EDUCATION. To
24 assist in implementing the asbestos health hazard program, the Depart-
25 ment of Education shall

26 (1) cooperate with the ^{Dept. of Labor and School} ~~Department of Environmental Conser-~~
27 ~~vation and the Department of Transportation and Public Facilities~~ ^{and REPA's} to
28 ensure inspection of schools in the state for asbestos health hazards
29 and to ensure that identified asbestos health hazards are ^{ABATED} ~~eliminated~~;

(2) ~~revise, update, and distribute information on~~

45
HEALTH HAZARDS IN PUBLIC FACILITIES

(4) INFORM THE DEPT. OF LABOR OF ALL ~~EXPENDITURE~~ MONIES AWARDED FOR ASBESTOS ABATEMENT, TO enable DEPT. OF LABOR TO ADVISE CONTRACTORS OF ASBESTOS HEALTH HAZARDS.

ated to finance reno-

(2) distribute available money as necessary to ~~eliminate~~ ^{ABATE} asbestos health hazards in schools and ~~public facilities~~ in the state;

(5) inform the Department of Labor when renovation contracts are awarded under AS 18.28.050(6), to enable the Department of Labor to advise contractors of asbestos health hazards that may be encountered in the renovation project.

(2) ~~to~~ maintain records, files, and reports on asbestos health hazards in city and borough schools and regional educational attendance area schools.

Sec. 18.28.040. DUTIES OF THE DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES. To assist in implementing the asbestos health hazard ^{ABATEMENT} program, the Department of Transportation and Public Facilities shall

(1) cooperate with the Department of ~~Environmental Conservation~~ ^{LABOR} and the Department of Education to ensure inspection of schools and public facilities for asbestos health hazards and to ensure that identified asbestos health hazards are ~~eliminated~~ ^{ABATED}; and

(2) provide technical assistance and guidelines for renovation techniques to ~~eliminate~~ ^{ABATE} asbestos health hazards from public facilities and from other buildings in the state.

Sec. 18.28.050. DUTIES OF SCHOOL OFFICIALS. To assist in implementing the asbestos health hazard ^{ABATEMENT} program, each city or borough school district, private school, and regional educational attendance area shall

~~(1) provide for the training of school personnel in the detection of friable asbestos in their respective school buildings;~~

(1) ~~(1)~~ maintain records of all inspections, including sample dates, location, condition, and analysis of ~~friable~~ materials;

(2) ~~(2)~~ notify school personnel of the location of ~~friable~~

insert here

1 asbestos materials and ways to reduce exposure;

2 (3) (4) notify the parents of students of asbestos inspection
3 results;

4 (4) (5) provide for the inspection of their respective school
5 buildings and the taking of samples as needed, following guidelines
6 established by the Department of ^{of labor} ~~Environmental Conservation~~ for deter-
7 mining the existence of asbestos health hazards;

8 (5) (6) contract for renovating school buildings to ^{ABATE} ~~eliminate~~
9 asbestos health hazards, and supervise and monitor the renovation
10 contracts, applying the standards in AS 18.60.075 to protect the
11 health of the persons who renovate the school buildings.

12 ~~Section 18.28.060. DUTIES OF DEPARTMENT OF COMMUNITY AND RE-~~
13 ~~GIONAL AFFAIRS. To assist in implementing the asbestos health hazard~~
14 ~~program, the Department of Community and Regional Affairs, in coop-~~
15 ~~eration with the Department of Environmental Conservation, shall~~

16 (1) ~~administer state money appropriated to finance reno-~~
17 ~~vation contracts under AS 18.28.050(6);~~

18 (2) ~~distribute available money as necessary to eliminate~~
19 ~~asbestos health hazards in schools and public facilities in the state;~~

20 (3) ~~inform the Department of Labor when renovation con-~~
21 ~~tracts are awarded under AS 18.28.050(6), to enable the Department of~~
22 ~~Labor to advise contractors of asbestos health hazards that may be~~
23 ~~encountered in the renovation project.~~

24 Sec. 18.28.070. DEFINITIONS. In this chapter

25 (1) "asbestos health hazard" means the presence of friable
26 ~~asbestos material or asbestos material that could easily be damaged by~~
27 ~~water or air circulation or by other means, and that could result in~~
28 the dispersal of asbestos fibers into a school building or public
29 facility;

(2) "Asbestos" means chrysotile, amosite, crocidolite, fibrous tremolite, fibrous anthophyllite, and fibrous actinolite;

(3) "asbestos product" means any product that produces airborne asbestos

1 ~~(2) "friable asbestos" means any material that contain~~
2 ~~more than one percent of asbestos by weight as one of its constituents~~
3 ~~and that can be easily crumbled, pulverized, or reduced to powder by~~
4 ~~hand pressure when dry;~~

5 (4) ~~(5) (6)~~ "public facilities" means buildings owned ^{leased, rented} by the state
6 or by a local government.

7 * Sec. 3. This Act takes effect immediately in accordance with AS 01.-
8 10.070(c).

DEPARTMENT OF LABOR

BOX 1149
JUNEAU, ALASKA 99811

March 24, 1981

Phone: 465-4856

Nancy Detrick
Administrative Aide
to Senator Parr
Pouch V
Juneau, Alaska 99811

Dear Ms. Detrick:

As requested during our recent telephone conversation, enclosed is our Division's inspection activity for the last two years regarding the health hazard asbestos. The table's columns are self-explanatory. We believe that the evaluation of exposures to asbestos has been on "as needed basis," however, routine evaluation has been limited due to a number of factors.

Our current production rate is 108 health compliance inspections per year. Fifteen of these are programmed and are called general scheduled inspections. The evaluation of target health hazards is the primary basis for selecting a particular establishment for inspection. This year we have selected four establishments (out of the fifteen) for inspection to evaluate potential exposures to asbestos. Our data shows that there are 1,897 places of employment in Alaska where potential exposure to asbestos exists. The following table shows by Standard Industrial Classification (SIC) the number by region of these employers in Alaska.

