EnviroScience Consultants inc.
Environmental Engineering ❖ Industrial Hygiene ❖ Laboratory Services

Office Locations:
Newington, CT
Fairfield, CT
Boston, MA

December 28, 2000

Mr. John Calhoun
Environmental Services
New Milford Public Schools
386 Danbury Road
New Milford, Connecticut 06776

Re: **Asbestos Management Plan**
**New Administration Building**
**386 Danbury Road, New Milford, CT**
EnviroScience Project No. 00-564.10

Dear Mr. Calhoun:

Enclosed please find the Asbestos Management Plan for the new Administration Building at 386 Danbury Road in New Milford, Connecticut.

Once the Plan is formally accepted by the State of Connecticut Department of Public Health, it needs to be maintained in the main office of the new Administration Building and periodically updated.

Sincerely,

James L. Scott, C.I.H.
Manager, Industrial Hygiene

DF:des

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795 North Mountain Road, Newington, Connecticut 06111
Phone (860) 953-2700 Fax (860) 953-3203

E-Mail: enviro.science@envirosci.com
Web Site: www.envirosci.com

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Boston, MA

# ASBESTOS MANAGEMENT PLAN

Prepared for:

NEW ADMINISTRATION BUILDING
386 DANBURY ROAD
NEW MILFORD, CONNECTICUT

Prepared by: James L. Scott, C.I.H.
Management Planner
EnviroScience Consultants, Inc.
795 North Mountain Road
Newington, Connecticut 06111

Date: December 28, 2000

Signed: _____

Certification: EPA Certified Management Planner
State of Connecticut License No. 000044

This Management Plan meets the requirements of the EPA "Asbestos Containing Materials in Schools" Rule, 40 CFR Part 763, as specified in the Asbestos Hazard Emergency Response Act (AHERA).

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LOCAL EDUCATION AGENCY SCHOOLS FORM

| | |
|---|---|
| Local Education Agency (LEA): | New Milford Public Schools |
| LEA Designated Person: | Mr. John Calhoun<br>Head of Environmental Services |
| School Building: | New Administration Building<br>386 Danbury Road<br>New Milford, Connecticut 06776 |
| Telephone Number: | (860) 354-6265 |
| Grades: | Not Applicable (Administration Building) |

Asbestos-containing building materials (ACBM) present:

Friable thermal system insulation (Confirmed)
Friable acoustic ceiling tile (Presumed)
Non-friable glue daubs (Presumed)

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Disclaimer

EnviroScience Consultants, Inc. (EnviroScience) warrants that it has performed the asbestos inspection and hazard assessment in this management plan with the degree of care and skill normally exercised under similar circumstances by similar organizations. The Customer acknowledges that because of the nature of the evaluation, and the environment in which the evaluation was performed, EnviroScience cannot guarantee that the evaluation process will reveal all asbestos containing materials in the new Administration Building at 354 Danbury Road in New Milford, Connecticut. False wall and ceiling chases, along with inaccessible crawlspaces or tunnels may contain further asbestos containing materials not identified in this report. In such possible cases, EnviroScience has exercised diligence in attempting to anticipate such circumstances and to note them in the management plan. However, caution should always be exercised when conducting major renovation, alterations, or demolition projects. No guarantee is made for other uses of this plan other than those stated in the scope and objectives section. Nothing in this plan should be construed as to avoid safety regulations or the use of state of the art asbestos removal, encapsulation, enclosure, or operations and maintenance techniques.

Scope and Purpose

In accordance with Section 763.80 of the Asbestos Containing Materials in Schools; Final Rule and Notice (40 CFR 763) which was promulgated under the Asbestos Hazard Emergency Response Act (AHERA - hereinafter referred to as the Rule or Act), the objective of this management plan is to protect human health and the environment from asbestos hazards using the least burdensome methods. This rule requires local education agencies to identify friable and nonfriable asbestos-containing material (ACM) in public and private elementary and secondary schools by visually inspecting school buildings for such materials, sampling the materials if they are not assumed to be ACM, and having samples analyzed by appropriate techniques referred to in the rule. The rule requires local education agencies to submit management plans to the Governor of their state, and to complete implementation of the plans in a timely fashion. In addition, local education agencies are required to use persons who have been accredited to conduct inspections, develop management plans or perform response actions. The Rule also includes record keeping requirements. Local education agencies may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties. Local education agencies are encouraged to consult with EPA Regional Asbestos Coordinators, or if applicable, a state's lead agency designated by the state Governor, for assistance in compliance with this rule.

Inspector/Management Planner's Statement of Accreditation

The Management Plan was developed by James L. Scott, C.I.H. Mr. Scott has attended and successfully completed a course for Management Planner at Hygienetics Training Institute, Boston, Mass., August 20-21, 1989. He most recently attended a refresher Inspector/Management Planner course at Capital Community-Technical College, Hartford,

Connecticut, October 11-12, 2000. He has met all the requirements for Management Planner as designated under the Act. Copies of the course certificates from these courses and applicable licenses are appended to this Management Plan (see Attachment C). The inspection report was reviewed by the Management Planner with special attention to physical damage, friability, potential for disturbance, and location of asbestos-containing building materials.

The inspection was performed by Environmental Consultant, Dominick Fiore. Mr. Fiore is a State of Connecticut licensed asbestos inspector. Copies of his license and applicable certificates are appended to this Management Plan (see Attachment C).

The findings of the inspection are detailed by homogeneous area and functional space (room, hallway, etc.) in Section 1, Inspection Report, of this Management Plan. ACBM or suspect ACBM is documented as thermal system insulation, surfacing materials, or miscellaneous materials.

Sampling Procedure

The manner used to determine sample locations was contrived through the procedures listed in Section 763.86(a) through (d) of the Act. Samples were collected in regard to the color, texture, homogeneity and construction date relative to the suspect material. Samples were collected by Mr. Fiore.

Statement of Laboratory Accreditation

All samples were analyzed by:

Electron Microscopy Service Labs, Inc. (EMSL, Inc.)
108 Haddon Avenue
Westmont, New Jersey 08108

The dates of analysis, and the name and signature of the person performing the analysis are included in the laboratory analysis report which is included with this management plan (please see Table of Contents).

Statement of Inspector's Assessment

During the course of the inspection all friable known or assumed ACBM in the New Milford Administration Building was assessed for condition using the criteria listed in Section 763.88(b) and (c). These assessments are summarized in Section 1, the Inspector's Report and Hazard Assessment, of the Management Plan.

Statement of Management Planner's Recommendations

During the course of developing the Management Plan, the Management Planner has developed recommendations for all friable known or assumed ACBM based on the above referenced assessments. These recommendations are summarized in Section 1, Hazard Assessment and Hazard Priority Ranking, of the Management Plan.

The inspection report was reviewed with special attention to physical damage, friability, potential for disturbance, and location of asbestos-containing building materials. The findings of the inspection are detailed by homogeneous area and functional space (room, hallway, addition wing, etc.) in Section 1.

Inspector/Management Planner Signatures

Based on the information gathered during the field inspections and through the laboratory analysis results, we hereby state that the foregoing statements, inspection report, hazard assessment and management plan are true and accurate to the best of our knowledge.

Inspector: Dominick Fiore
Title: Environmental Consultant

Management Planner: James L. Scott, C.I.H.
Title: Manager, Industrial Hygiene

Address: EnviroScience Consultants, Inc.
795 North Mountain Road
Newington, Connecticut 06111
Phone Number: (860) 953-2700

Inspector Signature: _____

Dominick Fiore
CT License No.: 000299
Certificate No.: AIR-10/99-11
Training Provider: Capitol Community/Technical College, Hartford, Conn.

Management Planner Signature: _____

James L. Scott, C.I.H.
CT License No.: 000038
Certificate No.: AMPR-10/99-3
Training Provider: Capitol Community-Technical College, Hartford, Conn.

Inspection Date: October 30, 2000
Original Management Plan Date: November 6, 2000

General Local Education Agency's Responsibilities

According to AHERA, 40 CFR part 763, subpart #763.84, the local education agency (LEA) shall:

a. Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillances, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with AHERA requirements.

b. Ensure that all custodial and maintenance employees are properly trained as required by the regulations, and other applicable federal and/or state regulations. (Training has been conducted for the custodial employees on May 1, 1998. Copies of training certificates are attached in Attachment D.)

c. Ensure that workers and building occupants, or their legal guardians are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic reinspection and surveillance activities that are planned or in progress.

d. Ensure that short-term worker (e.g., telephone workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACM.

e. Ensure that warning labels are prominently attached immediately adjacent to any friable and nonfriable ACBM and suspected ACBM assumed to be ACM located in routine maintenance areas (such as boiler rooms) at each school building. This shall include:
   1. Friable ACBM for which a response action other than removal was performed.
   2. Non-friable or friable ACBM for which no response action was performed.

   All labels shall be prominently displayed in readily visible locations and shall remain posted until the ACBM that is labeled is removed. The warning label shall read, in print which is readily visible because of large size or bright color, as follows:

CAUTION: ASBESTOS, HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT.

f. Ensure that management plans are available for inspection and notification of such availability has been provided to parent/teacher organizations on a yearly basis. A dated copy of the notification letter must be included in the Management Plan records.

g. Designate a person to ensure that the LEA's requirements have been met. (The New Milford Public School system has Mr. John Calhoun of Environmental Services as the designated person. Copies of training certificates are attached in Attachment D.)

h. Ensure that the Designated Person receives adequate training to perform the duties associated with the LEA's responsibilities. Such training shall provide, as necessary, basic knowledge of:
   1. Health effects of asbestos.
   2. Detection, identification, and assessment of ACM.
   3. Options for controlling ACBM.
   4. Asbestos management programs.
   5. Relevant federal and state regulations concerning asbestos, including AHERA and those of the Occupational Safety and Health Administration (OSHA), U. S. Department of Labor, the U. S. Department of Transportation, and the U. S. Environmental Protection Agency (USEPA).

i. Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities associated with the LEA's responsibilities.

In addition, local education agencies must provide for the transportation and disposal of asbestos in accordance with EPA's "Asbestos Waste Management Guide." The transportation of asbestos waste is covered by the Department of Transportation (49 CFR Part 173, Subpart J), and disposal is covered by the National Emissions Standard for Hazardous Air Pollutants (NESHAP 40 CFR Part 61, Subpart M).

Parent/Teacher Notification Requirements

Upon submission to the Governor, and once annually thereafter, the LEA shall notify parent/teacher organizations of the availability of the Management Plans. The Management Plan must include a description of the steps taken to notify such organizations, and a dated copy of the notification. A copy of all of the Plans for the school district must be kept at the administrative offices. The school shall maintain, in its administrative office, a complete, updated copy of the

management plan for that school. Plans shall be made available for inspection by representatives of the EPA and the state, the public, including teachers, other school personnel and their representatives, and parents. Copies of the Management Plans must be made available at a reasonable cost. A copy of the Parent/Teacher Notification letter is appended to this Management Plan (Attachment E).

Plan for Reinspection/Periodic Surveillance

In accordance with Sections 763.85(b) and 763.92(b) of the Act, the LEA or its designated person shall conduct:

1. Reinspection by an Accredited Inspector at least once every three years after the Management Plan is in effect (which is until all ACBM is removed from the building), according to federal regulations.

2. Periodic Surveillance at least once every six months after the Management Plan is in effect. This surveillance shall include:

   a. A visual inspection of all areas that are identified in the Management Plan which contain ACBM or assumed ACBM.
   b. Records of the dates of the surveillance, the name of the person conducting the inspection, and any changes in the condition of the materials.
   c. Submittal to the person designated to carry out general local education agency responsibilities and a copy of such record for inclusion in the Management Plan.

   A sample of a Periodic Surveillance Form is appended to this Management Plan.

Local Education Agency (LEA) Designated Person

| | |
|---|---|
| LEA Designated Person (Temporary): | John Calhoun |
| Title: | Environmental Services |
| Address: | New Milford Public Schools<br>386 Danbury Road<br>New Milford, Connecticut 06776 |
| Phone Number: | (860) 354-6265 |
| Signature: | _____ |
| Date: | _____ |

Designated Person Training

Training Date:
Length of Training:
Course Name: Asbestos Awareness and Designated Person Training

LEA's Assurance of Accreditation/Plan Compliance

The new Administration Building has and will use persons for the inspection of ACBM or the design or implementation of response actions who have been: accredited by the State of Connecticut under section 206(B) of Title II of the Act or is accredited by an EPA-approved training course under Section 206(C) of Title II of the Act.

I, the undersigned, hereby certify that the general responsibilities of the LEA as listed in Section 763.84 of the Act, have been met or will be met. Similarly, if additional cleaning is recommended by the asbestos management planner under Section 5.4 of this Management Plan, I, the undersigned, will ensure that those recommendations are carried out.

Designated Person: John Calhoun

Signature: _____

Date: _____

SECTION 1
INSPECTION AND ASSESSMENTS

This section details those locations where asbestos-containing building materials (ACBM) and assumed ACBM were identified by the inspector. In addition, the ACBM quantity, hazard rank (condition), and response action for each ACBM is included in the chart on the following pages. Also noted in this Section is a general description and overview of the school, its size, date of construction and/or modification. The main part of this Section is the chart that describes the inspection findings and prioritizes the ACBM needing attention. The ACBM identified in the chart are categorized was >(A)= - thermal system insulation (TSI), >(B)= - surfacing, and >(C)= - miscellaneous ACBM.

TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded insulation on pipe fittings. Surfacing ACBM includes all ACBM that is sprayed, troweled, or otherwise applied to an existing surface. Surfacing ACBM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials includes all ACBM not listed in thermal or surfacing, such as linoleum, vinyl asbestos floor tile, and ceiling tiles.

1(A) General Building Description

The new Administration Building is a two-story house with a basement built approximately sixty years ago. The structure is wood framed with hardwood floors throughout the first and second floors. The approximate area of the house is 3,500 square feet. An attic is located above the second floor, with a chimney passing through the attic. The basement has concrete floors while the foundation is constructed of stone. The house is heated with oil-fired furnace forced air. The window systems are wood framed. Walls throughout the building are plaster, with the exception of the basement walls.

1(B) Bulk Sampling Results

Sample analyses results are reported in percentages of asbestos and non-asbestos components. The United States Environmental Protection Agency (USEPA) defines any material that contains one percent (1%) asbestos, utilizing Polarized Light Microscopy (PLM), as being an asbestos-containing material. Materials that are identified as none detected are specified as not containing asbestos. Composition percentages are representative results only. Exact sample locations, types, and compositions are included in the attached laboratory results section.

Utilizing PLM, the following materials were determined to be asbestos-containing:

| | Material | Asbestos Content | Location |
|---|---|---|---|
| 1. | Thermal System Insulation | | |
| | Air-cell pipe insulation | 65% Chrysotile | Basement:from boiler toward brick wall |

The following materials are assumed to be ACBM. These materials were not sampled as sampling would have been of a destructive nature:

| | Material | Asbestos Content | Location |
|---|---|---|---|
| 1. | Miscellaneous Material | | |
| | 1' x 1' ceiling tile and associated glue daubs | Presumed asbestos-containing material | 2nd floor: Secretary's office |

The following materials were determined to be non-asbestos-containing:

| | | |
|---|---|---|
| 1. | Miscellaneous Material | |
| | a. Chimney flue cement | Basement: by boiler |
| | b. Window glazing compound | Basement: throughout |
| | c. Linoleum under 12" x 12" white floor tile | 1st floor Kitchen: under sink |
| | d. White 3rd layer linoleum | 1st floor Kitchen: under sink |
| | e. 12" x 12" white floor tile - 1st layer | 1st floor Kitchen |
| 2. | Surfacing Material | |
| | a. Skimcoat plaster | 1st floor Kitchen: stairway to basement |
| | | 1st floor: northeast closet space |
| | | 2nd floor: stairway to attic |

| | |
|---|---|
| b. Roughcoat plaster | 1st floor Kitchen: stairway to basement<br><br>1st floor: northeast closet space<br><br>2nd floor: stairway to attic |

1(C) Inspection Report, Hazard Ranking, and Response Actions

The objective of this Section is to not only report inspected ACBM locations and quantities, but also to prioritize the ACBM that needs to be attended to before other ACBM. A prioritization chart has been made for '(A)' - thermal system insulation, '(B)' - surfacing, and '(C)' - miscellaneous ACBM. The appropriate response action for each ACBM is also listed in the chart.

The response action for each ACBM is determined by the potential for fiber release based on actual and potential damage, location, friability, and potential for disturbance.

The response actions developed by the Management Planner and assigned to the ACBM described above, prioritizes the order of corrective measures to be undertaken by the LEA.

Where funding is not available to implement the entire program of recommended measures at one time, a prioritization of those actions is required. This ranking is a forced ordering, and should only be used in as a guideline, not as an absolute ranking.

The method used in this Management Plan is a straightforward one. It is a "decision tree" or "logic tree," developed by the EPA, and published in "Guidance for Assessing and Managing Exposure to Asbestos in Buildings." It was selected as the most easily interpreted rating scheme for the building owner, and one which could easily be reviewed or repeated by a Management Planner at three-year interval reinspections.

The hazard assessment "Decision Tree" can be referenced in the table of contents under the list of attachments. The Management Planner is routed through a set of choices in the decision tree to select on of eight response actions. The actions are numbered one through eight, with one representing the highest priority response. Each of the eight response actions is identified with a descriptive course of action which might include removal, repair, encapsulation, enclosure, or operations and maintenance. The corrective actions are defined in the Asbestos-Containing Materials in Schools Rule (40 CFR 763) as follows:

> **Removal**: Taking out or stripping of substantially all ACBM from a damaged area, functional space, or homogeneous area in a school building.

**Repair**: Returning damaged ACBM to an undamaged condition or intact state. This action is normally limited to localized damage.

**Encapsulation**: The treatment of ACBM with a material that surrounds or embeds the fibers in a matrix to prevent release. There are two types of encapsulants - penetrating and bridging. Penetrating encapsulants bind the fibers together to form a hard mass less susceptible to damage or friability. Bridging encapsulants are applied to the outer surface, forming a hard shell on the surface which reduces the potential for further damage. Both types may be applied by brush or through the use of an airless sprayer.

**Enclosure**: Construction of an essentially airtight, impermeable, permanent barrier around ACBM to control the release of fibers to the air. For example, a solid metal or plywood wall would classify as an enclosure, however carpeting over vinyl-asbestos floor tile, or lay-in acoustical tile over spray-on insulation, would not classify as enclosures.

**Operations and Maintenance (O & M)**: A program of training, work practices, and periodic surveillance designed to maintain the condition of friable ACBM and to prevent further release by minimizing and controlling friable ACBM disturbance or damage. The O & M Program is described in detail in Section 5.

Recommended response actions are developed by the Management Planner based on the assessment described above. The LEA has the final decision on the response actions and priorities to be undertaken. Table T-1 describes the relative advantages and disadvantages of each response action. Factors to be included in the decision are the current and future use of the affected school area, whether further damage could occur, and the availability of funding to implement one of the corrective actions.

Range of Recommended Response Actions

An overview of the range of recommended response actions used by the Management Planner in accordance with AHERA protocol is as follows:

1. Isolate area and restrict access. Remove as soon as possible , or reduce potential for disturbance.

2. Continue O & M. Repair or remove as soon as possible, or reduce potential for disturbance.

3-5. Repair, continue O & M. Number indicates priority if all repairs cannot be done immediately.

6-7. Continue O & M. Take preventive measures to reduce disturbance.

8. Continue O & M until major renovation or demolition requires removal under NESHAPS, or until hazard assessment factors change.

A. Thermal system insulation (TSI).

B. Surfacing ACM.

C. Miscellaneous ACM.

ADMINISTRATION BUILDING
ASBESTOS-CONTAINING MATERIAL LOCATIONS AND RESPONSE ACTIONS

| Homogeneous Material ID Number | Material | Location (ESC location #) | Quantity | Response Action |
|---|---|---|---|---|
| 1a | Air cell pipe insulation | Basement by boiler | 45 LF | Repair or Remove |

Notes: 1. The aircell pipe insulation has open ends. The ends need to be repaired , or the pipe insulation may be removed.

1(D) ACBM Remaining Following Response Actions

All ACBM and assumed ACBM with a hazard rank of 2 or less should be removed or repaired. All ACBM with a hazard rank of 3 to 5 should preferably be removed or repaired to an acceptable condition. All ACBM with a hazard rank of 6 or greater may remain in the building. These materials are either in fair to good condition and require minor or no remediation or are extremely inaccessible to building occupants. ACBM with a rank of 8 or greater may remain in the building indefinitely. These materials must be incorporated into the O & M Plan.

1(E) Location of Damaged and Friable ACBM

All ACBM or assumed ACBM are considered non-friable unless such damage, delamination, air erosion, physical contact, or deterioration can cause said material to potentially release airborne asbestos under moderate hand pressure.

**Basement**

As mentioned above, the aircell pipe insulation located in the basement has open ends. These ends need to be repaired by wrapping with wettable cloth or by application of "diplag". With the ends so repaired, this insulating material may be kept in O & M.

The 1' x 1' white ceiling tile and possible associated glue daubs in the Secretary's office on the second floor need to be considered as asbestos-containing materials until proven otherwise.

SECTION 2
ABATEMENT ACTIONS

2(A) Staging of Abatement Actions

Several considerations must be evaluated when scheduling abatement activities. These factors include:

1. The potential for exposure to occupants of the building.
2. The desirability of completing the work during the summer months when the school in not in session.
3. The desirability of completing the project prior to the start of the heating season, even if the school is in use at the time.
4. The availability of funding to perform the work.
5. The availability of contractors to perform the work.

Based on these factors and the observations made during the inspection of the house/Administration Building, the following schedule is recommended to implement the response actions:

1. Repair or removal: complete by August 2001

## SECTION 4
## CONTRACTOR SELECTION AND PROJECT MONITORING CONCERNS

One of the most important decisions to be made by the New Milford Public Schools new Administration Building is the choice of an asbestos abatement contractor. An experienced, knowledgeable contractor can make an abatement action proceed smoothly. Conversely, a poor contractor could potentially cause greater release of asbestos fibers in the school through improper work practices. This section reviews some of the considerations which should be included in the selection of an abatement contractor.

The use of an engineering firm to serve as "project monitor" during the abatement is highly recommended. The monitor serves as the "eyes and ears" of the building owner before, during and after the completion of an abatement response. The monitor provides quality assurance services including the collection of air samples and visual inspections. This sampling might include the collection of pre-abatement samples to establish a background concentration, sampling during the abatement to assure that no asbestos is leaving the work area, and clearance samples to assure the project has been completed.

The monitor also oversees the contractor to assure that all work is performed in accordance with the schedule and other contractor documents, as well as in accordance with local, state, and federal regulations pertaining to asbestos abatement projects. This section also describes some of the considerations which should be evaluated in the selection of an engineering firm.

Reference the Operations and Maintenance section for Contractor Selection and Engineering Firm Selection criteria.

**EMSL Analytical, Inc.**
17 Haddon Ave., Westmont, NJ 08108
Phone: (856) 858-4800 Fax: (856) 858-4960 Email: ssiegel@EMSL.com

Attn: Jim Scott
EnviroScience Consultants, Inc.
795 North Mountain Road
Newington, CT 06111
Fax: (860) 953-1650 Phone: 860-953-2700
Project: 00-564.10/NEW MILFORD AHERA

Customer ID: ENVI54
Customer PO:
Received: 11/02/00 10:55 AM
EMSL Order: 040018875
EMSL Project ID:
Analysis Date: 11/4/00

## Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Location | Appearance | Treatment | Non-Asbestos % Fibrous | Non-Asbestos % Non-Fibrous | Asbestos % Type |
|---|---|---|---|---|---|---|
| DF-103-01a<br>*040018875-0001* | Basement | Gray/Tan<br>Fibrous<br>Heterogeneous | Teased | 15% Cellulose | 20% Non-fibrous (other) | 65% Chrysotile |
| DF-103-01b<br>*040018875-0002* | Basement | | | | | Not Analyzed |
| DF-103-01c<br>*040018875-0003* | Basement | | | | | Not Analyzed |
| Basement 02a<br>*040018875-0004* | Boiler Chimney | Gray/Brown<br>Non-Fibrous<br>Heterogeneous | Crushed<br>Dissolved | <1% Cellulose<br>2% Synthetic | 98% Non-fibrous (other) | None Detected |
| Basement 02b<br>*040018875-0005* | Boiler Chimney | Gray/Brown<br>Non-Fibrous<br>Heterogeneous | Crushed<br>Dissolved | <1% Cellulose<br>2% Synthetic | 98% Non-fibrous (other) | None Detected |
| Basement 02c<br>*040018875-0006* | Boiler Chimney | Gray/Brown/Rust<br>Non-Fibrous<br>Heterogeneous | Crushed<br>Dissolved | <1% Cellulose<br>2% Synthetic | 98% Non-fibrous (other) | None Detected |
| Basement 03a<br>*040018875-0007* | Basement | Green/Brown<br>Non-Fibrous<br>Heterogeneous | Crushed<br>Dissolved | <1% Cellulose | 100% Non-fibrous (other) | None Detected |
| Basement 03b<br>*040018875-0008* | Basement | Tan/Green/Brown<br>Non-Fibrous<br>Heterogeneous | Crushed<br>Dissolved | <1% Cellulose | 100% Non-fibrous (other) | None Detected |
| Basement 03c<br>*040018875-0009* | Basement | Tan/Green/Brown<br>Non-Fibrous<br>Heterogeneous | Crushed<br>Dissolved | <1% Cellulose | 100% Non-fibrous (other) | None Detected |
| Basement 04a<br>*040018875-0010* | Kitchen | Brown/Tan/Gray<br>Fibrous<br>Heterogeneous | Teased | 30% Cellulose<br>1% Synthetic | 69% Non-fibrous (other) | None Detected |

Analyst(s)
*Scott Combs (27)*

Stephen Siegel, CIH
or other approved signatory

EMSL Analytical, Inc.
17 Hadden Ave., Westmont, NJ 08108
Phone: (856) 858-4800 Fax: (856) 858-4860 Email: ssiegel@EMSL.com

