Mark Needham

Ohio Department of Health

8/21/12

Mark,

Thank you for your time on the phone conversation with Chris Gates, Bill Cavness, Tony Taylor and yourself on 8/16/12. The following is a summary of the discussed issues pertaining to the interpretation and application of the asbestos standard for construction at 29 CFR 1926.1101. The issues discussed were:

1. The application of Class I and Class II Work based on the definition of "Surfacing".
2. The application of (g)(2)
3. The meaning and application of "intact/non-intact"
4. The application of (g)(6) and (g)(8)(vi) – Alternative Controls.

**Class I, Class II and "Surfacing"**

There is much confusion over the definition of "surfacing" (therefore the definition of "Class I Work"). Most of this stems from the earlier EPA AHERA use of the term as a classification of building materials during an inspection. However, OSHA has issued a number of interpretive rulings clarifying their use of the term as a material in which the asbestos is "loosely bound", and represents "high hazard" to employees, much like the EPA use of the term "friable". Therefore, what we would call "friable surfacing", from an EPA perspective, is what OSHA would call surfacing for the definition of Class I Work. All other materials such as plaster, stucco, wall or ceiling texture or joint compounds are not surfacing, therefore their removal is Class II Work, not Class I Work.

**The application of sub-paragraph (g)(2)**

The proper understanding and application of sub-paragraph (g)(2) under "Methods of Compliance" is the required response when an employee is exposed to asbestos above the PELs or where there is no Negative Exposure Assessment (therefore exposure must be assumed). The employer in this case "..shall use the following control methods to achieve compliance with the (PELs)..". To interpret this sub-paragraph as a universal mandate would be to apply its requirements on all 4 classes of work, since PEL compliance in all 4 classes of work is always required. This is not OSHA's intent in their "tiered" worker protection concept. Therefore, local exhaust ventilation, enclosure, and engineered air movement are not always required, depending on the class of work or chosen control method.

**"Intact" and "non-intact"**

Much like EPA in their use of the term friable, the word "broken" has no application in the definition or use of "intact" under the OSHA standard. "Intact" means that the fibers of asbestos in a material are bound in the matrix, therefore cannot float away or become

airborne. Non-intact means that the material has "...been pulverized...so that the asbestos is no longer likely to be bound with its matrix". "Intact" has application mainly in the context of Class II Removal. Most class II materials are intact or "substantially intact", even during removal. If the employer has a valid Negative Exposure Assessment, then critical barriers, isolation or dropcloths are not necessarily required. Of course, regulatory requirements are minimal, not necessarily the best way to do a job.

**Alternative Control Methods**

Sub-paragraphs (g)(6) and (g)(8)(vi) were written into the standard for the practical purpose of allowing new methods of control, as they are developed, to be incorporated into the standard without having to change the standard in the future, and to give a way to require worker protection when normal methods of compliance cannot work (i.e. NESHAP ordered demolition of a building with class I or class II materials in place). When an employer uses alternative methods instead of the specifications and work practices in (g)(5) or (g)(8), he is using the concept of negative exposure assessment instead of regulatory specifications. In both cases, worker protection is paramount. OSHA themselves have gone back and forth in interpretive documents on when alternative methods should be implemented, but several issues should be considered here. One is the intent of the writing of the regulation as explained in the preamble, and the other is the results of personal air monitoring conducted during the work. The goal of either regulatory specifications or alternative controls is that there be no exposure to the workers. As to the question of how work under these two paragraphs can be addressed for compliance and enforcement, in addition to the written paragraphs, the General Duty Clause can always be implemented.

August 25, 2008

Jacqueline Ayer
Director, Engineering Operations
Air Quality Specialists
4533 MacArthur Blvd, 564
Newport Beach, CA 92660

Dear Ms Ayer:

Thank you for your letter of August 1, 2008 asking for a clarification of a memo I sent to Delegated agencies regarding their implementation of EPA applicability determinations. Specifically, your belief that these agencies may not determine asbestos materials between 1.1 and 1.49 percent to be regulated since an EPA determination states such materials are rounded down to 1 percent and are unregulated.