SIC	REGION						TOTAL
	1	2	3	4	5	6	
15	96	351	77	74	13	15	626
1622	3	6	4	5	1	0	19
1623	5	29	11	8	8	7	68
1711	19	92	23	34	1	6	175
175	1	50	0	10	0	0	61
1761	3	28	0	6	0	0	37
1791	2	20	3	5	0	0	30
1793	1	8	2	1	0	0	12
1794	10	58	16	14	3	1	102
1799	4	31	12	7	0	1	55
2091	12	10	13	0	10	1	46
2611	2	0	0	0	0	0	2
327	0	3	0	0	0	0	3
5511	7	23	0	13	0	0	0
7539	1	16	0	4	0	0	27
80	65	306	32	44	3	2	452
82	25	41	17	21	19	8	131
07-GGLH TOTAL	256	1072	224	246	58	41	1897

The regions are geographic areas described as follows:

- Region 1 - Southeast Alaska (Ketchikan to Yakutat)
- Region 2 - Southcentral Alaska (Cordova to Matanuska-Susitna)
- Region 3 - Kenai Peninsula - Aleutian Islands (Seward to Kodiak - Aleutians)
- Region 4 - Northcentral Alaska (Fairbanks)
- Region 5 - Western Alaska (Bristol Bay to Kuskokwim)
- Region 6 - Northern Alaska (Barrow to Nome - Kobuk - Prudhoe Bay)

The SIC's are described as follows:

- 15 - Building Construction - General Contractors
- 1622 - Bridge, Tunnel and Elevated Highway - Heavy Construction
Except Highway
- 1623 - Water, Sewer, and Utility Lines - Heavy Construction
- 1711 - Plumbing, Heating, Air Conditioning - Special Trade Contractors
- 175 - Carpeting and Flooring - Special Trade Contractors
- 1761 - Roofing and Sheet Metal Work - Special Trade Contractors
- 1791 - Structural Steel Erection - Misc. Special Trade Contractors
- 1793 - Glass and Glazing Work - Misc. Special Trade Contractors
- 1794 - Excavating and Foundation Work - Misc. Special Trade Contractors
- 1799 - Special Trade Contractors - NEC
- 2091 - Canned and Cured Seafoods - Misc. Foods and Kindred Products
- 2611 - Pulp mills - Paper and Allied Products
- 327 - Concrete, Gypsum, and Plaster Products
- 5511 - New and Used Car Dealers
- 7539 - Automotive Repair Shops - NEC
- 80 - Health Services
- 82 - Educational Services

We hope that this information is what you need and if we may be of any additional service to you, please do not hesitate to call upon us.

Sincerely,

Darrell Miller
Darrell Miller, Director
Division of Occupational
Safety and Health

Enclosure

cc: Commissioner's Office

1 Inspection Number	12 Number of Work- ers exposed/sam- pled/exposure evaluated	13 Other Asbes- tos related violations issued	14 Reason for Inspection	15 Union Affiliated
D-79-21	5/0/5	None	C-79-77	None
D 9-32	4/2/4 "	OH&EC 04.0102 (d)(2)(D)	DOSH IH Gen. Sched. Insp. Proc.	None
D-79-32A		04.0102(f)(1) 04.0102(g)(1)(A) 04.0102(g)(2)(A) 04.0102(h)(2) 04.0102(i)(1) 04.0102(j)(2)		
D-79-33	3/3/4 " " " " " " " " " " " "	None	DOSH IH Gen. Sched. Insp. Proc.	None

1	2	3	4	5	6	7	8	9	10	11
Inspection Number	Sample Number	Date Collected	Sample Type	Asbestos Type	Asbestos %	Fibers/cc 5 um	Exposure	Task Operation	Where Collected	Protection of Worker
D-79-21	1	6/7/79	Environ	amosite		0.01	below PEL	Maint.	Maint.	not req.
	2	6/7/79	Environ	amosite		0.01	"	"	sched. mech.	"
	3	6/7/79	Bulk	amosite	42-50		n/a	"	bldg.	n/a
D-79-32	A	11/7/79	Bulk	amosite	10-20		below PEL	Demolition	n/a	n/a
	1	11/7/79	Pers	amosite		1.28	"	"	basement	inadequate
	2	11/7/79	Pers.	amosite		2.11	n/a	"	"	"
	3	11/7/79	Pers.	amosite		1.72	"	"	"	"
D-79-32A	Based on samples collected in D-79-32									

D-79-33	P-33-01	12/12/79	Pers	amosite/or and Chrysotile		1.59	below PEL	Demolition	basement	adequate
	P-33-02	"	"	"		2.13	"	"	"	"
	P-33-03	"	"	"		3.06	"	"	"	"
	P-33-04	"	"	"		1.82	"	"	"	"
	P-33-05	"	"	"		Too heavy	"	"	"	"
	P-33-06	"	"	"		1.96	"	"	"	"
	P-33-07	"	"	"		1.43	"	"	"	"
	P-33-08	"	"	"		3.82	"	"	"	"
	P-33-09	"	"	"		2.93	"	"	"	"
	P-33-10	"	"	"		2.02	"	"	"	"
	P-33-11	"	"	"		Too heavy	"	"	"	"
	P-33-12	"	"	"		2.08	"	"	"	"
	P-33-13	"	Blank	None			n/a	"	"	"
	P-33-14	"	Bulk	amosite Chrysotile	5-10 5-20		n/a n/a	" "	" "	" "

1	12	13	14	15	16	17
Inspection Number	Number of Workers exposed/sampled/exposure evaluated	Other Asbestos related violations issued	Reason for Inspection	Union Affiliated	Col- ch.	Protection of Worker not req. "n/a" inadequate " "
P-80-09	10/10/10	OH&EC 04.0102(f)(1) 04.0102(d)(2)(D) 04.0102(d)(3) 04.0102(d)(4)(C)(i) 04.0102(h)(1) 04.0102(h)(2) 04.0102(g)(2)(A) 04.0102(g)(1)(A) 04.0102(j)(1) 04.0102(j)(6)	C-79-154	IBEW Local # 1547		n/a inadequate " "
P-80-26	0/0/60	None	C-80-85 & 86	Teamster # 959		adequate " " " " " " " " "
P-80-27	2/0/2	None	Agency Referral	None		" " " "
S-80-10	260/0/260	None	DOSH IH General Scheduled Procedure	ILWU Loc. 37, Machinist Alaska Fish- erman's Union- Bristol Bay Native Cannery Workers, Alaska Fisherman's Union- STUNA AFLCIO Bristol Bay Resident Cannery Workers Branch		" " " " " " " " "