Attn: Jim Scott
EnviroScience Consultants, Inc.
795 North Mountain Road
Newington, CT 06111
Fax: (860) 953-1860 Phone: 860-953-2700
Project: 00-564.10/NEW MILFORD AHERA

Customer ID: ENVI54
Customer PO:
Received: 11/02/00 10:55 AM
EMSL Order: 040018875
EMSL Project ID:
Analysis Date: 11/4/00

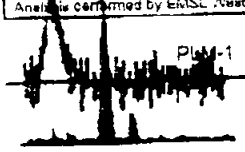
## Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| Sample | Location | Appearance | Treatment | Non-Asbestos % Fibrous | Non-Asbestos % Non-Fibrous | Asbestos % Type |
|---|---|---|---|---|---|---|
| Basement 04b<br>040018875-0011 | Kitchen | Brown/Tan/Gray Fibrous Heterogeneous | Teased | 30% Cellulose<br>1% Synthetic | 69% Non-fibrous (other) | None Detected |
| Basement 04c<br>040018875-0012 | Kitchen | Brown/Tan/Gray Fibrous Heterogeneous | Teased | 30% Cellulose<br>1% Synthetic | 69% Non-fibrous (other) | None Detected |
| DF-1030-05a<br>040018875-0013 | 1st Floor Under kitchen | Black/Gray Fibrous Heterogeneous | Teased Dissolved | 65% Cellulose<br>1% Synthetic | 34% Non-fibrous (other) | None Detected |
| DF-1030-05b<br>040018875-0014 | 1st Floor Under kitchen | Black/Gray Fibrous Heterogeneous | Teased Dissolved | 65% Cellulose<br>1% Synthetic | 34% Non-fibrous (other) | None Detected |
| DF-1030-05c<br>040018875-0015 | 1st Floor Under kitchen | Black/Gray Fibrous Heterogeneous | Teased Dissolved | 65% Cellulose<br>1% Synthetic | 34% Non-fibrous (other) | None Detected |
| DF-1030-06a<br>040018875-0016 | 1st Floor kitchen | Gray/Tan Non-Fibrous Layer # 2 | Crushed Dissolved | | 100% Non-fibrous (other) | None Detected |
| DF-1030-06b<br>040018875-0017 | 1st Floor kitchen | Gray/Tan Non-Fibrous Layer # 2 | Crushed Dissolved | | 100% Non-fibrous (other) | None Detected |
| DF-1030-06c<br>040018875-0018 | 1st Floor kitchen | Gray/Tan Non-Fibrous Layer # 2 | Crushed Dissolved | | 100% Non-fibrous (other) | None Detected |
| DF-1030-07a<br>040018875-0019 | 1st Floor Bathroom | Tan/Gray/Gold Fibrous Layer #2 | Teased Dissolved | 10% Cellulose<br>3% Glass | 87% Non-fibrous (other) | None Detected |
| DF-1030-07b<br>040018875-0020 | 1st Floor Bathroom | Tan/Gray/Gold Fibrous Layer # 2 | Teased Dissolved | 10% Cellulose<br>3% Glass | 87% Non-fibrous (other) | None Detected |

Analyst(s)
Scott Combs (27)

Stephen Siegel, CIH
or other approved signatory

PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Negative PLM results cannot be guaranteed. Samples reported as <1% or none detected should be tested with TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government.
Analysis performed by EMSL Westmont (NVLAP #101048-0), NY ELAP 10872



**EMSL Analytical, Inc.**
7 Haddon Ave., Westmont, NJ 08108
none: (856) 858-4800 Fax: (856) 858-4960 Email: ssiegel@EMSL.com

Attn: Jim Scott
EnviroScience Consultants, Inc.
795 North Mountain Road
Newington, CT 06111
Fax: (860) 953-1650 Phone: 860-953-2700
Project: 00-564.10/NEW MILFORD AHERA

Customer ID: ENVI54
Customer PO:
Received: 11/02/00 10:55 AM
EMSL Order: 040018875
EMSL Project ID:
Analysis Date: 11/4/00

## Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | | Non-Asbestos | | | Asbestos |
|---|---|---|---|---|---|---|---|
| Sample | Location | Appearance | Treatment | % Fibrous | | % Non-Fibrous | % Type |
| DF-1030-07c<br>*040018875-0021* | 1st Floor Bathroom | Tan/Gray/Gold Fibrous Layer # 2 | Teased Dissolved | 10% Cellulose<br>3% Glass | | 87% Non-fibrous (other) | None Detected |
| DF-1030-08a<br>*040018875-0022* | 1st Floor kitchen stairway to basement | Gray/Tan/Brown Non-Fibrous Heterogeneous | Crushed Teased | 2% Cellulose<br>2% Hair | | 96% Non-fibrous (other) | None Detected |
| DF-1030-10b<br>*040018875-0023* | 2nd Floor stairway to attic | Gray/Tan Non-Fibrous Heterogeneous | Crushed Teased | <1% Cellulose<br>1% Hair | | 99% Non-fibrous (other) | None Detected |
| DF-1030-08c<br>*040018875-0024* | 1st Floor closet | Gray/Tan/Brown Non-Fibrous Heterogeneous | Crushed Teased | 1% Cellulose<br>2% Hair | | 97% Non-fibrous (other) | None Detected |
| F-1030-09a<br>*040018875-0025* | 1st Floor kitchen stairway to basement | Gray/Tan Non-Fibrous Heterogeneous | Crushed Teased | 2% Cellulose<br>2% Hair | | 96% Non-fibrous (other) | None Detected |
| DF-1030-11b<br>*040018875-0026* | 2nd Floor stairway to attic | Gray/Tan Non-Fibrous Heterogeneous | Crushed Teased | 1% Cellulose<br>2% Hair | | 97% Non-fibrous (other) | None Detected |
| DF-1030-09c<br>*040018875-0027* | 1st Floor north east closet | Gray/Tan Non-Fibrous Heterogeneous | Crushed Teased | 1% Cellulose<br>2% Hair | | 97% Non-fibrous (other) | None Detected |

Analyst(s)
*Scott Combs (27)*

Stephen Siegel, CIH
or other approved signatory





04001887 5

# EnviroScience Consultants Inc.

Environmental Engineering ◆ Industrial Hygiene ◆ Laboratory Services

Office Locations:
Newington, CT
Greenwich, CT
Boston, MA

## SAMPLE LOG FOR ASBESTOS BULKS

Sheet No. 1 of 3

Project Name: New Milford AHERA
Building: New Administration location 354 Danbury Road

Project Number: 00-56412
Project Manager: Jim Scott

| Sample ID Number | Sample Location | Material Type | Result (%) |
|---|---|---|---|
| DF-1032-01a | Basement by ceiling joists | Pipe Insulation | 65% chrysotile |
| 01b | | | NVLAP Analytical |
| 01c | | | ND |
| Basement 02a | By boiler chimney flue cement | Chimney Flue cement | |
| 02b | | | |
| 02c | | | |
| 03a | window glazing interior basement | window glazing | |
| 03b | | | |
| 03c | | | |
| 04a | Kitchen under sink linoleum under 12"x12" white floor tile | Linoleum, brown 2nd layer | |
| 04b | 1st floor | | |
| 04c | | | |

11/4/00

Analysis Method: ☒ PLM ☐ Other _____

Turnaround Time 48 hr

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____. Please call the EnviroScience Laboratory at 860-953-2700 if analyses will be late.

Fax Results To: EnviroScience Consultants Inc. Laboratory at 860-953-1850

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted.

Samples Collected By: DF Date: 10-30-00 Time: 4:30pm

Samples Recd/Sent By: [illegible] Date: 10/31 Time: 0800

Samples Received By: [illegible] Rogelo Date: _____ Time: _____

Shipped To: ☒ EMSL ( Region NJ ) ☐ Other _____

Method of Shipment ☐ UPS Regular ☐ UPS Overnight ☒ Fed Ex. ☐ Other _____

CAD c:\current\biocrs\techform-asb\09.18.97 11:20cm

795 North Mountain Road, Newington, Connecticut 06111
Phone: 860-953-2700 Fax: 860-953-3203

0400188 75

# EnviroScience Consultants inc.

Environmental Engineering ◆ Industrial Hygiene ◆ Laboratory Services

Office Locations:
Newington, CT
Greenwich, CT
Boston, MA

SAMPLE LOG FOR ASBESTOS BULKS

Sheet No. 2 of 3

Project Name: New Milford AHERA
Building: New Administration location
354 Danbury Rd

Project Number: 00-564.10
Project Manager: Jim Scott

| Sample ID Number | Sample Location | Material Type | Result (%) |
|---|---|---|---|
| AF-1030-05a | 1st Floor under kitchen SINK | 3rd layer white linoleum | ND |
| 05b | | | |
| 05c | | | |
| 06a | 1st Floor kitchen | (12" x 12" white floor tile (top layer) | |
| 06b | | | |
| 06c | | | |
| 07a | 1st Floor bathroom closet | linoleum (one layer) white & yellow dots | |
| 07b | | | |
| 07c | | | |
| 08a | 1st Floor kitchen stairway to basement | Skim coat plaster | |
| 10b | 2nd Floor stairway to attic | | |
| 08c | 1st Floor North East closet space | | |

Analysis Method: ☒ PLM ☐ Other _____ Turnaround Time _____

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____. Please call the EnviroScience Laboratory at 860-953-2700 if analyses will be late.

Fax Results To: EnviroScience Consultants Inc. Laboratory at 860-953-1850

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted.

Samples Collected By: D.F. Date: 10-30-00 Time: 4:30 pm.

Samples Rec'd/Sent By: _____ Date: _____ Time: _____

Samples Received By: D. Rogers Date: _____ Time: _____

Shipped To: ☒ EMSL ( Region NJ ) ☐ Other _____

Method of Shipment: ☐ UPS Regular ☐ UPS Overnight ☒ Fed Ex. ☐ Other _____





795 North Mountain Road, Newington, Connecticut 06111
Phone: 860-953-2700 Fax: 860-953-3203

040018875

# EnviroScience Consultants Inc.

Environmental Engineering ◆ Industrial Hygiene ◆ Laboratory Services

Office Locations:
Newington, CT
Greenwich, CT
Boston, MA

## SAMPLE LOG FOR ASBESTOS BULKS

Sheet No. 3 of 3

Project Name: New Milford AHERA
Building: New Administration location
354 Danbury Rd

Project Number: 00-56410
Project Manager: Jim Scott

| Sample ID Number | Sample Location | Material Type | Result (%) |
|---|---|---|---|
| 09a | 1st Floor kitchen stairway to basement | Rough coat-plaster | ND |
| 11b | 2nd Floor stairway to attic | ↓ | ↓ |
| 09c | 1st Floor North East closet | | |

10 NOV 2 AM 10:55

Analysis Method: ☒ PLM ☐ Other _____

Turnaround Time 5D

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____. Please call the EnviroScience Laboratory at 860-953-2700 if analyses will be late.

Fax Results To: EnviroScience Consultants Inc. Laboratory at 860-953-1850

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted.