You are correct that agencies can only enforce provisions of rules where they have authority under state or local law. In the case of California, counsel for the State Attorney General or County/District Counsel will enforce Asbestos NESHAP cases for delegated agencies. Indeed, counsel may enforce all California Health and Safety Codes under their jurisdiction.

California has many requirements that are stricter than the NESHAP, for example, disclosure and certification requirements of the State are much stricter than anything required under the NESHAP. Indeed, California requires certification/training for workers working with asbestos materials down to .1 percent asbestos, ten times stricter than the Asbestos NESHAP. Building departments must insure compliance with Asbestos NESHAP notification requirements prior to issuing a building permit, and air districts are required to assess potential hazardous pollutants discharged within 400 meters of a school. These are only a few of the California requirements stricter than the Asbestos NESHAP.

EPA will not direct State or local agencies to interpret their authorities in a manner less stringent to meet EPA applicability determinations. The State or local agency is the expert in interpreting and enforcing their rules, and EPA will not impede such authority. This would include the State or local agency determining not to round down asbestos results to 1 percent.

Grant and delegation agreements require State and local agencies to implement and enforce the Asbestos NESHAP. To do so, these agencies must implement and enforce

the Asbestos NESHAP to the minimal Federal Standard. EPA will not determine limitations on State or Local Agencies when they determine their rules to be more stringent than the Federal NESHAP, this authority can only be determined by the State or local Agency. Of course, any owner/operator is required to comply with State and local rules

I suggest you contact the individual State or local agencies to determine when materials between 1.1 and 1.49 percent asbestos are regulated. If you have further questions on the Asbestos NESHAP, please feel free to contact me at (415)972-3989.

Sincerely,

Robert S. Trotter
Asbestos NESHAP Coordinator

Control Number: C103

**Category:** Asbestos
**EPA Office:** SSCD
**Date:** 08/07/1991
**Title:** **Res. Structures Acquired by Municip. Corp.**
**Recipient:** Blackwood, James
**Author:** Rasnic, John B.
**Comments:**

**Subparts:** Part 61, M National Emission Standards for Asbestos

**References:** 61.141
61.145
61.150

**Abstract:**

Residential buildings acquired and demolished for the purpose of an urban renewal project are considered institutional buildings and are not exempt from the asbestos NESHAP. While a notification for demolition would be required, the work practice and waste disposal requirement would only apply where the combined amount of asbestos exceeds the threshold amounts. Homes resold by the Redevelopment Commission, which are then renovated by the new homeowner, are not subject to the asbestos NESHAP since the NESHAP does not apply to single family dwellings.

**Letter:**

Control Number: C103

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

OFFICE OF
AIR AND RADIATION

Mr. L. James Blackwood, II
Coggin, Hoyle, Blackwood, and Brannan
108 Commerce Place
Greensboro, North Carolina 27401

Dear Mr. Blackwood:

This is in response to your June 18, 1991 letter requesting clarification of two issues concerning the applicability of the asbestos NESHAP to residential structures acquired by a municipal corporation.

Issue 1: "The demolition of structures containing less than four residential units acquired by the Redevelopment Commission of Greensboro under its eminent domain authority;"

Response: In the preamble to the November 20, 1990 revisions to the asbestos NESHAP (FR 48412 November 20, 1990), EPA stated that, "[we do] not consider residential structures that are demolished or renovated as part of a commercial or public project to be exempt from the rule. For example, the demolition of one or more houses as part of an urban renewal project, a highway construction project, or a project to develop a shopping mall, industrial facility or other private development would be subject to the NESHAP." Residential buildings which are acquired and demolished for the purpose of an urban renewal project are considered institutional buildings and, as discussed above, are not exempt from the asbestos NESHAP.

In addition, as stated in the above mentioned Federal
Register notice, "[a] group of residential buildings under the control of the same owner or operator is considered an 'installation' and is, therefore. covered by the rule." However, while a notification for demolition would be required, the work practice and waste disposal requirements in 40 CFR Section 61.145 and Section 61.150 would only apply where the combined asbestos in the buildings was over the threshold amounts (80 linear meters on pipes or at least 15 square meters on other facility components).