1	2	3	4	5	6	7	8	9	10	11
Inspection Number	Sample Number	Date Collected	Sample Type	Asbestos Type	Asbestos %	Fibers/cc 5 um	Exposure	Task operation	Where Collected	Protection of Worker
P-80-09	P-09-01	2/5/80	Bulk		None		n/a	Pipe insulation removal	Utilidoor	Inadequate
	P-09-02	2/5/80	Bulk		None		"			
	P-09-03	2/5/80	Bulk	Chrysotile	2-5		"			
	P-09-04	2/5/80	Bulk	Chrysotile	Approx. 5		"			
	P-09-05	2/5/80	Bulk	Chrysotile	80-90		"			
	P-09-06	2/5/80	Bulk	Chrysotile	2-5		"			
	P-09-07	2/5/80	Bulk	amosite	75-85		"			
P-80-26	P-26-01	7/11/80	Environ		None	0.01	n/a	Office	Sm. cabinet	n/a
	P-26-02	7/11/80	Environ		None	0.01	n/a			
	P-26-03	7/11/80	Environ		None	0.01	n/a			
	P-26-05	7/11/80	Environ		None	0.01	n/a			
	P-26-06	7/11/80	Environ		None	0.01	n/a			
	P-26-07	7/11/80	Wipe		None	0.01	n/a			
	P-26-08	7/11/80	Bulk		None	1 % Fibrous	n/a			
	P-26-04	7/11/80	Bulk		None	"Blank	n/a			
P-80-27	P-01	1/15/80	Bulk	Chrysotile	5	n/a	n/a	Not related	Laundry room	n/a
	P-02	1/15/80	Bulk		None	n/a	n/a			
	P-03	1/15/80	Bulk		None	n/a	n/a			
	P-27-01	7/16/80	Environ	Unknown		0.02	Below PEL			
	P-27-02	7/16/80	Bulk	Not analyzed because P-27-01 negative		n/a	n/a			
	P-27-03	7/16/80	Bulk	"		n/a	n/a			
S-80-10	1	7/29/80	Bulk	Chrysotile amosite	10	n/a	n/a	Not related	Retort	n/a



Alaska State Legislature

Senate

Official Business

Pouch V
State Capitol
Juneau, Alaska 99811

FOR IMMEDIATE RELEASE:
January 23, 1984

JOSEPHSON BILL ELIMINATES ASBESTOS

AS HEALTH HAZARD IN SCHOOLS, PUBLIC BUILDINGS

JUNEAU, AK. -- A program to eliminate asbestos health hazards in Alaska's schools and other public buildings would be established in the state Department of Environmental Conservation (DEC) under a bill introduced in the State Senate today by Sen. Joe Josephson (D-Anchorage).

Josephson, chair of the Senate Committee on Health, Education, and Social Services, cited medical studies which indicate that persons exposed to asbestos fibres have significantly increased incidences of cancer and other severe or fatal diseases.

"Unfortunately, medical science has not yet established a minimum level of exposure to asbestos fibres that is considered to be safe," Josephson said today. "The problem is magnified by the fact that asbestos has been used in many of Alaska's schools, yet medical evidence suggests that children may be particularly vulnerable to cancer induced by exposure to asbestos," he added.

The Anchorage Democrat said his bill would require the state DEC to provide training materials to school personnel and custodians of public buildings to help them inspect and test for the presence of asbestos fibres.

"My bill would also require the DEC to coordinate efforts by other state departments and agencies, and by school and public facilities personnel to identify and eliminate asbestos health hazards," Josephson explained.

(more)

The Josephson bill would ensure cooperation among the DEC, the state Department of Education (DOE), and the state Department of Transportation and Public Facilities (DOT/PF) so that asbestos health hazards are eliminated from schools and other public facilities throughout Alaska. "The bill also requires school officials to notify parents of the results of asbestos inspections," Josephson added.

He said cost estimates to implement the asbestos health program are "still being worked out, but as soon as we have developed reliable cost figures we will release them to the public."

"Once approved by my legislative colleagues and Governor Sheffield, this bill will help protect the health of our children as they attend school, and all Alaskans in public buildings and facilities," Josephson concluded.

The Josephson bill has been co-sponsored by Sens. Rick Halford (R-Chugiak), Tim Kelly (R-East Anchorage), Vic Fischer (D-Anchorage), Arliss Sturgulewski (R-Anchorage), and Pat Rodey (D-Anchorage).

-30-

For further information, contact:
Nancy Deitrick, Tel: 465-4907

012384

Tod Butler
1924 South Salem Dr.
Anchorage, Alaska 99508
December 14, 1983

RECEIVED

Governor Bill Sheffield
Pouch A
Juneau, Alaska 99811

Dear Governor:

Three years ago a major occupational health nightmare occurred at Alaska Psychiatric Institute. While a sprinkler system was being installed in the building a large amount of asbestos was circulated and recirculated through the building for a period of nine months. (See attachments). At that time, I proposed a set of procedures which I believed would prevent a recurrence of that situation as well as protect us workers in our everyday duties.

An investigator from DOSH, Max Andrews, was sent out and did an incomplete and incompetent investigation concerning the sprinkler job and by his lack of thoroughness caused our workers to be further exposed to asbestos. The procedures he gave us are incomplete, ineffective, and do not follow what is outlined in the State Occupational Safety and Health Standards. Mr. Andrews is currently administering the new Right-to-Know program.