Samples Collected By: D.F. Date: 10-30-00 Time: 4:30 pm

Samples Recd/Sent By: _____ Date: _____ Time: _____

Samples Received By: D. Rogers Date: _____ Time: _____

Shipped To: ☒ EMSL ( Region NJ ) ☐ Other _____

Method of Shipment: ☐ UPS Regular ☐ UPS Overnight ☒ Fed Ex. ☐ Other _____

CAD c:\current\blocks\leanform-iso\05.18.97.11:20am

795 North Mountain Road, Newington, Connecticut 06111
Phone: 860-953-2700 Fax: 860-953-1203

EnviroScience Consultants inc

Environmental Engineering ÷ Industrial Hygiene ÷ Laboratory Services

# Work Site Diagram

Project Number: 005616

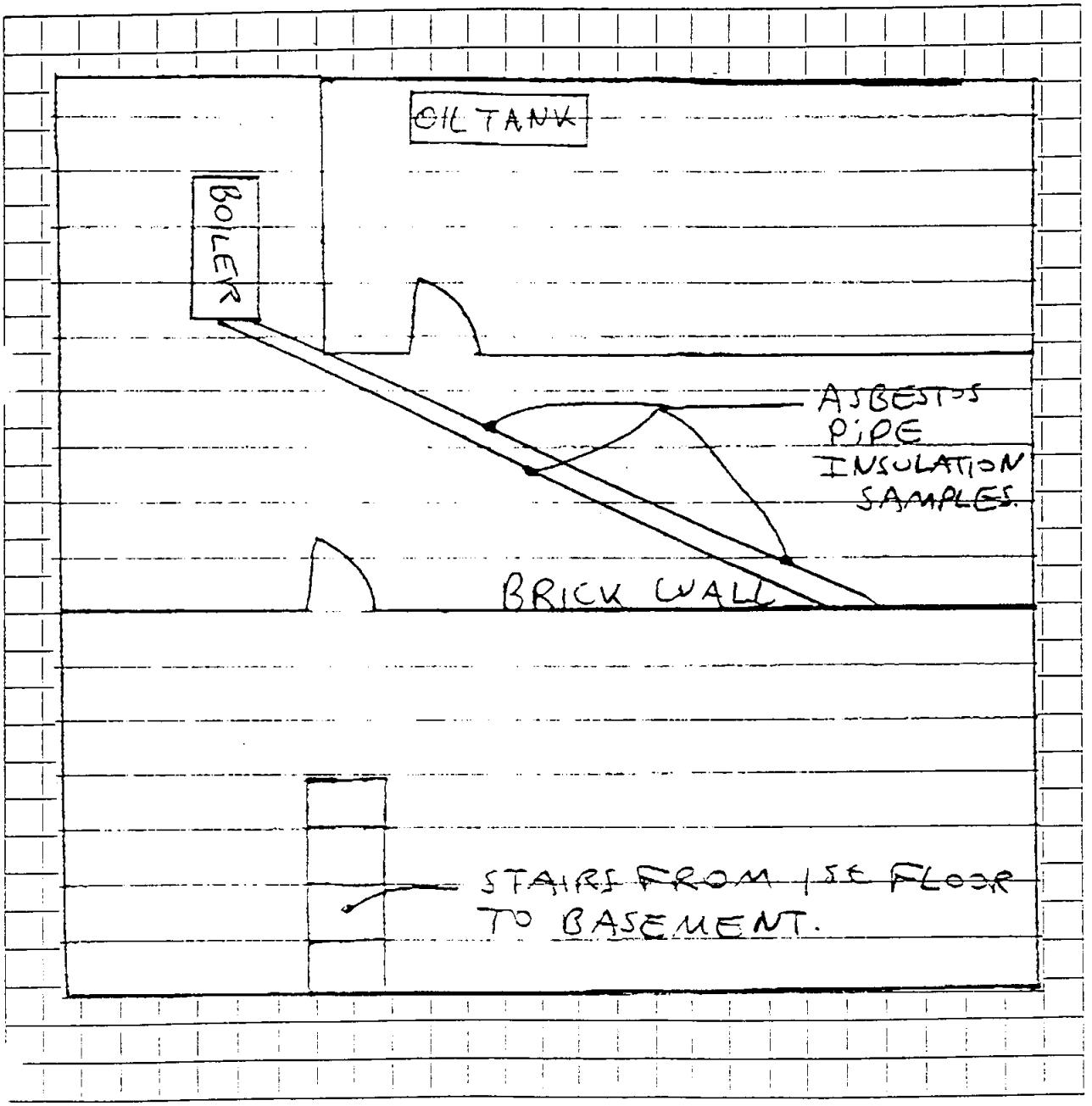
Project Name: New Milford Schools - Init'l AHERA Survey

Work Area: BASEMENT

Building Identification / Address: 386 Danbury Rd (New Admin Bldg)

Amount of Material Removed:

Comments:




BASEMENT

EnviroScience Consultants inc

Environmental Engineering ◆ Industrial Hygiene ◆ Laboratory Services

**Work Site Diagram**

Project Number: 00564.10

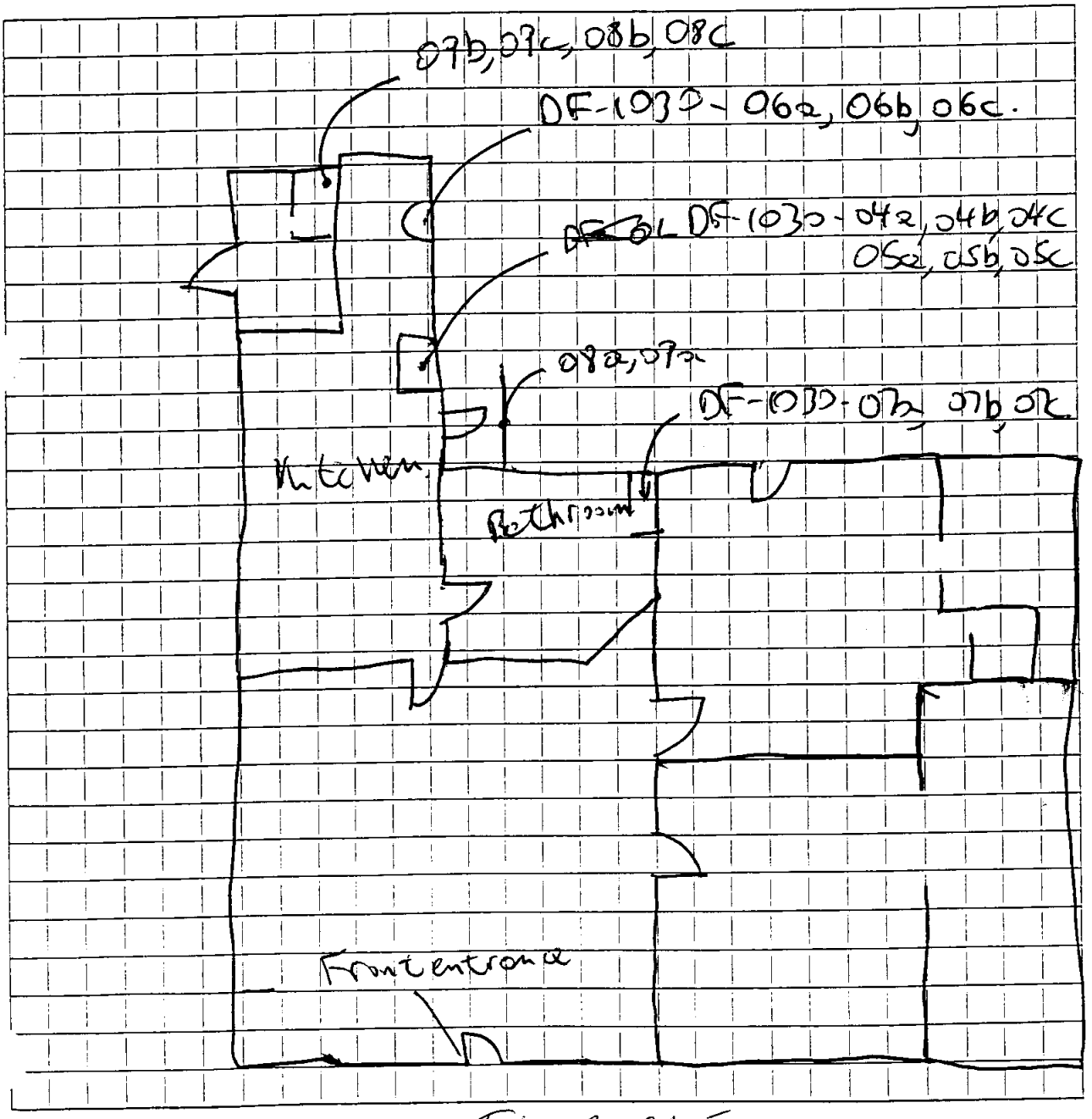
Project Name: Administration Bldg. – Initial AHERA Survey

Work Area: 1st Floor.

Building Identification / Address: 386 Danbury Rd, New Milford

Amount of Material Removed:

Comments:




FLOOR ONE

EnviroScience Consultants inc

Environmental Engineering ◆ Industrial Hygiene ◆ Laboratory Services

# Work Site Diagram

**Project Number:** 005641 0

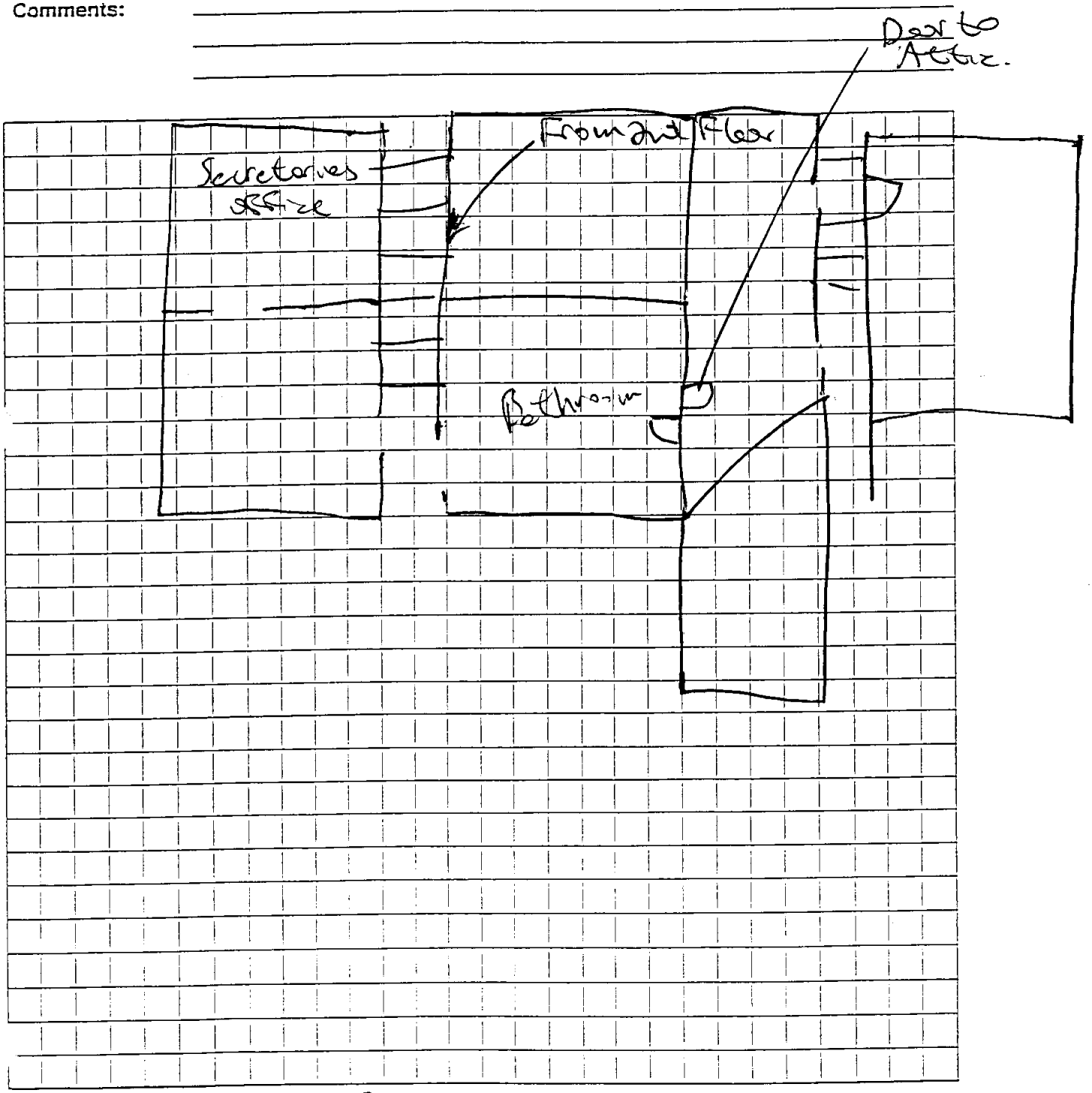
**Project Name:** New Milford Schools - Initial AHERA Survey

**Work Area:** 3rd Floor, 2nd Floor.

**Building Identification / Address:** 386 Danbury Rd, New Milford CT

**Amount of Material Removed:**

**Comments:**




FLOOR TWO

# STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT
THE INDIVIDUAL NAMED BELOW IS LICENSED
BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT - INSP / MGMT - PLANNER

JAMES L SCOTT

LICENSE NO.
000038

CURRENT THROUGH
08/31/01

VALIDATION NO.
00-384615

SIGNATURE

COMMISSIONER / DEPT. OF PUBLIC HEALTH

APPENDIX I

OPERATIONS AND MAINTENANCE
WITH ATTACHMENTS

TABLE OF CONTENTS



List of Attachments

**Forms/Tables**

# KEY TO ABBREVIATIONS

## Materials for Construction

| | |
|---|---|
| LAT | Lay-in Acoustical Tile (Drop Ceiling) |
| CB | Cinderblock or concrete block |
| VAT | Vinyl Asbestos Tile |
| FG | Fiberglass insulation |
| BR | Brick |
| GT | Glazed Tile |
| SR | Sheet Rock |
| WD | Wood |

## Heating System

| | |
|---|---|
| CMR | Ceiling Mounted Radiator |
| WMR | Wall Mounted Radiator |
| FMR | Floor Mounted Radiator |
| HW/CW | Hot Water/Cold Water Supply |
| T1 | Magnesium Silicate Type ACBM Pipe Insulation |
| T2 | Air Cell Type ACBM Pipe Insulation |
| T3 | Millboard Type ACBM Pipe Insulation |
| T4 | Magnesium Silicate Board Type ACBM Insulation (on boilers, breeching, hot water tanks, etc.) |

## ACBM Condition

| | |
|---|---|
| ND | No Damage |
| SLD | Slight Damage |
| D | Damage |
| SD | Significant Damage |
| PD | Potential Damage |
| PSD | Potential Significant Damage |

## ACBM Quantities

| | |
|---|---|
| LF | Linear Feet |
| SF | Square Feet |

## KEY DEFINITIONS

Several key definitions are listed for the benefit of the reader. These definitions are taken from 40 CFR Part 763. For additional detail, the reader should refer to the "Asbestos Containing Materials in Schools" Rule.