Issue 2: "The resale of property owned by the Redevelopment Commission of Greensboro in which it is required that specific renovations be performed by the new homeowner;"

Response: Although the buildings are originally purchased by the Redevelopment Commission of Greensboro for institutional purposes (i.e., urban redevelopment), the actual renovation activities take place after the residential buildings are sold to single family owners. The Redevelopment Commission does not own or manage the buildings at the time the renovations are performed. The asbestos NESHAP does not apply to renovations of single family buildings (including buildings which have four or fewer dwelling units). Consequently, the asbestos NESHAP would not apply to the resale of homes by the Redevelopment Commission and the renovation of those homes by the new homeowners.

This determination has been coordinated with EPA's Office of Enforcement, the Emission Standards Division of the Office of Air Quality Planning and Standards and Region IV. Of you have any questions, please contact Scott Throwe of my staff at (703) 308-8699.

Sincerely,

John B. Rasnic, Director
Stationary Source Compliance Division Office of Air Quality Planning and Standards

**2003 - 03/05/2003 - Inaccurate Asbestos Exposure Records Lead to Nearly $51,000 in OSHA Fines for North Adams, Mass., Employer**

# OSHA Regional News Release

**U.S. Department of Labor**
**Office of Public Affairs** **Region 1**

**Region 1 BOS 2003-043**
**March 5, 2003**
**Contact: Ted Fitzgerald**
**Phone: (617) 565-2074**

## Inaccurate Asbestos Exposure Records Lead to Nearly $51,000 in OSHA Fines for North Adams, Mass., Employer

**SPRINGFIELD, Mass.** -- A North Adams, Mass., asbestos removal contractor's failure to maintain accurate records of its workers' exposure to asbestos has resulted in a total of $50,900 in fines from the U.S. Labor Department's Occupational Safety and Health Administration.

GEM Environmental Services has been cited for alleged willful and serious violations of the Occupational Safety and Health Act following an OSHA inspection begun Jan. 3, 2003, in response to an employee complaint.

OSHA's inspection identified eight instances where the company intentionally failed to accurately record or keep measurements of employees' asbestos exposure during an asbestos removal job at Berkshire Medical Center in Pittsfield in the summer of 2002, explained Ronald E. Morin, OSHA's Western Mass. area director. He noted that inhalation of asbestos fibers by workers can lead to serious lung diseases over time.

"That's why proper exposure monitoring is so critical for workers. It's the tool by which employers can promptly spot overexposures and take swift, effective steps to reduce them," he said. "Otherwise, inaccurate monitoring leads to inadequate safeguards and increased risk to employees' health and well-being."

As a result, OSHA has cited GEM Environmental for an alleged willful violation, the most severe category of OSHA citation, and proposed a fine of $44,000. A willful violation is defined by OSHA as one committed with an intentional disregard of, or plain indifference to, the requirements of the Occupational Safety and Health Act and regulations.

An additional $6,900 in fines was proposed for six hazards classified as serious. They involve failure to monitor employees' asbestos exposure while cleaning equipment at GEM's headquarters; failure to calibrate air sampling pumps; missing or incomplete records of respirator use, pump calibration and duration times; and a defective power cord. OSHA defines a serious violation is one in which there is a substantial probability that death or serious physical harm could result, and the employer knew, or should have known, of the hazard.

GEM Environmental has 15 business days from receipt of its citations and proposed penalties to either elect to comply with them, to request and participate in an informal conference with the OSHA area director, or to contest them before the independent Occupational Safety and Health Review Commission. The OSHA area office in Springfield conducted the inspection. The telephone number is (413) 785-0123.

The Occupational Safety and Health Administration is dedicated to saving lives, preventing injuries and illnesses, and protecting America's workers. Safety and health add value to business, the workplace and life. For more information, visit www.osha.gov.

December 4, 1995

Kenneth H. Mueller, Esq.
Greentree Consulting Incorporated
163 Stockton Street
Highstown, New Jersey 08520

Dear Mr. Mueller:

This is to confirm your phone conversation on October 20, with Doug Ray of my staff, that your interpretation (letter of June 12th) of 1926.1101(f)(2)(iii)(B) of the asbestos standard is correct. More specifically, per your conversation with Doug Ray, a negative exposure assessment has been established when the workplace conditions "closely resemble" the process, type of material, control methods, work practices, environmental conditions, and employee training of an asbestos job monitored within the past 12 months. Documentation should address the above 6 areas for a negative exposure assessment, and should be available at each new worksite.