In the early part of this year, several large valves were replaced in our boiler room, adjacent to the maintenance shop at A.P.I. and asbestos was spread throughout that building, which in this case is separate from the hospital. That incident, coupled with several others while we did repair and remodeling work prompted me to write to our administrator, Roxolana Pomeroy to ask for more stringent protection in the form of a set of procedures to be used while working around asbestos. She, in turn, told me she wrote to DOSH around the second week of October for information. We have yet to hear back from them. We requested and received a seminar on working around asbestos from Federal OSHA which pointed up the need for us to have a firm set of procedures and the inadequacy of what was previously outlined by the State.

I am not asking for a multi-million dollar removal program; only for some simple and inexpensive safeguards that will protect us and the people we work around. Some of our workers have been exposed to asbestos for hundreds of hours with no protection and exposed for additional hundreds of hours with inadequate protection.

If the State really believes that asbestos is harmful to humans, it must be more aggressive in its protection programs. Two simple and inexpensive things that could be done are to have State buildings surveyed as the schools were for asbestos content, and for warning signs to be put up to let workers and contractors know where asbestos is located and not to handle it if they do not know how to do so safely. Also, D.O.T. could be directed to note potential hazard areas on blueprints and to inspect jobsites to ensure safe work procedures are being followed. By waiting for asbestos exposure incidents to happen and going through the ponderous process involved in getting DOSH to come out and take air samples, the workers have been exposed and the damage has been done. It's a tough issue as there are no immediate effects or short term disabilities. We're looking 20 years in the future. In short, we need to think about prevention now.

The administration in this hospital, I feel, has been consistently arrogant and unresponsive in assuming they understand the asbestos situation here and assuming we are protected.

There has been no communication on their part, and conversely I think they try to keep the issue from the non-maintenance employees. An example of this was a letter from Ray Jorgenson, State Chief Industrial Hygienist, this year posted on the main bulletin board in the hospital. The letter not only incorrectly identifies one of the materials in question, but also gives the illusion that there is no problem with asbestos at A.P.I. which I believe is untrue.

There are some unanswered questions in my mind about the safeness of the asbestos in the ceilings at A.P.I. since much has been knocked loose and there is an air current which blows through the false ceiling area.

If there is any doubt or question about the questions I raise or the validity of my statements, I would be happy to respond, or to demonstrate what happens when workers go up into the ceilings and come down covered with asbestos. In the meantime I and my fellow workers are going to have to wonder for the next 20-30 years, when most of us will be in our mid-forties and early fifties whether we have breathed enough asbestos to be susceptible to contracting any of the asbestos related diseases. I feel strongly that if Mr. Andrews' investigation of the sprinkler job was inadequate, all employees in this hospital must be informed of their exposure.

Thank you for any assistance you can give.

Sincerely,



Tod Butler
Painter, A.P.I.

TB/kfb

Attachments

cc: Senator Vic Fisher
Senator Bettye Fahrencamp
Senator Arliss Sturgelewski
Senator Joe Josephson
Cherie Shelley, Alaska Public Employees Association
Mick Cotrum, District Council of Laborers
Joint Committee on the Accreditation of Hospitals

#5

September 14, 1983

Dear Mrs. Pomeroy:

Two recent incidents involving exposure to asbestos prompt us to again bring up safety procedures regarding this issue.

When the valves were being replaced in the boiler room, the contractor, with obviously no experience in the safe handling of asbestos, cut the lagging off the valves, spreading asbestos dust throughout the boiler room which was visible in the air to our eye as well as visible on the floor. When the contractor realized how much was being spread throughout the boiler room, he tried to dissipate the dust by opening the back doors. In the meantime, he swept up all the loose asbestos and put it in a garbage can which he carried through our shop to the dumpster as we sat for break.

In the second incident, in the remodeling of medical records, the ceiling was opened and left open for over two weeks exposing maintenance workers as well as medical records workers to the friable or loose asbestos which is present up there. The problem was very apparent to all workers in the area when the wind started blowing one afternoon through the false ceiling area and into the medical records area.

These two incidents as well as the poor morale and stress caused the maintenance workers when we have to work around asbestos brings us again to propose some inhouse regulations concerning working around asbestos in the hospital.

The short set of regulations that are now in effect are inadequate and don't cover the scope of work that we are involved in. We feel Don has been reasonable in trying to limit the amount of work done in the ceilings as well as using alternate methods when remodeling such as surface mounting conduit, etc. However, we feel it is imperative to have a comprehensive set of regulations. The focus of any job involving asbestos should be the safety and future health of A.P.I. staff and patients. It needs to be re-emphasised that ceiling work should be strictly limited to repairs.

We would like a safety seminar on asbestos provided for the maintenance shop. We have contacted Eric Short of DOSH who is more than willing to do this in conjunction with Steve Kadish of the Alaska Health Project.

We strongly suggest that a memorandum be put out to all departments that anyone suspecting or observing any form of loose asbestos contact the maintenance department. We would also suggest that a new set of regulations, when agreed upon, be put in the A.P.I. P&P and posted in the maintenance department.

We believe that these regulations and procedures will be beneficial as the public concern about asbestos and the outrage over sloppy handling of asbestos increase.

Sincerely,

J. Fred Butler
Fred Perry
Nancy Haber.

[Handwritten signature]

J. Stevenson
Joe D. Garcia
W. Kouchell

JTB/kf

cc: Steve Kadish, Alaska Health Project

Eric Short, DOSH

PROPOSED REGULATIONS

1. The primary focus of any job involving asbestos will be to plan the job so that exposure times will be limited to the shortest duration possible.
2. Areas around ceiling hatches and any other exposed ceiling areas should be sealed off while maintenance workers are working. Staff and patients should be kept away as much as possible. Hatches should be kept closed when not in use.
3. All maintenance workers should wear protective clothing at all times when in contact with asbestos. This should include a minimum of overalls, and head and hair protection as well as an approved respirator.
4. A vacuum should be purchased solely for asbestos clean up use and should be marked "For Asbestos Use Only." The fill bags for the vacuum should be of the disposable type and when full should be put in a plastic bag, sealed, and disposed of in accordance with Municipal regulations.
5. Before maintenance workers leave affected area, they should be thoroughly vacuumed off with the specially marked vacuum and the area vacuumed.
6. All contaminated coveralls and clothing should be checked for loose asbestos before being taken to the laundry.
7. Architects or engineers making building changes should be advised of the asbestos conditions and should be requested to make strong precautionary notes in specifications.
8. Contractors having work to do in the ceiling should be notified in advance of the presence of asbestos and should be expected to provide protection for their workers.
9. Contractors should be specifically instructed in how to clean the area after work is done to prevent the spread of asbestos throughout the hospital.
10. A warning sign should be posted in the maintenance shop for all workers to read, as well as a written set of precautions.