1. **Asbestos-Containing Building Material (ACBM)** - Thermal system ACM, surfacing ACM, and miscellaneous ACM in or on interior parts of the school building. (For purposes of the standard, this is limited to items which are part of the structure of the building, exterior hallways, porticos, and mechanical systems.)

2. **Damaged or Significantly Damaged Thermal System ACM** - ACM on pipes, boilers, etc., where the insulation has lost its structural integrity or its covering, is crushed, gouged, punctured, missing, or not intact. As a rule, local damage over 25 percent of the surface, or damage over 10 percent of the total surface would classify insulation in this category as significantly damaged.

3. **Damaged Friable Surfacing ACM** - ACM which has deteriorated or sustained physical injury such that it lacks adhesion to the substrate (underlying layer) or fiber cohesion (binding).

4. **Miscellaneous ACM** - Includes a variety of materials in buildings such as vinyl flooring, fire-resistant gaskets and seals, asbestos cement, transite paneling.

5. **Significantly Damaged Friable Surfacing ACM** - Surfacing material where the damage is extensive and severe. Again, local damage over 25 percent of the surface, or damage over 10 percent of the total surface would classify insulation as significantly damaged.

6. **Friable** - The material, when dry, may become crushed, crumbled, pulverized, or damaged when moderate hand pressure is exerted.

7. **Functional Space** - A room, or group of rooms, or common area (such as a pipe tunnel, or air space above a drop ceiling), cafeteria, gymnasium, or common hallway.

8. **Homogeneous Area** - An area of insulation which is uniform in color and texture (i.e., pipe lagging which travels through several classrooms).

9. **Surfacing Material ACM** - Material in a school building which is sprayed-on, troweled-on, or applied to wall or ceiling surfaces for acoustical or fireproofing purposes.

## CONTRACTOR SELECTION SPECIFICATIONS

While bid cost is certainly an important consideration in the selection of an abatement contractor, it must not be the only consideration. Careful planning and preparation are the most important keys to a successful project. Adequate information must be provided to the contractor to permit a bid, and certain information must be obtained from the final bidder or bidders before an award is made.

1. Previous experience with the contractor on similar projects at the facility which define the contractor's abilities. The contractor should demonstrate reliability through submission of a list of references. Preferably, the contractor should have a minimum of three years of experience, and be able to provide a list of ten references. At least three of these should be on projects of similar scope and size as the one proposed.
2. The contractor should maintain and provide a copy of the comprehensive general liability and professional liability (errors & omissions) insurance policies, stating the insurer, policy number, type of coverage, aggregate amount, and expiration date. Policies for worker compensation, and driver/vehicle insurance should be provided as well. Review the policies with your legal counsel.
3. The contractor should provide a complete list of the training courses attended by the person who will serve as site supervisor for the project. The firm should provide evidence that all workers have completed the requirements for worker training, and that both workers and supervisor are certifiable in the State of Connecticut.
4. The contractor should provide a copy of the written standard operating procedure, and work practice, including specific references to OSHA and EPA standards.
5. The contractor should comply with all current and proposed asbestos abatement regulations in the State of Connecticut.
6. The contractor should provide a description of all projects which have been terminated prematurely, and the circumstances surrounding the termination.
7. The contractor should provide a list of any citations levied against the contractor by local, state, or federal agencies for violations related to asbestos abatement. The contractor should also provide a description of any legal proceedings, lawsuits, or claims in reference to asbestos abatement.
8. The Administration Building and the selected contractor should take special care to assure that there is understanding and acceptance of the terms and conditions of the contract by both parties prior to the start of any work.

Most importantly, the Asbestos Program Manager should have effective communication and a sense of confidence in the ability of the contractor, and have a good working relationship with the primary contact at the firm.

## ENGINEERING FIRM SELECTION

As with the contractor, there are several considerations in the selection of the engineering representative.

1. As stated, the firm is the liaison between the building owner and the abatement contractor, and will be in daily communication with the building owner on the status of the project. Effective communication, and a sense of confidence in the ability of the engineering firm should be the most important criterion.
2. Persons involved with the project on-site should be licensed as and have attended approved training courses as a Project Monitor and be supported by licensed Project Designer.
3. Previous experience with the engineering firm on similar projects at the facility which define the firm's abilities. Firms should demonstrate reliability through submission of a list of references. Preferably, the engineering firm or principal assigned to the project should have as minimum of two years of experience in monitoring similar projects.
4. The engineering firm should provide a copy of the comprehensive general liability, and professional liability (errors and omissions) insurance, stating the insurer, policy number, type of coverage, aggregate amount, and expiration date. Policies for worker compensation and drive/vehicle insurance should be examined as well. Review all policies with your legal counsel.
5. The laboratory used by the engineering firm should be licensed in the State of Connecticut to perform asbestos fiber counting. The laboratory should participate in the NIOSH Proficiency Analytical Testing program, and be accredited by the American Industrial Hygiene Association (AIHA), or the individual performing the fiber counting be listed in the AIHA Asbestos Registry.
6. The individual providing on-site support should be an industrial hygienist by training, or should be under the direction of a full-time industrial hygienist. All training shall comply with 40 CFR 763.

## OPERATIONS AND MAINTENANCE

The Local Education Agency (LEA) shall implement an operations, maintenance, and repair (O&M) program whenever any friable ACBM is present or assumed to be present in a building (Section 763.91(a)). The Operations and Maintenance Program is an integral part of the management plan in any school where asbestos-containing building materials are present. The goal of the O&M program is to establish a set of work practices and housekeeping procedures designed to minimize the potential for workers and occupants of the building to be exposed to asbestos. This program remains in effect as long as ACBM remains in the building, and will be updated to reflect any changes in the location, condition, damage, or potential for exposure to ACBM.

The specific objectives of the O&M program are to develop and provide worker training and work practices which minimize disturbance of asbestos during routine maintenance activities; a plan to perform emergency repair, encapsulation, and enclosure of ACBM, as well as to clean up small amounts of asbestos debris on floors and other surfaces. The O&M programs generally focus on the maintenance and custodial staff's performing routine activities in the building, rather than large-scale abatement projects which will be performed by abatement contractors.

In each school, all custodial employees will be included in the O&M program. One or more maintenance employees for the school should be designated as emergency repairs are required. O&M work practices are tailored to four types of projects: 1) those which are likely to involve any contact with ACBM, 2) those which may cause accidental disturbance of ACBM, 3) those which involve small scale manipulation or removal of ACBM, and 4) those which involve large scale manipulation or removal of ACBM.

The O&M program contains eight major segments as follows:

1. A written plan defining the objectives and goals of the program.
2. All occupants of the building are notified of the presence of ACBM, and the results of the survey.
3. Employee training and education.
4. Scheduling of O&M activities.
5. Establishment of good work practices and procedures for cleaning, maintaining, renovating, remodeling, and repairing buildings where ACBM is present.
6. Development and implementation of a respiratory protection and medical surveillance program.
7. Reinspection and periodic surveillance of ACBM remaining in the building, noting any changes in conditions.
8. Maintenance of accurate records of all activities involving ACBM.

## 5.1 Written Program

Once asbestos is identified in the building, and the decision is made to leave the ACBM in the building, the O&M program, under the direction of the LEA's Designated Person, identifies all asbestos-related activities.

The written program for the Administration Building is based upon a physical inspection of the school which occurred December 30, 1996. The inspection report provides an historical documentation for the school and identifies the location and condition of all ACBM and records of previously documented abatement activities.

Notification: All occupants of the building must be notified of the presence of ACBM. Administrators of primary and secondary schools are required to inform employees and parent-teacher groups about friable ACBM and to distribute specified instructions on handling ACBM to custodial and maintenance workers. This training will take place through the use of signs, information sessions, and distribution of notices. (The Notification was issued on May 5, 1998.)

Training: All maintenance and custodial workers will be trained in special procedures and work practices designed to minimize disturbances of ACBM, as well as the potential for exposure during routine maintenance activities. Levels of training will depend upon the nature of the task and the potential for disturbing ACBM. Training sessions are identified as a two-hour "general awareness" session and an additional fourteen hour comprehensive training session. (Training was conducted on May 1, 1998.)

Reinspection: Periodic surveillance of all remaining ACBM is an important portion of any O&M program. This reinspection is performed semi-annually, at a minimum, to assess whether any physical changes have occurred in the condition of the ACBM. Reinspection by a licensed, accredited inspector is required at three year intervals until all ACBM has been removed from the school.

### 5.1.1 Implementation

Each school should identify one Asbestos Program Manager, who will be responsible for all the asbestos related tasks performed by maintenance personnel or short duration workers which are specific to that school. Please keep in mind that if duties are delegated from the Designated Person to a Program Manger, this person must, at a minimum, receive the same training as the Designated Person. Examples of duties of an Asbestos Program Manager could be as follows:

1. Arrange and coordinate training of all custodial and maintenance staff and arrange for annual updates for new personnel since the previous training program. Ensure that new custodial or maintenance personnel are trained within 60 days of starting employment.

2. Arrange for abatement procedures identified in the abatement/response section.
3. Comply with all applicable local, state, OSHA, and EPA regulations pertaining to removal, repair, or enclosure of asbestos.
4. Coordinate routine maintenance activities by in-house maintenance personnel.
5. Make a decision in conjunction with the Designated Person to retain outside contractors in the event of a major release episode or major planned abatement activities. Coordinate all work by outside firms during these periods.
6. Ensure that short-term workers (non-school employees) who may come in contact with asbestos are provided information regarding the locations of ACBM and suspect ACBM.
7. Ensure that workers and building occupants are informed annually about inspections, response actions, and post-response actions, including periodic reinspection and surveillance activities.
8. Establish and implement a respiratory protection and medical surveillance program for all affected custodial and maintenance employees.
9. Obtain and maintain all specialized equipment needed to implement this plan, including HEPA vacuums, disposable coveralls, respirators, etc.
10. Monitor all remaining ACBM in the building and maintain all required warnings, notifications, signs, labels, and records as required by the EPA and OSHA.

## 5.2 Building Occupant Notification

One of the most important aspects provided under the O&M program is the notification of affected persons that ACBM is present in the school building. There are specific requirements on transfer of this information. Notification may take place through posting of signs and labels, through information sessions, and by providing written notification (Section 40 CFR 763.84c).

1. The EPA requires that the LEA of primary and secondary schools notify employees and parent-teacher groups about the presence of friable ACBM and to provide specific handling instructions to custodial and maintenance workers (Asbestos-Containing Materials in Schools; Identification and Notification Rule 40 CFR 763.100-763.119).

2. Both EPA and OSHA require the LEA to notify all building occupants, the parents of school children, and contractors working in the building of the presence of ACBM, any abatement plans, and the location of the management plan for the

school. Parent, teacher, and employee organizations must be notified at the time of submittal to the Governor, and at least annually thereafter about the availability of the management plans.

3. The OSHA Asbestos Construction Standard and Hazard Communication Standard require notification of all contractor employees and school custodial and maintenance personnel of the potential to come in contact with asbestos. (29 CFR 1923.58 and 29 CFR 1910.120) AHERA extends coverage of the EPA Worker Protection Rule (40 CFR 763) to maintenance and custodial personnel in schools which are not covered by the OSHA Construction Standard. New maintenance employees must be informed and/or trained within 60 days of beginning work. The Designated Person or Asbestos Program Manager should notify the contractor in writing and receive written acknowledgment that all employees of the contractor have been informed.

   If the contractor is involved with the asbestos abatement activities, the written notification from the contractor must include the training and licensing of the asbestos workers and supervisor.

4. Warning labels must be placed on ACBM and suspected ACBM assumed to be ACM located in routine maintenance areas (such as boiler rooms) at each school building. The signs are placed in accessible locations to alert and remind building occupants not to disturb ACBM. The labels must be placed on entrance doors to utility and mechanical rooms. The labels must say:

   CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND PROTECTIVE EQUIPMENT. AUTHORIZED PERSONNEL ONLY. (40 CFR 763.95)

5.3 Employee Training and Education

All custodial and maintenance staff and contract employees who work in the school system must be trained to use special work practices and procedures in handling asbestos. Training for other school personnel who may occasionally pass through areas where asbestos is present, such as teachers and office personnel, is voluntary but recommended. Interested parents or representatives of parent-teacher groups may also be invited at the discretion of the LEA.

1. Training takes place on two levels. The first is a two-hour "general awareness" session which must be attended by <u>all</u> maintenance and custodial personnel regardless of whether they work with asbestos and may include the other persons identified above. It is recommended that this session be given annual. The two-hour session includes the following topics:
   a. Information on the uses and forms of asbestos in the schools.
   b. Health effects associated with asbestos exposure.

c. Detection, identification, and assessment of asbestos.
d. Options for controlling ACBM.
e. Asbestos management programs.
f. Relevant federal and state regulations concerning asbestos, including those in subpart E of the Act, and those of the Occupational Safety and Health Administration, U. S. Department of Labor, the U. S. Department of Transportation, and the U. S. Environmental Protection Agency.