We apologize for the delay in responding to your letter of June 12, and any inconvenience it may have caused.

Sincerely,

Ruth McCully, Director
Office of Health Compliance

June 12, 1995

Mr. John Miles
Director of Compliance Programs
OSHA
200 Constitution Avenue, N.W.
Washington, DC 20210

RE: Request for written OSHA Interpretation on Use of Asbestos Air Monitoring Data from a Prior Job to Establish a "Negative Exposure Assessment" for a Projected Job: 29 CFR 1926.1101(f)(2)(iii)(B)

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Dear Mr. Miles:

In researching the OSHA Asbestos Exposure Assessment and Monitoring Regulation 29 CFR 1926.1101(f)(2)(iii)(B), the need has arisen for a written interpretation from OSHA on the use of asbestos air monitoring data from a prior job to establish a "Negative Exposure Assessment" for a projected job in a different geographic region (i.e. state). For purposes of clearly explaining this issue, the following illustration is presented.

Illustration

Company "XYZ" performs drilling into asbestos containing floor tiles at their "XYZ" - NJ facility. At the start of the job, "XYZ" performs initial eight (8) hour air monitoring and the results establish a "Negative Exposure Assessment" at their "XYZ" - NJ facility. Nine (9) months later, "XYZ" needs to perform drilling into asbestos containing floor tiles at their "XYZ" - Texas facility. The drilling work to occur at the "XYZ" - Texas facility "closely resembles" the work conditions (i.e. process, type of material) and environmental conditions of the prior job which occurred at their "XYZ" - NJ facility. Also, the workers scheduled to perform the work at the "XYZ" - Texas facility have similar asbestos training to those workers who performed the work at the "XYZ" - NJ facility.

Issue 1

Assuming the above fact pattern, per Asbestos Exposure Assessment and Monitoring Regulation 29 CFR 1926.1101(f)(2)(iii)(B), can the "XYZ" - NJ facility eight (8) hour asbestos air monitoring data (which establishes a "Negative Exposure Assessment" at the "XYZ" - NJ facility) be used to establish a "Negative Exposure Assessment" for the "XYZ" - Texas facility, and thus eliminate the need to conduct asbestos air monitoring at the "XYZ" - Texas facility?

Issue 2

If the answer to the above stated Issue 1 is "yes", what documentation must be maintained at the "XYZ" - Texas facility prior to the start of the asbestos related work? (i.e. copies of eight (8) hour asbestos air monitoring from the "XYZ" - NJ facility, etc.).

A formal interpretation on the above two (2) issues is respectfully requested from your office. The response can be faxed to my attention at fax #(609) 490-9544 (or if necessary by your office) mailed to my attention at:

Greentree Consulting, Inc.
163 Stockton Street
Hightstown, NJ 08520
Attn: Kenneth H. Mueller, Esq.

Your cooperation is appreciated regarding the above issues. Should you have any questions, please contact me directly at (609) 490-0400.

Very truly yours,

Kenneth H. Mueller, Esq.

September 3, 1997

Mr. Gayle E. Anderson
Manager, Corporate Marketing and Sales
Reliable Environmental Management and Services, Inc.
2500 W. 31st Street, Suite G-2
Lawrence, Kansas 66047

Dear Mr. Anderson:

This is in response to your letter of February 3, addressed to Mr. Michael Connors, Regional Administrator, Chicago Regional Office of the Occupational Safety and Health Administration (OSHA). You wrote your letter to obtain answers to questions you have pertaining to the Construction Asbestos Standard, 29 CFR 1926.1101.

I will include each of your questions and follow them with an answer.

Question:

Does OSHA view wallboard/gypsum wallboard and joint compound as a composite building system as does the Environmental Protection Agency (thus allowing for a composite of the bulk sample analysis of the multiple layers)?

Answer:

By interpretation of the definition of asbestos-containing material (ACM) presented at 29 CFR 1910.1001(b), 29 CFR 1915(b), and 29 CFR 1926.1101(b); OSHA regards each of the items used to construct wall shells from wallboard panels as separate materials. Each of these materials that may contain asbestos must be analyzed separately for their asbestos content. If any of these materials contain more than 1% asbestos, then work practices specified in the Standard must be followed if the wallboard panels are removed.