11. Work in the ceilings should be kept to a minimum, restricted to emergency repairs.
12. Any removal of asbestos covered pipes should be handled with precautions equal to those of working in the ceilings.
13. No materials containing asbestos should be used if there is a substitute.
14. Maintenance workers should keep personal safety in mind at all times when working with asbestos as well as the safety of all staff and patients.
15. Anyone observing loose or torn asbestos should contact the maintenance department immediately.
16. Pipes with torn or loose lagging will be sealed according to industry standards for safety.

Tod Butler
3803 Mac Innes St.
Anchorage, Alaska 99504
November 15, 1981

Stan Godsoe
Chief of Voluntary Compliance
OSHA
3301 Eagle St.
Anchorage, Alaska 99504

Dear Mr. Godsoe:

I am writing to you for assistance on an occupational health matter. The maintenance workers at A.P.I. have been crawling into the areas above the ceilings of the hospital on a semi-regular basis to do remodeling and repair work for many years. While in the "attics" they have crawled under the asbestos-insulated beams many times and have gotten asbestos particles all over their coveralls and in their hair. Until the summer of 1980 when a memorandum was issued by the hospital superintendant they wore no respirators or protective clothing other than coveralls, to my knowledge.

From approximately June 1980 to January 1981, A.P.I. had a sprinkler system installed in the majority of the areas of the hospital by an outside contractor, Sentry Automatic Sprinkler Co. This involved running the sprinkler pipe in the area above the ceilings. The wards were cleared of patients on a rotating basis while the work was going on in each ward. Each of the sprinkler workers, in my estimation, made a total of 5-15 trips through the hatches into the ceiling each day. For the greater part of the job they had no protection because they couldn't find out if the insulation they were in contact with was asbestos. They were covered each day from head to toe with particles of asbestos. They dragged a considerable amount of visible asbestos particles through the wards as they worked and the wards were covered with a visible layer of dust and dirt. The sprinkler workers walked through the common areas of the hospital and used the elevators to transport supplies each day. I observed visible chunks of asbestos in the elevators most days. The workers often stood in line at our snack shack to buy coffee or snacks with their contaminated clothing on. At one point they had an open hatch proximate to the main lobby where there was an area covered with asbestos particles.

The sprinkler workers, after many inquiries became quite concerned with the problem and demanded respirators with which they were provided. To my knowledge, they were not instructed on proper use and cleaning of the respirators. About that time our own

workers became concerned and were furnished with respirators designed for spray painting. Apparently about that time some other people at A.P.I. became concerned about the dust problem and OSHA was called to inspect and conduct air samples. To my knowledge, though, they did not go into the wards where the sprinkler workers were working. I am not sure they knew that the sprinkler job was going on.

The air samples apparently showed no trace of asbestos. Our maintenance department also sent a sample of the insulating material in for analysis during the summer of 1980. It came back showing the material as asbestos. That report was lost.

While the sprinkler workers were working in a ward, I was re-painting the ward with some help from other workers from the maintenance department as well as some patients' help. I felt at the time that since I was not directly exposed to the asbestos that I shouldn't worry but was very careful to not create dust with my tarps or as I was wiping off window sills and tops of door jambs that were covered with a thick layer of dust which I assumed to be asbestos. After the sprinkler workers were done in a ward the janitorial and housekeeping workers came in to clean using a dust mop to sweep the floors and dry stripped them afterwards. The housekeepers wiped off all surfaces with damp rags. The wards that were carpeted were vacuumed with hospital vacuums. The sprinkler job ended in January, 1981 and we finished painting and cleaning the last ward on March 31, 1981.

I became quite worried in May, 1981 after I read a series of articles about asbestos in the Daily News which led me to believe that incidental exposure to asbestos could be as dangerous over a period of time as direct exposure. I voiced my concerns to four doctors in the hospital some time in late August and they in turn talked to our hospital administrator who wrote a letter to Dale Cheek. An industrial hygienist, Max Andrews, was sent to inspect the hospital in late August or early September. He told my supervisor that the only time asbestos was dangerous was when it was being sprayed or removed. I talked to Mr. Andrews about a week after he made his inspection and he said he still had the sample on his desk and he guessed he should send it in since we were all worried. In the approximate two month period while the sample was being analyzed, no interim precautions were given to my supervisor about what workers should do while working in the attics. A coworker and I were sent to an asbestos seminar put on by Max Andrews to find out any more useful information we could. We asked Mr. Andrews about respirators again and were told our paint respirators were more than adequate. We waited for the test results and Mr. Andrews apparently got back to our supervisor, Don Clay on November 2. Mr. Andrews finally came out to take tests as our workers worked in the ceilings last Friday, November 13.

In the meantime, our workers have taken it upon themselves to try to control the spread of asbestos while they work in the ceilings and after they come down. However, they still walk through wards with contaminated clothing on and stand in front of the open door to our shop and brush themselves off. Until recently, our contaminated overalls were just thrown into a box with all other dirty maintenance clothes in the laundry.

I am personally worried about my own exposure, that of the sprinkler, janitorial, housekeeping, and maintenance workers during the sprinkler job and our maintenance workers exposure while they worked in the ceilings. We were assisted by patient helpers, as well, during the course of the sprinkler job.

Although the sprinkler job is over and no visual observations can be made or air samples taken, I would like your professional opinion on whether all workers involved during this period should be informed of their exposure and be given the opportunity to receive physicals through Worker's Compensation. I don't believe the janitorial and housekeeping workers know they were working in an asbestos contaminated environment.