2. The Administration Building should identify one custodial or maintenance employee whose activities may include assignments which affect the disturbance of ACBM, or who may be involved in emergency asbestos repairs. This employee(s) must have an additional fourteen (14) hours of training. This training should be repeated at three-year intervals or when a new employee is involved. This session should include the following:
   a. The overall scope and direction of the asbestos program for the Intensive Education Academy.
   b. The requirements of the Operations and Maintenance program.
   c. Methods and procedures for handling and disposing of ACBM.
   d. Proper selection and use of respiratory protection and protective clothing.
   e. The availability and use of special cleaning equipment such as HEPA vacuums, steam cleaners, etc.
   f. Hands-on training in the proper use of respirators, protective equipment, work practices, and control of asbestos fiber release.
   g. Recordkeeping requirements and generation of Work Orders through the Asbestos Program Manager.
   h. Training requirements under the ACT and any additional state or local requirements. Records must be maintained for each employee's training, indicating the date, location, course content, trainer(s), and any certifications issued from the training.

The regulations only specify that the Designated Person be properly trained in the hazards of asbestos and other related topics. Attendance of a 24-hour training program by the Designated Person and/or Asbestos Program Manager, if applicable, is strongly recommended.

## 5.4 Work Practices for Cleaning, Maintenance and Renovation

This section describes the special work practices and procedures which are used by the maintenance personnel. The training is important to minimize fiber release. Cleaning conducted carelessly may cause damage to ACBM, releasing more fibers.

Cleaning: Cleaning activities are described as initial cleaning, periodic cleaning, minor release episodes, and major release episodes. All cleaning must be performed by a person who is at least qualified as an "asbestos associated project worker."

Initial Cleaning: The initial cleaning is to remove all asbestos debris from floors, walls, and other surfaces in areas where asbestos may have settled. This includes HEPA vacuuming of carpets and floors and wet cleaning of walls and surfaces. This is performed once before the O&M program starts in schools where damaged or significantly damaged thermal insulation is present.

Periodic Cleaning: HEPA vacuuming of affected areas as described above should be performed semi-annually in areas of buildings where damaged thermal system insulation is present.

The following is a list of equipment and supplies which is required to perform small scale manipulation or cleaning projects:

1. Respirators, both half and full face, NIOSH/MSHA approved for asbestos (with High Efficiency Particulate Absolute or HEPA filters).
2. Disposable protective clothing with hoods and booties.
3. High efficiency particulate air filter vacuum cleaner (HEPA vacuum).
4. Glove bags and tools for removal of pipe insulation.
5. Six-mil plastic sheeting for enclosing work area.
6. Airless spray pump for sealants and encapsulants.
7. Asbestos caution signs for posting the work area.
8. Labeled asbestos disposal bags.
9. Sealants for encapsulation.
10. Wettable glass cloth for sealing/repairing pipe, breeching, or other insulation.
11. Rubber gloves for mixing/applying glass cloth adhesive.
12. Surfactants and wetting agents to prevent fiber releases during manipulation or clean-up operations.
13. Duct tape for emergency repair of pipe, boiler, etc. insulation.
14. Wood to construct containment structures if necessary.

Minor release episodes occur when less than three square feet or three linear feet of ACBM falls or is damaged or when small amounts of debris fall on the floor, walls, or pipes. These releases may be handled by the appointed maintenance staff. The following procedure should be used:

1. Restrict access to the area during cleanup. Post signs and use stanchions or barriers to keep out others.
2. The proper protective equipment should be used, including full length Tyvek coveralls and respiratory protection.

3. Any asbestos debris on the floor, walls, or pipes should be thoroughly wetted, carefully shoveled up, and placed in a six-mil asbestos disposal bag.
4. The area should then be HEPA-vacuumed or steam cleaned. All debris, cleaning supplies, vacuum bags, protective clothing, etc., should be placed in the disposal bag.
5. Any damaged areas must be cleaned and repaired with asbestos-free materials.
6. Clean all surfaces, fixtures, or other components in the immediate work area with HEPA vacuum or wet cleaning.

Major release episodes occur when more than three square feet or linear feet of asbestos falls or is damaged, or when large amounts of debris fall on the floor, pipes, etc. The following procedure should be used:

1. Immediately restrict access or prevent entry, post warning signs, and block off access by means of stanchions or barriers.
2. Notify the Designated Person and/or the Asbestos Program Manager for the Administration Building.
3. Shut off the air handling equipment in the area of the release and cover or block air supply and air return vents to prevent spread of the asbestos.
4. The Designated Person and/or the Asbestos Program Manager will assess the situation and design the complete response action, including notification of an outside contractor, selection of proper personnel protective equipment, and, if necessary, make arrangements for evacuation of the school or a portion of the school.

There may also be emergency major release episodes which occur before, during, or after occupancy of the school building by students, such as a hallway ceiling falling during classroom change. Immediate evacuation of the school, notification of the Superintendent's office, as well as the State of Connecticut Department of Public Health and the EPA Program for Region I in Boston would be required. The cleanup program would then be implemented, using an outside contractor. Actions to minimize student exposure would include showering or HEPA vacuuming of clothing, and covering the floor with plastic to prevent trampling. Heavily contaminated clothing would be disposed of as contaminated.

Maintenance: There are three levels of maintenance activities which might involve asbestos: accidental disturbance of ACBM; small scale repair or removal of ACBM; and large scale repair or removal of ACBM. All maintenance activities which might cause accidental disturbance of ACBM, small scale manipulation of ACBM, or large scale manipulation of ACBM should only be performed by the designated individuals having the 14-hour training course.

The small scale manipulation is considered a "small-scale, short-duration" project for purposes of AHERA. In the State of Connecticut, this is defined as three linear feet or three square feet of ACM. The intent of this type of project is to allow the trained custodial or maintenance person to perform the work while school remains in operation during a removal. Typical activities defined by AHERA to be "small-scale, short-duration" include removal of one glovebag of pipe lagging or fittings, replacement of ACM gaskets on a valve, installation or removal of a small section of asbestos-containing dry wall, using an abrasive pad on a floor polisher to clean a floor surface prior to waxing, drilling of holes through transite paneling, replacement of lights near ACM, replacement of lay-in acoustical tile which either contains ACM or is underneath known or suspect ACM, or installation of electrical conduits through or near ACBM. To meet the exemption, the project must have one of the acceptable removal techniques which include glovebag, mini-enclosure, entire structure removal, or enclosure. Before <u>any</u> small scale manipulation of ACBM is performed, the custodian or maintenance person will assure that the following steps are taken:

1. All contaminated objects are wet-wiped or HEPA vacuumed and the general area itself cleaned or HEPA vacuumed.
2. All moveable objects should be removed from the work area and non-moveable objects covered with six-mil plastic.
3. The floor, and if required, the walls covered with two layers of six-mil plastic extending well beyond the repair area and secured with duct tape or adhesive spray.
4. During any removal or repair, the work area should be thoroughly and frequently wetted with amended water, except where water cannot be used for safety reasons, such as near live electrical equipment.

Glovebag use should be taught as part of the 14-hour course, including proper training in glovebag removal. Mini-enclosures are used on short lengths of pipe where glovebags cannot be used. The mini-enclosure is used for one worker and is constructed of plastic sheeting around a frame, with a built-in changing area, built around the location of the work, such as a pipe or ceiling. Negative air may be maintained in the mini-enclosure by means of a HEPA vacuum. Protective equipment requirements and proper work practices are taught in the 14-hour course.

The large-scale manipulation projects should <u>not</u> be performed by any custodial or maintenance employee who has had just the 14-hour course. It should be performed only by a reputable/licensed contractor in the State of Connecticut.

There are general work practices which apply to all schools in the school system.

1. Vinyl Asbestos Floor Tile (VAT). In many cases, the surface of the tile may appear abraded. Often, custodial employees will use abrasives to clean floor surfaces prior to the application of floor wax. This practice should be strongly discouraged, as it wears away the top surface, exposing the underlying matrix which may contain asbestos. Where a

dull white finish is observed through the top surface of the tile, it indicates that damage tot he tile has occurred.

2. Hammering or drilling through floor tile to fasten carpeting or other material should be prohibited.
3. Chairs and desks should be equipped with rubber feet or gliders to reduce damage to the floor tile surfaces.
4. Efforts should be made to minimize storage of maintenance supplies in the portions of the boiler rooms nearby boilers, breeching, headers, or other areas which might be damaged. This applies specifically to items such as ladders, chairs, desks, and other large items which might damage the surface.
5. The storage of desks, chairs, and other school supplies in pipe tunnels or chases where there is ACM should be discouraged. In addition to limiting access, movement of these items may cause damage to the surface.
6. Where ladders are required in areas where thermal system ACBM has been documented, hinge-type ladders should be used if possible. Custodial employees are discouraged from leaning extension ladders against boilers, breeching, or headers.

## 5.5 RESPIRATORY PROTECTION/MEDICAL SURVEILLANCE

A formal respiratory protection program is required for the school system as a part of the O&M program, since custodial and maintenance employees will be required to use air-purifying respirators under certain conditions for small-scale, short-duration projects involving asbestos. The OSHA Construction Standard requires the use of respirators whenever exposure exceeds, or may be expected to exceed the Permissible Exposure Limit (0.2 fibers per cubic centimeter of air as an eight-hour time-weighted average exposure).

The OSHA Respiratory Protection Standard defines a "minimally acceptable respiratory protection program" which includes requirements for a written program, selection of the proper respiratory, restrictions and limitations, use, cleaning, maintenance and storage of the respirator. All employees who will be using respiratory protection shall be trained in its proper use and shall have a chance to don the respirator, including qualitative fit-testing before any assignment in which the respirator is required. All employees using respiratory protection should complete a course with this minimum content. All employees who use air-purifying respirators should receive a medical clearance from their physician at least once every two years. EnviroScience Consultants, Inc. will work with the Designated Person to assure these requirements are implemented.

According to the OSHA Asbestos Standard for the Construction Industry (29 CFR 1926.58), the OSHA Asbestos Standard for General Industry (39 CFR 1910.1001) and the U. S. EPA Worker Protection Rule (40 CFR 763.120), any employee who is exposed to at least 0.1 fibers per cubic centimeter (f/cc) of asbestos (eight-hour time weighted average, as measured with Phase Contrast Microscopy) must be involved in a medical surveillance program. Likewise, any employee who works in an environment where fiber levels are 0.1 f/cc or higher (eight-hour time weighted average) or who wears a negative pressure respirator as part of his other job must be included in a respiratory protection program. In the O&M program, the use of negative pressure respirators

will dictate involvement in the medical surveillance program for most custodial and maintenance workers. Although fiber levels may not be high enough to require a respiratory protection program, establishing such a program is recommended.

The purpose of the medical surveillance program is to establish an employee's fitness to wear a respirator, and to detect any changes in the gastrointestinal and cardiopulmonary systems as a result of working in asbestos contaminated areas. Such changes may indicate the onset of an asbestos-related disease.

The main requirements of the medical surveillance program are initial and periodic examinations. The initial examination can be omitted if the employee had an equivalent exam within the last twelve months. Periodic examinations are required at least annually and must be performed before the employee is issued a negative pressure respirator.

## 5.6 ROUTINE PERIODIC SURVEILLANCE

The custodial and maintenance staff serves as the eyes and ears for the asbestos program. They are likely to be the first persons to observe asbestos debris or newly damaged ACM. Once the initial inspection has been completed, periodic inspections must be made to assure that the condition of the ACM in the building has not substantially changed.

Routine periodic surveillance shall be conducted at least twice per year by the Asbestos Program Manager as assisted by the custodial or maintenance person assigned to the task. Any individual performing the periodic reinspection must have completed an EPA-approved 16-hour training course or received equivalent training for O&M and periodic reinspection. The inspection includes a visual examination of all areas identified in the management plan. Any change in the condition of the insulation shall be noted on the Periodic Surveillance Report, signed, and returned to the Asbestos Program Manager for inclusion in the management plan. A copy of the Periodic Surveillance Report is included in this management plan (see list of attachments).

The visual inspection may be supplemented by periodic air sampling in suspect areas to find whether there is an actual exposure. Air sampling provides data on exposures at that instant and should be used in combination with the inspections to give a good assessment.

In addition to the scheduled semi-annual inspections, custodial and maintenance personnel should frequently make visual checks in work areas and immediately report any visible debris or newly damaged areas to the Designated Person/Program Manager without waiting for the semi-annual survey. A reinspection by a licensed, accredited inspector must be performed at three year intervals until all ACBM has been removed from the school.

## 5.7 RECORDKEEPING REQUIREMENTS

Another important part of the O&M program is the need to keep detailed and accurate records of program activities and procedures. The recordkeeping portion also sets up the procedure to

notify the Asbestos Program Manager and to initiate small-scale, short-duration abatement projects.

The recordkeeping system must track two types of data -- information on the physical condition of the ACBM remaining in the school, and any corrective measures taken on the ACBM, and the data associated with personnel involved in the asbestos program for the Intensive Education Academy.