Question:

What type of material does OSHA consider wallboard/gypsum wallboard to be, surfacing or miscellaneous?

Answer:

As indicated by the definitions of "Class I asbestos work" and "Class II asbestos work" presented at 29 CFR 1926.1101(b), OSHA divides asbestos-containing material (ACM) into two groups. One group of ACM consists of surfacing material and thermal system insulation. The other group of ACM material consists of material that is not surfacing material or thermal system insulation material. ACM wallboard/gypsum wallboard is material that is not surfacing material or thermal system insulation material.

Question:

What type of material does OSHA consider joint compound to be, surfacing or miscellaneous?

Answer:

ACM joint compound is material that is not surfacing material or thermal system material. As indicated on page 41032 of Federal Register, Vol. 59, No. 153, Wednesday, August 10, 1994, joint compound is finishing material.

Question:

If OSHA regards wallboard/gypsum wallboard and joint compound as a surfacing material, is it correct to interpret 29 CFR 1926.1101 in that abatement of greater than 10 square feet of ACM joint compound is "Class I" work?

Answer:

OSHA does not regard wallboard/gypsum wallboard and joint compound as a surfacing material. If a wall shell is constructed of ACM joint compound and wallboard panels that are not ACM, then removal of the wall shell is Class II asbestos work.

Question:

If OSHA regards joint compound as a surfacing or miscellaneous material, is the abatement of ACM wallboard/gypsum wallboard and joint compound required by OSHA prior to building renovation, remodeling or demolition activities?

Answer:

I understand this question to be seeking clarification as to whether the wallboard panels must be removed from the studs and the like before these are removed if ACM joint compound was used in the construction of the wall shell. Note that the term "removal" includes demolition operations. When wallboard panels are removed, the provisions the employer must comply with include the methods of compliance provisions presented at 29 CFR 1926.1101(g)(1), (g)(2), (g)(3), and (g)(7) and at 29 CFR 1926.1101(g)(8)(v) or (vi); and the waste disposal provision at 29 CFR 1926.1101(l)(2). I have enclosed copies of the identified provisions for your convenience. An employer may have difficulty complying with the provisions without removing the panels and the studs and the like separately, but if the employer can remove the panels and studs and the like together and comply with the provisions, that approach is acceptable.

Question:

If OSHA regards joint compound as "surfacing material" does the material then have to have bulk samples collected following the "3,5,7" rule using the random sampling grid.

Answer:

There is not a requirement to collect bulk samples of joint compound according to the "3,5,7" rule because joint compound is not regarded as surfacing material.

Question:

If wallboard/gypsum wallboard and joint compound are viewed by OSHA as separate materials, does this conflict with the EPA's definition that considers these to be a "composite" building system?

Answer:

If you have correctly reported the EPA's position, there are apparently a greater percentage of wall shells constructed from wallboard panels and ACM joint compound that are covered by the

OSHA Asbestos Standard than by the EPA asbestos standard issued as one of the National Emission Standards for Hazardous Air Pollutants (NESHAP). OSHA has concluded that removal of wall shells constructed with wallboard panels and ACM joint compound poses a potential hazard to workers that must be controlled; while the EPA may have concluded that such activity does not produce sufficient air pollution to regulate. This is not viewed as a "conflict."

Question:

In order to be in compliance with OSHA's "Communication of Hazard" requirement as outlined in 29 CFR 1926.1101(k), do inspections that were conducted pursuant to the requirements of the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763 Part E and/or Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61, Subpart M, fulfill OSHA requirements when wallboard/gypsum wallboard systems are sampled as composite building system as allowed under AHERA?

Answer:

An inspection conducted pursuant to the requirements of AHERA or NESHAP where wallboard/gypsum wallboard systems were sampled is not relevant to the OSHA provision at 29 CFR 1926.1101(k)(5)(ii)(A). This provision indicates that one of the means an employer has for demonstrating that presumed asbestos-containing material (PACM) does not contain more than 1 percent asbestos is to have had a completed inspection conducted pursuant to the requirements of AHERA (40 CFR Part 763, Subpart E) which demonstrates that the material is not ACM. The reason this is not relevant is because OSHA does not consider either wallboard or joint compound PACM.