I am angry about the way the OSHA investigation has been handled so far. It seems it would have been prudent to make some interim guidelines while the samples were being analyzed. It also seems that samples should not be sent outside Alaska when there is a testing lab right here in Anchorage that can do the tests in a matter of days. In the time it takes to get the samples analyzed Outside, many more workers can be exposed to a proven hazardous substance to an even greater extent. It seems incongruous for Mr. Andrews to state that asbestos is dangerous only when it is being sprayed or removed when there has been such controversy over the minute amount found in hairdryers.

In my estimation, asbestos dust is as hard to control as regular household dust and thus should be worked around under the very strictest of conditions. I would like to be kept informed of any further investigation as I have observed intently for the last year and a half the conditions we have worked in as well as the attitudes of the people involved.

Thank you for your consideration in this matter. Enclosed is a copy of a letter written and delivered to my supervisor, Don Clay.

Sincerely,



Tod Butler
Painter, A.P..

TB/kfb

STATE OF ALASKA #3

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF LABOR

BOX 1149
JUNEAU, ALASKA 99811
PHONE: (907) 465-4855

December 3, 1981

Mr. Tod Butler
3803 Mac Innes Street
Anchorage, Alaska 99504

Dear Mr. Bulter:

I am responding to your letter of November 15, 1981 regarding your concern about potential asbestos exposure to maintenance workers at the Alaska Psychiatric Institute (API).

My investigation into the Alaska occupational safety and health program's involvement into this matter has revealed the following:

Our records do not indicate any inspections prior to September 10, 1981 that were conducted at API facilities to determine exposure to asbestos or other dust problems. An inspection of API was conducted in 1978 to investigate a complaint about heat stress in the laundry working area. Your letter indicated an "OSHA" inspection conducted sometime in 1980; can you provide me the name of the inspector. Perhaps, the Department of Health and Social Services or Environmental Conservation conducted an inspection.

Max Andrews, our industrial hygienist, upon the request of your employer conducted on-site consultative visit on September 10, 1981 to advise the employer on a ventilation problem. During this visit, he was asked to look into a potential asbestos problem. Mr. Andrews took a bulk sample of the material that was suspected of containing asbestos. He provided the maintenance superintendent with interim guidelines to be taken while samples were being processed. I am enclosing a copy of these interim guidelines.

7 Mr. Andrews performed a preliminary field test of the bulk sample in our office which indicated that asbestos was present in the material. As soon as it was determined that asbestos was present, Mrs. Roxanne Pomeroy, Hospital Administrator, was contacted and informed of the field test. This field test, however, did not determine the amount or type of asbestos and, therefore, the sample was sent to our contract laboratory, Northwest Health Services at Richland, Washington, for further analysis.

December 3, 1981

The Division would like to use an Alaska laboratory; unfortunately, none of the laboratories in Alaska are certified by the American Industrial Hygiene Association. We are required, under our agreement with the Federal Occupational Safety and Health Administration (OSHA) to use a certified laboratory.

Mr. Andrews was assigned to other duties and unfortunately the sample was not sent to the laboratory until September 21, 1981. We received the results from the laboratory on October 2, 1981. We have instituted procedures to make sure that such delays do not occur in the future.

As soon as we learned that the material contained 30 percent chrysotile asbestos, we contacted API and informed them that air samples needed to be taken when work was being performed in the areas with asbestos materials. We were contacted by API on November 13, 1981 that work was being performed in this area and we conducted air samples on that day. The samples were sent to the laboratory on November 16, 1981. The results of these samples were sent to your employer on December 1, 1981.

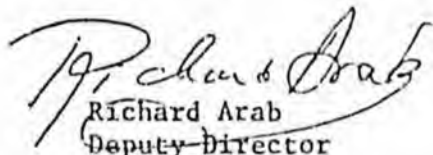
The air samples indicate that there is sufficient exposure to warrant medical examinations of workers who may have been exposed. Your employer has received this recommendation. Under our regulations, the employer would be required to provide such examinations.

Our investigation indicates that the asbestos-containing material was introduced into API when the sprinkler system was installed. Furthermore as we did not sample the dust that you indicate was present when this project was being performed, we cannot prove that this dust contained asbestos. Asbestos in its solid state is not dangerous. It becomes a health hazard when it becomes a particle in the air and is inhaled into the body. The problem with the hairdriers was that the asbestos shields that some models contained started to fray and when the hairdriers were turned on they blew asbestos fibers into the air.

I am sorry if you received an impression from our staff that we are not concerned with your safety and health. Apparently there was some misunderstanding, but I would like to assure you that the Alaska Department of Labor is dedicated to protecting workers from job-related safety and health hazards.

I would like to commend you for your concern for the safety and health of your fellow workers.

Sincerely,



Richard Arab
Deputy Director
Division of Labor Standards
and Safety

Enclosure

cc: Roxanne Pomeroy
Hospital Administrator
APT

Stan Godsoe, Chief
Voluntary Compliance

Al Baffone
Business Agent
Local 71

November 1, 1981

Dear Don:

It was proposed to me by one of the physicians in the hospital that I write a set of proposed regulations concerning the "safe handling" of asbestos. I'm furnishing a partial list that is open to revision or correction. My main concern in this issue is that of people's attitudes toward asbestos. It is hard to put emphasis on something that has effects that are not apparent for a number of years. However, asbestos has been proven without a doubt to be a cancer causing substance in humans. I feel it is important for everyone to realize that it is projected that one in four Americans will contract some form of cancer and that a majority of these cancers are caused by environmental contaminants such as asbestos.

Dan and Jess have been exposed numerous times without protection and it is imperative that they have the best protection available. There is no established safe level for exposure to asbestos. I have waited patiently for two months for the results of the OSHA tests to come back verifying that the insulation in the attic is asbestos--something that was already established last year. If it is any indication of the concern of the industrial hygienist, I called him a week after he was out here to take the sample. He said, "Oh, yeah, the sample is still on my desk. I guess I should send it to the test labs. I guess people are pretty worried out there."