General Building Work Authorization/Asbestos Work Order: The Designated Person is responsible for overseeing the entire O&M program for the Intensive Education Academy. A General Building Work Authorization must be obtained from the Designated Person or Program Manager if applicable before any non-routine maintenance activity which might involve asbestos. This gives the responsible person the chance to determine whether ACBM may be involved. The Designated Person/Program Manager will check the management plan and approve the work. If ACBM is involved, an Asbestos Work Order will be issued. This work order will identify the work to be performed and will have an order number so that any work may be audited in the future by the EPA or appropriate state agencies. Copies of the General Building Work Authorization and Asbestos Work Order are appended to this management plan (see list of attachments).

The Asbestos Work Order identifies where the work is to be performed, what work is to be done, and the types of controls used to prevent the spread of airborne asbestos fibers. Either the names of the school employees or contract employees performing the work are to be identified on the Work Order. All Asbestos Work Orders become part of the management plan for the school and are reviewed during the three-year reinspection of the school.

Whenever an asbestos project is to be performed, the Designated Person or Asbestos Program Manager must complete an Asbestos Project Notice (40 CFR 763.124). A copy of the notice must be submitted to the EPA and the state at least ten days before the planned abatement occurs, and within 48 hours after emergency abatement occurs. A copy of the Asbestos Project Notice is enclosed with the attachments.

If asbestos removal from the school takes place, the Designated Person/Manager must complete an Asbestos-Containing Building Materials Disposal Document (see list of attachments). This form includes the location of the landfill, the name of the transporter, the asbestos work order number, and establishes a "chain-of-custody" to follow the ACBM from the point in which it is removed from the school to the ultimate disposal location.

It is the responsibility of the Designated Person/Manager to assure that these forms are all completed for any abatement project undertaken during the life of the O&M program.

OSHA also requires that records of employee exposure and medical surveillance be maintained for the length of employment plus 30 years. Sampling results must be provided to the employee, and the employee must be notified of his (her) right to see the medical files. In addition, several of the AHERA requirements including the program plan, work practices, respiratory protection,

fiber release episodes, etc., require written documentation to some degree. The Designated Person/Manager should become familiar with these requirements, and assure they have been met.

## 5.8 RECORDKEEPING

1. For each preventative measure and response action taken since December 14, 1987, provide a written description of the action or measure:

    a. Method used
    b. Location
    c. Reasons for selecting the action or measure
    d. Start and completion date
    e. Names and addresses of all contractors involved and all license numbers
    f. Name and signature of any person collecting any air samples required at the completion of the action
    g. Locations where samples were collected
    h. Date of collection
    i. Names and address of laboratory performing analysis
    j. Date of analysis, results of analysis, method of analysis, and name and signature of person performing analysis
    k. A statement that the laboratory meets the applicable requirements

2. For any employee training which has occurred since December 14, 1987, maintain a listing of:

    a. Person's name and job title
    b. Date training was completed
    c. Location of training and number of hours completed in training

3. If the initial cleaning has occurred since December 14, 1987, maintain a record of:

    a. The persons performing the cleaning
    b. Date of the cleaning
    c. Locations cleaned
    d. Methods used to perform cleaning

4. For O & M conducted since December 30, 1996, maintain a record of:

   a. The name of person conducting O&M activity
   b. Start and completion date of activity
   c. Location of activity
   d. Description of activity including preventative measures used
   e. Name and location of storage or disposal site if removal occurred

5. For each major asbestos activity which occurred since December 30, 1996, maintain a list of:

   a. Name and signature, state of accreditation, and accreditation number of each person performing the activity
   b. Start and completion dates of activity
   c. Locations where activity occurred
   d. Descriptions of activity, including preventative measures used
   e. Name and location of storage or disposal site if removal occurred

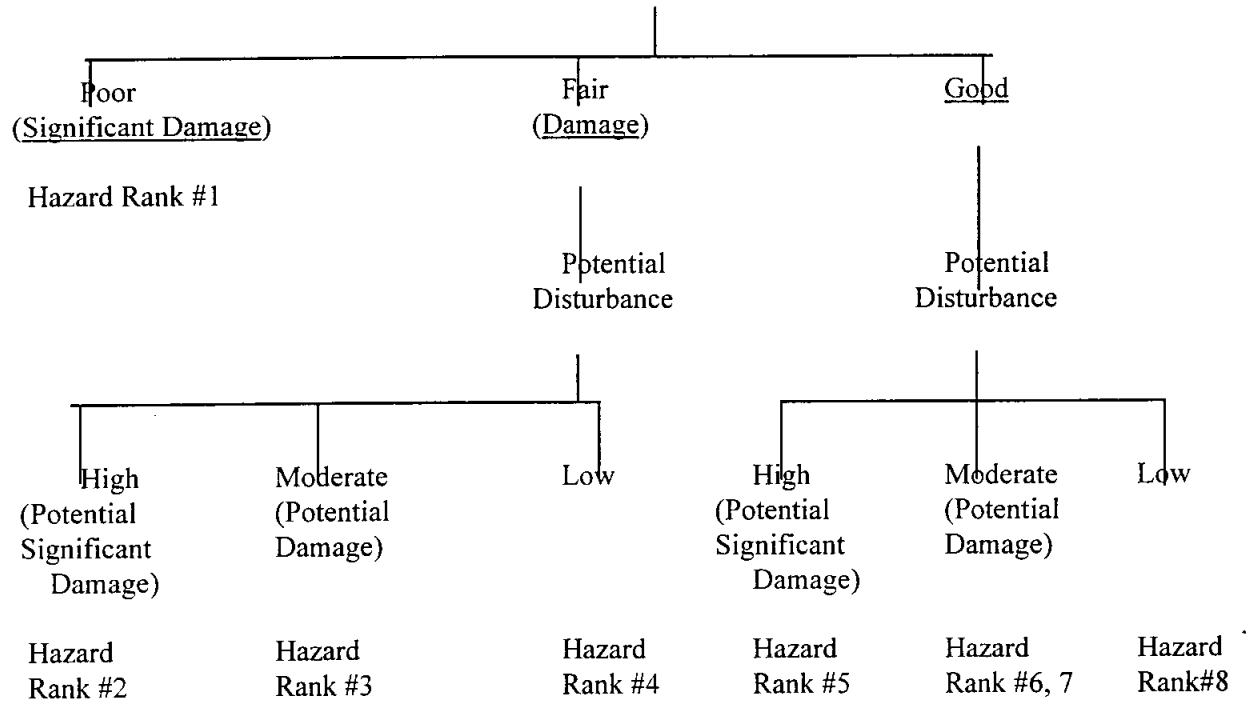
6. For each fiber release episode which has occurred since December 14, 1987, maintain the following:

   a. Method of repair, preventative measure or response action taken
   b. Name of each person performing the work
   c. Name and location of storage or disposal site if removal occurred

F:\EVERYONE\WORD\PROJECTS\00\00-564.10A.DOC

# HAZARD ASSESSMENT DECISION TREE

## ACBM Condition




## RESPONSE ACTIONS KEY

1. Isolate area and restrict access. Remove as soon as possible.

2. Continue O & M. Repair or remove as soon as possible, or reduce potential for disturbance.

3-5. Repair, continue O & M. Number indicates priority if all repairs cannot be done immediately.

6-7. Continue O & M. Take preventative measures to reduce disturbance. Number indicates priority for removal.

8. Continue O & M until major renovation or demolition requires removal under NESHAPS

TABLE -1
Comparison of Asbestos Control Alternatives

| Method | Advantages | Disadvantages | Appropriate Applications | Inappropriate Applications | General |
|---|---|---|---|---|---|
| Removal | Eliminates asbestos source<br><br>Eliminates need for special operations and maintenance program | Replacement with substitute material may be necessary<br><br>Porous surfaces also may require encapsulation<br><br>Improper removal may raise fiber levels | Can be used in most situations | | Containment barriers needed<br><br>Worker protection required<br><br>Wet removal is required for all types of asbestos , (amosite will not absorb water or water with traditional wetting agents)<br><br>Disposal may be a problem in some areas<br><br>Unusual circumstances, complex surfaces, and the presence of utilities may require special removal techniques |

TABLE -1
Comparison of Asbestos Control Alternatives
(continued)

| Method | Advantages | Disadvantages | Appropriate Applications | Inappropriate Applications | General |
|---|---|---|---|---|---|
| Enclosure | Reduces exposure in area outside enclosure<br><br>Initial costs may be lower than for removal unless utilities need relocating or major changes<br><br>Usually does not require replacement of material | Asbestos source remains and must be removed eventually<br><br>Fiber release continues behind enclosure<br><br>Special operations program required to control access to enclosure for maintenance and renovation<br><br>Periodic reinspection required to check for damage<br><br>Repair of damaged enclosure necessary<br><br>Fibers released in dry form during construction of enclosure | ACBM is located in a small area (e.g., a column)<br><br>Disturbance or entry into enclosed area unlikely<br><br>Material still retains bonding integrity | Damaged or deteriorating materials causing rapid fiber release<br><br>Water damage evident<br><br>Damage or entry into enclosure likely<br><br>Ceiling to be enclosed is low<br><br>Material does not adhere well to substrate | Containment barriers needed<br><br>Use of tools with HEPA-filtered vacuum attachment advisable<br><br>Worker protection needed |

TABLE -1
Comparison of Asbestos Control Alternatives
(continued)

| Method | Advantages | Disadvantages | Appropriate Applications | Inappropriate Applications | General |
|---|---|---|---|---|---|
| Enclosure (continued) | | Long-term costs could be higher than for removal | | | |
| Encapsulation | Reduces asbestos fiber release from material<br><br>Initial costs may be lower than for removal<br><br>Does not require replacement of material | Asbestos source remains and must be removed later<br><br>It material is not in good condition, sealant may cause material to delaminate<br><br>Periodic reinspection required to check for damage or deterioration<br><br>Repair of damaged or deteriorating encapsulated surface required | Damage to material not likely<br><br>Material not highly accessible<br><br>Material granular, cementitous<br><br>After removal of ACBM if the substrate is porous | Material is deteriorating or damaged, or damage is likely<br><br>Water damage is evident<br><br>Material is fibrous, fluffy | Containment barriers needed<br><br>Worker protection required<br><br>Airless sprayers should be used<br><br>Previously encapsulated materials may have to be re-encapsulated |

TABLE -1
Comparison of Asbestos Control Alternatives
(continued)

| Method | Advantages | Disadvantages | Appropriate Applications | Inappropriate Applications | General |
|---|---|---|---|---|---|
| Encapsulation (continued) | | Encapsulated surface is difficult to remove and may require dry techniques for eventual removal<br><br>Long-term costs may be higher than removal | | | |

# BUILDING INFORMATION SHEET

Date: _____

| Document Number | Building No. | Building Name |
|---|---|---|
| | | |
| | Building Location | |
| | | |

| | | | |
|---|---|---|---|
| Number of floors in this building | | Original construction date (year) | |
| Number of basement levels | | Renovation date #1 (year) | |
| Number of attic or penthouse levels | | Renovation date #2 (year) | |
| Number of other levels | | Estimated Gross Square Feet Occupied Space in Building | |

| Building Construction Type | | Building Use | X Floor Space | ACM PRESENT? |
|---|---|---|---|---|
| | Use #1 | | | YES - Present<br>NO - Not Present<br>UNK - Unknown |
| Natural Concrete with:<br>Metal Backs, Flat Slab,<br>_____/Joist or _____<br>_____ Structural _____<br><br>Steel Frame<br>Wood Frame<br>Load Bearing Masonry<br>Other (Specify) | Use #2 | | | |
| | Use #3 | | | |
| | Academic Classes, Administrative Offices, Food Services, Dormitory, Mechanical Spaces, Gymnasium, Laboratory, Sorority, Fraternity, Library, Residential, Other (Specify other) | | | |

| Original Owner & Address | Current Owner & Address |
|---|---|
| | |

| Architect & Address | Engineering Consultant & Address |
|---|---|
| | |

| Construction Contractor & Address | Building Manager Address & Phone |
|---|---|
| | |

| Inspector #1 Identification | Inspector #2 Identification |
|---|---|
| | |

PERIODIC SURVEILLANCE REPORT

Facility Name: _____

Facility Address: _____

_____

Date of Surveillance: _____

Type of ACBM Inspected: _____

All ACBM in Good Condition? yes no (circle one)

If no, fill out table below:

**ACBM DAMAGE REPORT**

| Location | Previous Condition | Present Condition | Change in Condition (Yes/No) | Quantity Damaged | Comments |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |

Conditions: G = Good
D = Damaged
SD = Significant damage

Surveillance conducted by: _____

_____ Training _____
(signature)

# REASSESSMENT OF ASBESTOS-CONTAINING MATERIALS

Location of asbestos-containing material(s) (address, building, room(s)), or general description:

_____

_____

_____

_____

_____

Type of asbestos-containing material(s):

1. Sprayed-on or troweled-on ceilings or walls.
2. Sprayed-on or troweled-on structural members.
3. Insulation on pipes, tanks, or boilers.
4. Other (describe): _____

Abatement Status:

1. The material has been encapsulated ____, enclosed ____, neither ____.

Assessment:

1. Evidence of physical damage: _____
   _____
2. Evidence of water damage: _____
   _____
3. Evidence of delamination or other deterioration: _____
   _____
   _____
4. Degree of accessibility of the material: _____
   _____
5. Degree of activity near the material: _____
   _____
6. Location in an air plenum, air shaft, or air stream: _____
   _____
7. Other observations (including the condition of the encapsulant or enclosure, if any): ____
   _____
   _____

Signed:_____ Date:_____
(Evaluator)

# ASBESTOS WORK ORDER



Document Control No. _____ Date _____

Reference General Building Work Authorization No.

| Document Number | Building Number | Building Name |
|---|---|---|
| | | |
| | Building Location and Owner | |
| | | |

ACM Space(s) Involved

ACM Space(s) Number and Name

| | | | |
|---|---|---|---|
| | | | |
| | | | |

DESCRIPTION OF WORK TO BE PERFORMED

WORK TO BE PERFORMED BY: (Identify contractor or, if Building Owner's employees or agents are to perform the work, then the individuals names and employee identification numbers.
Employee Name and ID Number

| | | | |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

CONTRACTOR IDENTIFICATION
(Name, Address, Phone Number, Cert. No., and State)

CONDITIONS OF WORK PERFORMANCE

It is an explicit condition of this work order that all work be performed in strict accordance with all applicable health and safety standards, and state of the art work practices.