Question:

If not, how can this conflict between the regulations be reconciled?

Response:

OSHA does not see a conflict between the regulations.

Question:

If not, are all inspections conducted pursuant to the requirements of the AHERA and/or NESHAP inadequate with respect to assessing wallboard/gypsum wallboard and joint compound when considering OSHA regulations?

Response:

OSHA does not see a conflict between the regulations.

Question:

If your answer is "yes" [the inspection conducted pursuant to the AHERA and Asbestos NESHAP regulations are inadequate], how does OSHA reconcile its position when 1910.1001(e)(8)(ii)(A) states: "Having a completed inspection conducted pursuant to the requirements of AHERA (40 CFR 763, Subpart E) which demonstrates that no asbestos is present;" is a means by which a building owner may demonstrate that PACM does not contain asbestos?

Response:

OSHA does not see a conflict between the regulations.

Question:

Has OSHA adopted the EPA Model Accreditation Plan as the training curriculum for workers who work around, disturb, repair or remove asbestos-containing materials in public and commercial buildings?

Answer:

According to 29 CFR 1926.1101(k)(9)(iii), if the workers perform Class I operations or Class II operations that require the use of critical barriers (or equivalent isolation methods) and/or negative pressure enclosures, then they must be provided training that is equivalent in curriculum, training method and length to the EPA Model Accreditation Plan (MAP) asbestos abatement workers training (40 CFR Part 763, subpart E, appendix C).

Question:

What is OSHA's definition of a "public" building as it pertains to the applicability of the regulations under discussion?

Answer:

OSHA does not have a special definition for "public building" because the term is not used in the standard.

We appreciate the opportunity to provide this clarifying information. If you have further questions please contact the Office of Health Compliance at (202) 219-8036.

Sincerely,

John B. Miles, Jr., Director
Directorate of Compliance Programs

February 1, 2005

Mr. Skip Bolding
Safety Director
Templeton Construction
521 West Beauregard
San Angelo, TX 76903

Dear Mr. Bolding:

Thank you for your January 21 letter to the Occupational Safety and Health Administration (OSHA). You have questions regarding OSHA's construction industry asbestos standard, 29 CFR 1926.1101. This letter constitutes OSHA's interpretation only of the requirements discussed and may not be applicable to any question not delineated within your original correspondence. Your paraphrased questions and our replies are below.

Question 1: What is the interpretation for the definition of "Regulated Area(s)" that appears at 29 CFR 1926.1101(e) in the construction asbestos standard?

Reply: In cases involving Class I, II, and III asbestos work, the regulated area includes, as a minimum, the area in which the workers move about in the process of performing the work. If the airborne concentrations of asbestos beyond the area in which workers move about exceed or there is a reasonable possibility the concentrations may exceed an asbestos permissible exposure limit (PEL), then the regulated area also includes this additional area. For operations other than Class I, II, and III asbestos work, the regulated area is simply the area where airborne concentrations of asbestos exceed or there is a reasonable possibility the concentrations may exceed either of the asbestos PELs.

Question 2: If the asbestos content for every one of the materials involved in a demolition project is <1%, does a regulated area have to be established for the project?

Reply: Since the asbestos content for every one of the materials involved in the demolition project is <1%, the project does not involve the performance of either Class I or Class II asbestos work. Therefore, the employer's requirement for establishing an asbestos regulated area for the project is determined by the airborne concentrations of asbestos that are generated. As indicated by 29 CFR 1926.1101(e)(1), the employer must establish an asbestos regulated area if the employer has a situation where airborne concentrations of asbestos exceed or there is a reasonable possibility they may exceed either of the asbestos PELs. If the employer does not have that situation, then the employer is not required to establish an asbestos regulated area.

Question 3: What work practices under 29 CFR 1926.1101, if any, must be followed to remove sheetrock when lab results show <1% asbestos?