I personally will not be satisfied until a firm set of rules are adopted. The primary intent of any job that involves working around asbestos should be that the patients, staff, and particularly the maintenance workers are protected to the best occupational health standards. I still would like an industrial hygienist to come to the shop to explain proper procedures and use of protective equipment. I am enclosing some information for your reading.

Thank you.

Sincerely,

Tod Butler

Tod Butler

TE/kfb

Enclosures

cc: Fred Hillman M.D.

PROPOSED RULES

1. Areas around ceiling hatches should be sealed off while maintenance workers are working. Staff and patients should be kept away as much as possible.
2. All maintenance workers should wear protective clothing at all times when in contact with asbestos. This should include a minimum of coveralls, head and hair protection as well as an approved respirator. Disposable coveralls should be checked into for their usefulness.
3. A vacuum should be purchased solely for asbestos clean up use and marked "For Asbestos Use Only". The fill bags for the vacuum should be of the disposable type and when full should be put in a plastic bag, sealed, and disposed of in the dumpster.
4. Before maintenance workers leave affected area they should be thoroughly vacuumed off with a specially marked "asbestos" vacuum as well as the area vacuumed.
5. All contaminated coveralls and clothing should be put in a plastic bag and marked with "Asbestos." Laundry workers should be instructed on safe handling.
6. Maintenance workers should be instructed on proper use of respirators and cleaning. Disposable masks should be considered.
7. Maintenance workers exposed to asbestos should have a physical examination every year with guidelines set by Dr. Irving Seilikoff.
8. Any maintenance workers unknowingly exposed in the past should be informed of their exposure.
9. Architects or engineers making building changes should be advised of the condition and asked to make a strong precautionary note in specifications.
10. Contractors having to do work in the ceiling should be notified in advance of the presence of asbestos and should be expected to provide protection for their workers.
11. Contractors should be instructed how to clean areas after work to prevent the spread of asbestos throughout the hospital.

12. A warning sign should be posted in the maintenance shop for all workers to read, as well as a set of precautions.
13. Work in the ceilings should be kept to a minimum, restricted to emergency repairs.
14. Problem areas in the hospital containing asbestos should be examined for safety. (e.g. the penthouse, refrigeration room, O.T. clinic).
15. Any tearing out of asbestos covered pipes should be handled with precautions equal to those of working in the ceiling.
16. No materials containing asbestos should be used if there is a substitute.
17. Maintenance workers should keep personal safety in mind at all times when working with asbestos as well as the safety of all staff and patients.

DEPT. OF HEALTH AND SOCIAL SERVICES
OFFICE OF THE COMMISSIONER

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

Document# 57-81

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.

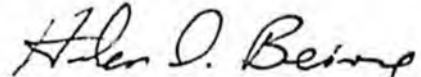
In regards to this, we have given considerable thought to the problem and have been in contact with Dr. Edward Gaensler, who is in charge of the Chest Program at Boston City Hospital and who has been interested in the asbestos problem for a number of years. I would like to emphasize the following, I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

POSITION PAPER

Senate Bill No 338

"An Act establishing an asbestos health hazard program and providing for an effective date."

Senate Bill No. 338 provides for cooperative efforts between the Departments of Environmental Conservation, Education and Transportation and Public Facilities in locating, analyzing, evaluating, record keeping and eliminating hazards associated with asbestos. The asbestos was used in some building materials utilized in the construction of schools and public buildings in past years. With time the buildings wear and deteriorate exposing the asbestos fiber. The asbestos particles, being very small, tend to easily break away from the material and float lightly in the air, subject to inhalation by the inhabitants of the building. As the amount of asbestos inhaled increases the statistical probability of a higher rate of asbestosis is present.

This bill is designed to begin a program of minimizing the incidence of exposure to Alaskans.

The Department of Health and Social Services feel this bill is needed and supports its passage.

Recommended by: David Bruce
David Bruce, Deputy Director
Division of Public Health

Date: April 6, 1981

Approved by: Helen D. Beirne
Helen D. Beirne
Commissioner

Date: 4/13/81

FISCAL NOTE

I. REQUEST

Bill/Resolution No. Senate Bill No. 338

Title "An Act establishing an asbestos health hazard program and providing for an

Requested by Commissioner's Office Date 4/5/81

effective date."

II. FISCAL DETAIL

Agency Affected Department of Health and Social Services

Program Category Affected Public Health

BRU, Program, or Subprogram(s) Affected _____

(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
100 PERSONAL SERVICES	0	0	0	0	0	0
200 TRAVEL	0	0	0	0	0	0
300 CONTRACTUAL	0	0	0	0	0	0
400 COMMODITIES	0	0	0	0	0	0
500 EQUIPMENT	0	0	0	0	0	0
600 LAND & STRUCTURES	0	0	0	0	0	0
700 GRANTS, CLAIMS, ETC.	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

FUNDING (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER (Specify Fund Source)	0	0	0	0	0	0

POSITIONS

FULL TIME	0	0	0	0	0	0
PART TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

TO: Joe Beauchamp, Director
Maintenance/Construction

FROM: *Bob Thornton*
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 ago, 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
regulations and
can be answered by the NESHAPS
Appendix B.