If the Building Owner's employees or agents are involved in the work in any phase, then they are required to complete the WORKER'S DAILY LOG and return this LOG to their supervisor at the end of work daily.

THE WORK TO BE PERFORMED, AND ANY APPLICABLE TERMS AND CONDITIONS THEREOF ARE MORE FULLY DESCRIBED ON PAGE 2 OF THIS FORM, AND SAID PAGE IS HEREBY MADE A PART HEREOF.

# ASBESTOS WORK ORDER- CONTINUATION



Document Control Number _____ Date: _____

## GENERAL WORK CONDITIONS

### TYPE OF MATERIAL

Surfacing
- Floor _____
- Wall _____
- Ceiling
  - Visible _____
  - Hidden _____

Miscellaneous
- Describe _____
- _____
- _____

Thermal Systems
- Pipe Lagging _____
- Boiler Cover _____
- Ducting
  - Intake _____
  - Exhaust _____
- Fittings, Valves _____

Estimated Quantity of Materials

| Square Feet | Linear Feet | No. of Places |
|---|---|---|
| _____ | _____ | _____ |

### TYPE OF GENERAL PROTECTION

General Occupant and Public
- Poly on floor _____
- Mini-enclosure _____
- Glove Bag _____
- Negative Air Enclosure _____
- HEPA Vacuum _____
- HVAC Shutdown _____
- Power Shutdown _____
- Wet Cleaning _____
- Other (Describe) _____
- _____
- _____

General Worker Protection
- Air-Lock, Clean Room _____
- Type C Air _____
- Full Body Suits _____

Clearance Approval Method

_____

_____

Start of Work Date: _____

If removal is involved, then the "Asbestos-Containing Materials Disposal Document" is made a part hereof.

"Abatement Project Notice" sent to EPA Yes _____

## OTHER CONDITIONS OF WORK

_____

_____

_____

_____

_____

_____

## ASBESTOS WORK ORDER APPROVAL BY ASBESTOS PROGRAM MANAGER

_____ _____

Signature Date

# GENERAL BUILDING WORK AUTHORIZATION

DOCUMENT CONTROL NUMBER:_____ DATE: _____

| Document Number | Building Number | Building Name |
|---|---|---|
| | | |
| | Building Location and Owner | |
| | | |

DESCRIBE THE WORK TO BE PERFORMED

IDENTIFY THE ORGANIZATION OR INDIVIDUAL(S) WHO WILL PERFORM THE WORK

IDENTIFY THE ACM-SPACE(S) INVOLVED IN THE WORK

| ACM-Space(s) Number and Name | | | |
|---|---|---|---|
| | | | |
| | | | |

ASBESTOS PROGRAM MANAGER'S AUTHORIZATION
MUST BE SIGNED PRIOR TO COMMENCEMENT OF WORK.

I HEREBY CERTIFY THAT, ACCORDING TO THE RECORDS,
THE ABOVE DESCRIBED ACM-SPACE(S) DO NOT CONTAIN
ASBESTOS-CONTAINING BUILDING MATERIALS.

Signature _____ Title _____ Date _____

THE ABOVE IDENTIFIED ACM-SPACE(S) CONTAIN
ASBESTOS-CONTAINING BUILDING MATERIALS, AND THE
WORK MUST BE UNDERTAKEN IN ACCORDANCE WITH ALL
APPLICABLE HEALTH AND SAFETY RULES AND REGULATIONS
AND THE ATTACHED "ASBESTOS WORK ORDER"
REQUIREMENTS.

Asbestos Work Order Number
_____

_____
Signature

# ASBESTOS ABATEMENT PROJECT NOTICE

| Document Number | Building Number | Building Name |
|---|---|---|
| | | |
| | Building Location and Owner | |
| | | |

NOTICES TO EPA MUST BE POSTMARKED:

PLANNED ABATEMENT:
AT LEAST 10 DAYS BEFORE ABATEMENT BEGINS

EMERGENCY ABATEMENT:
NO MORE THAN 48 HOURS AFTER PROJECT BEGINS

SUBJECT TO CIVIL AND CRIMINAL PENALTIES

NOTICE SENT TO:

_____
_____
_____
_____
_____

As required by 40 CFR 763.124 "Toxic Substances: Asbestos Abatement Projects," we wish to notify you of the following asbestos abatement project in the above identified building.

DATE OF NOTICE: _____

PROJECT CLASS: PLANNED ABATEMENT _____ EMERGENCY _____

PROJECT SIZE: LESS THAN _____ or MORE THAN _____ 3 Linear Feet or 3 Square Feet

DATE WORK (TO BE) STARTED: _____

DATE WORK (TO BE) COMPLETED _____

Covering Work Order (or Contract) ID

_____

ACM-space(s) Involved: Number and Name

| | | | |
|---|---|---|---|
| | | | |
| | | | |

TYPE OF WORK:
Removal _____ Repair _____ Encapsulation_____ Enclosure_____ Cleaned Up_____
Other:_____

IF REMOVAL UNDERTAKEN, THEN COMPLETE THIS SECTION

Disposition of ACBM: Name of Landfill:

_____

Location of Landfill:

_____

ASBESTOS CONTAINING MATERIAL DISPOSAL CHAIN OF CUSTODY DOCUMENT MUST BE ON FILE.

REPORT PREPARED BY: _____
Signature, Title, and Date

AIR S LE LOG

| CUSTOMER: | LOCATION: | DATE MAILED: |
|---|---|---|
| OPERATION MONITORED: | JOB #: | DATE WRITTEN REPORT REC'D: |
| PURPOSE OF MONITORING: | | |
| FILTER CASSETTE RATING: | 2 hour is inside containment<br>Beginning Test: 12 hours - 1200 volume<br>Final Test: 22 hours - 2000 volume | |

| Sample Number | Date | Sample Location | Time | | | (A) | (B) | (C) | Flow Volume | | Lab Results |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Start | Stop | Total Min | Start LPM Gauge | End of Test (in Hg) Gauge | Start of Test (in Hg) Gauge | AXB / C | Min. X Flow | |
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REMARKS:

Person Monitoring:

# WORKER MEDICAL SURVEILLANCE RECORD

INDIVIDUAL'S NAME _____

INDIVIDUAL'S IDENTIFICATION NUMBER _____

PERMANENT STREET ADDRESS _____

EMERGENCY CONTACT PERSON _____

PERMANENT CITY, STATE, AND ZIP CODE _____

EMERGENCY CONTACT PHONE NUMBER _____

HOME PHONE NUMBER _____

ATTENDING PHYSICIAN _____

ATTENDING PHYSICIAN'S PHONE NUMBER _____

## RESPIRATOR FIT TESTING

| MEDICAL APPROVALS | | TEST CONDUCTED BY: | DATE | MANUFACTURER'S DATA: | |
|---|---|---|---|---|---|
| DATE | PHYSICIAN | | | MAKE | MODEL |
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## MEDICAL EXAMINATION HISTORY

| DATE | PHYSICIAN | TYPE OF EXAMINATION | REASON | RESULTS ON FILE AT LOCATION |
|---|---|---|---|---|
| | | | | |
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# ASBESTOS CONTAINING MATERIALS DISPOSAL DOCUMENT

DOCUMENT CONTROL NUMBER:_____ DATE: _____

| Document Number | Building Number | Building Name |
|---|---|---|
| | | |
| | Building Location and Owner | |
| | | |

PICK UP SITE:_____
DISPOSAL SITE:_____
TRANSPORTED BY: _____

ESTIMATED QUANTITY OF ACM: _____
NUMBER OF CONTAINERS: _____
TYPE OF CONTAINERS: _____

DESCRIPTION OF ACBM(S) TO BE DISPOSED OF:

_____

Removed under the authority of the work
order (contract) identified as: _____

THE FOLLOWING SIGNATURES ESTABLISH THE CHAIN OF CUSTODY
OF THE ABOVE DESCRIBED ACBM(S):

ACBM(S) PACKED UNDER THE SUPERVISION OF:

_____ Signature
_____ Employed by
_____ Title
_____ Date

ACBM(S) TRANSPORTED BY:

_____ Signature
_____ Employed by
_____ Title
_____ Date
_____ Transport Manifest Number

ACBM(S) DISPOSAL SITE:

_____ Site Location (City, State)
_____ Received by Signature
_____ Employed by
_____ Site Name
_____ Date of Receipt
_____ Receiving Document Number

REPORT PREPARED BY:

_____ Signature
_____ Employed by
_____ Title
_____ Date

THE ORIGINAL OF THIS DOCUMENT MUST BE RETURNED TO THE ASBESTOS
PROGRAM MANAGER AT THE BUILDING _____
_____LOCATION NAMED ABOVE

Recommended Sample Reinspection Notification Letter

EASTSIDE COMMUNITY PUBLIC SCHOOLS

East Park Avenue
Eastside, CA 91005
(999) 922-3333

Bob Smith, Superintendent

Notification of Asbestos Reinspections

TO: Parents and Staff of Eastside Middle School

FROM: Bob Smith, Superintendent of Schools

DATE: December 15, 1991

In compliance with the U.S. Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA), in the fall of 1988 we performed inspections of each of our school buildings for asbestos-containing building materials. The inspection findings and asbestos management plans have been on file in each school administrative office since that time.

The EPA requires us to perform reinspections of the asbestos materials every three years. During the months of September through November 1991, accredited asbestos inspectors performed these reinspections. An accredited management planner reviewed the results of the reinspections and recommended actions we should take to safely manage each asbestos material in our buildings.

Two significant findings were noted during the reinspection of Eastside Middle School:

- Asbestos-containing water pipe insulation in the kitchen over the dishwasher is slowly deteriorating due to high humidity. The material is scheduled for removal over the Christmas break.

- Linoleum in all bathrooms was not included in the original AHERA inspection. The backing (between the vinyl layer and the floor) is assumed to contain asbestos. The vinyl layer is in good condition and provides an effective barrier, preventing asbestos fiber release. This material has been added to our asbestos maintenance program and we will monitor it for any changes in condition.

All other asbestos materials in this school are in good condition and we will continue to manage them in place, as recommended by the accredited management planner.

The results of the reinspection are on file in the management plan in the school's administrative office. Everyone is welcome to view these anytime during normal school hours (M-F, 8:00 a.m. - 4:30 p.m.). The Asbestos Program Manager, Jill Williams, is available to answer any questions you may have about asbestos in our buildings at (999) 922-3334.

Log Date: 11/6

# WORD PROCESSING REQUEST FORM

PROJECT NAME: New Milford Schools New Administration Bldg ALHERA NO. 00-564.10

SUBMITTED BY: Dominick Fiore

PROJECT MANAGER: Jim Scott OIC: SUC

Date to be mailed to Client: _____

| DFT # | DATE SUBMIT TO WP | DATE DUE FOR REVIEW | GIVEN TO & DATE | APPVD BY | DATE APPVD | TYPIST | DATE WP CMPLTD | TIME USED |
|---|---|---|---|---|---|---|---|---|
| 1 | 11-06 | 11-07 | JLS 11/6 | | 12/27 | des | 11/6/00 | 2 |
| F | 12/27 | 12/29 | SUC 12/27 | M | 12/27 | | | |
| | | | JLS 12/28 | | 12/28 | des | 12/28/00 | 3/4 |
| | | | | | | | | |
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SPECIAL INSTRUCTIONS: Please pick up markings and give back to Jim 12/27. edited by JLS on 12/28

USED OLD DOCUMENT?: Y: ✓ N: ___ DOC NAME: 3

**DATE SUBMITTED FOR FINAL PRINT:** _____

INVOICE WHEN COMPLETE? Y: ___ N: ___ IS THIS A COL -

DOES THIS REPORT NEED TO BE FAXED? TO WHO? _____

FAX NUMBER: _____

# OF COPIES REQUIRED: CLIENT: 1 PM: ___ BF 1

BINDING REQUIREMENTS: GBC ___ 3HP ___

DOCUMENT NAME: 00-564.10a.doc CREATOR: des

DATE MAILED: 12/29/00 VIA: UPS BY: des

**Business/Legal Review of Bid Doc.:** _____ **Date Reviewed:** _____