OSHA

work practices and the airborne
asbestos workers can be
regulations apply to removal,
and other operations involving

limits on the amount of
to which a worker may be exposed on
any given period the average
concentration level (also known as
TLV (TWA)) to which a worker
should not exceed two fibers longer than
5 micrometers per cubic centimeter of air (2f/cc). At

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 respirator. 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 in 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

Air Monitoring

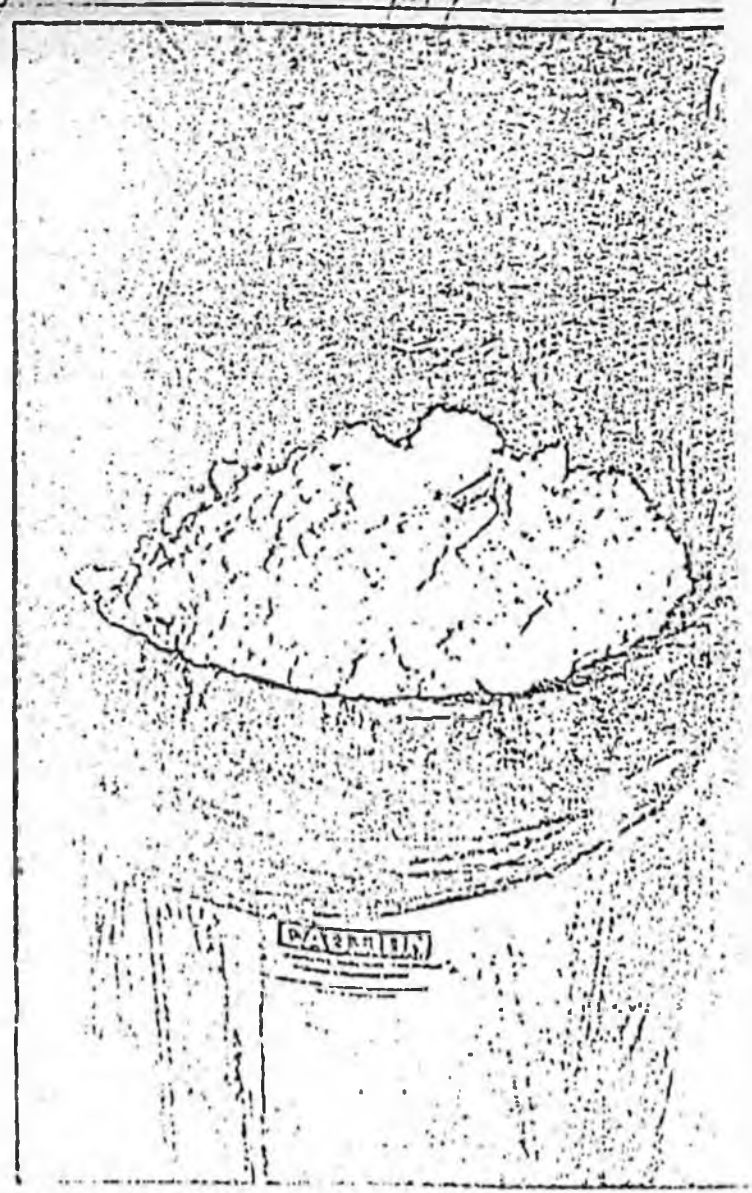
A. Throughout the entire [removal, encapsulation] and cleaning operations, air monitoring shall be conducted to ensure that the Contractor is complying with the EPA and OSHA regulations [and any applicable State and local government regulations]. The Contractor shall provide an air monitoring technician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

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 Times
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

STATE OF ALASKA

DEPARTMENT OF LABOR

JAY S. HAMMOND, GOVERNOR

BOX 1149
JUNEAU, ALASKA 99811
PHONE:

Ph: 465-2700

May 4, 1981

Ms. Nancy Dietrick
Researcher, Senator Parr's Office
Alaska Senate
Pouch V
Juneau, Alaska 99811

Dear Ms. Dietrick:

Per your request, the following information concerns the funding necessary to staff the industrial hygienist positions for our Occupational Safety and Health program. These positions are included in the budget, 50% General Fund and 50% Federal funds. The following amounts should be added to the General Fund revenue amounts as federal funding is not anticipated for FY '82.

Personal Services	
PCN 2002 & 2006 (17,346 + benefits x 2) =	\$44,002
Travel (for 2 positions including moving costs)	27,800
Contractual	7,200

It may be difficult to receive OSHA approval to use matching federal funds for non-personal services for State funded positions. Therefore, the \$7,800 in travel is required to travel in-state to inspect work places. The \$20,000 in moving costs will assure that we will be able, if necessary, to recruit out-of-state because there are very few qualified industrial hygienists available in Alaska. We did not request moving costs in our original budget in order to stay within the budgetary level.

Thank you again for your interest and support of the Occupational Safety and Health program. Please advise if you need additional information.

Sincerely,

Judy Knight
Judy G. Knight
Special Assistant

SUGGESTIONS RECEIVED FOR SB 338:

The Department of Labor would like to be notified of all renovation undertakings through the local school districts so that they can personally contact individual contractors concerning safety regulations. They would choose contact through Ray Jorgenson, Chief Industrial Hygiene, in the Anchorage office.

The Department of Community and Regional Affairs has agreed to send copies of the OSHA regulations for Worker Protection to each school district who receives a grant for renovation work.

Appropriation changes for SB 339, recommended by the DEC:

Section 1. enlarging money for testing and evaluation from \$33,250 to \$60,000. Rationale is that major problems have been uncovered since original planning, and that public education and awareness programs be included.

Section 2. expanding amount for school repairs from \$500,000 to \$3,000,000 because of extensive damage in Anchorage school system(377,188 sq. feet fo sprayed on asbestos insulation in the main school areas. Diamond, Bartlett and West schools with the major problem being the damaged areas in boys locker room and pool at West). DOE did not address this problem at the HESS committee meeting because of the nature of the information and the school districts desire not to have any further publicity on the subject. Mat-Su also reports an estimated need of \$400,000 for repairs to badly water and air damaged asbestos insulation.

Section 3. enlarge appropriation for renovations to public facilities from \$500,000 to \$1,000,000. The DEC originally reported that state facilities were in need of only minor repairs that could generally be handled through routine maintenance at no extra cost (this info from DOT/PF Inventory and Condition Survey), and that the only facilities not inventoried were those in Anchorage. I only included the lesser amount in the appropriation bill since it appeared to be all that was needed until definite information would be obtained on Anchorage facilities.

I contacted Margo Partridge, Region X office of the EPA, about the questions raised about trained professionals needing to collect samples for testing. Her opinion was that the sample collecting is not difficult, and has been handled successfully in other school districts by maintenance personnel. The only thing vital is that the training be consistent, the personnel wear protective equipment, random samples be taken, and records be maintained properly in the school district. I believe the DEC has provided for all these possibilities, and I understand that the training materials are of excellent quality.