Reply: The employer needs more information than the fact that the sheetrock contains <1% asbestos in order to establish what work practices he/she must follow. The employer also needs to know the concentration of asbestos in the joint compound, spackling compound, tape, and so forth that was used to complete the installation of the sheetrock. If any of these items contain >1% asbestos, then removal of the sheetrock is Class II asbestos work and the employer must follow the work practices set forth at 29 CFR 1926.1101(g)(7) in the standard for performing Class II asbestos work. In addition, the employer must observe the relevant general work practice and engineering control requirements and prohibitions contained elsewhere in the standard under 29 CFR 1926.1101(g).

If some of the items associated with the installed sheetrock contain some asbestos but none of them contain >1% asbestos, then removal of the sheetrock is considered unclassified asbestos

work. This means that only certain ones of the standard's work practice and engineering control obligations, and prohibitions pertain. Some of the general ones do not pertain because they apply to installed building materials containing >1% asbestos (ACM). How many of the eligible general work practice and engineering control obligations, and prohibitions are applicable depends on whether the employee levels of exposure to airborne asbestos exceed either of the asbestos PELs. In further explanation:

(1) If the employees' asbestos exposures exceed neither asbestos PEL, then only two of standard's general work practice control procedures and three of the standard's general prohibitions pertain to the sheetrock removal operation; none of the standard's engineering control methods pertain to the sheetrock removal operation. Those general work practice procedures and general prohibitions the employer must observe under such a condition are those presented at:

29 CFR 1926.1101(g)(1)(ii), which requires: wet methods, or wetting agents, to control employee exposures during asbestos handling, ... removal, cutting, ... and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards ... [and] equipment malfunction...;

29 CFR 1926.1101(g)(1)(iii), which requires: prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers...;

29 CFR 1926.1101(g)(3)(i), which prohibits: high-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air;

29 CFR 1926.1101(g)(3)(ii), which prohibits: compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air; and

29 CFR 1926.1101(g)(3)(iv), which prohibits: employee rotation as a means of reducing employee exposure to asbestos.

(2) If the employees' asbestos exposures exceed either asbestos PEL, then all of the standard's relevant general work practice control procedures, engineering control methods, and prohibitions that are not directed specifically at ACM pertain to the sheetrock removal operation.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at http://www.osha.gov. If you have any further questions, please feel free to contact the Office of Health Enforcement at 202-693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Enforcement Programs

## 04/21/1998 - Class III asbestos work: training, medical surveillance, PPE, and surfacing materials.

Standard Interpretations - Table of Contents

• **Standard Number:** 1926.1101

April 21, 1998

Ms. Sally J. Lagomarisino
Supervisor Environmental Health and Safety
Clayton Environmental Consultants
1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566

Dear Ms. Lagomarisino:

This is in response to your letter of August 29, 1997, to Stephen Mallinger, former Acting Director, Office of Health Compliance Assistance, Occupational Safety and Health Administration (OSHA), requesting clarification of the applicability of the asbestos standard to certain work activities. We apologize for the delay in our response to you.

You ask if pounding a nail or installing a molly anchor into wall materials, such as, joint compound, finishing/texture material, wall plaster, or paint, that contain more than 1% asbestos, to hang a picture, bulletin board, or clock, etc. is considered to be work that is covered by tile construction asbestos standard (29 CFR 1926.1101). You also ask if installing a molly anchor or other fasteners into wall materials as described above or into floor materials such as asbestos-containing resilient floor tile or sheeting in order to seismically brace a file cabinet, bookcase, etc., is construction work that is covered by the construction asbestos standard. Such work must be evaluated case by case to determine whether it is covered by the construction asbestos standard. If the task is difficult or complex enough to require that construction workers, maintenance persons, or repair persons perform the work, then the work is Class III work covered by the construction asbestos standard. If the task is easy or simple enough to not require that construction workers, maintenance persons, or repair persons perform the work,then the work is covered by the general industry asbestos standard, 29 CFR 1910. 1001, instead of the construction asbestos standard.

You seek clarification of what training must be provided employees performing that work described above that is Class III work covered by the construction asbestos standard. If the employees are employed at carrying out an operation and maintenance program for the building or facility, they require training equivalent to the Environmental Protection Agency's (EPA's) Operation and Maintenance (O&M) training as outlined in 40 CFR 763.92. On the other hand, if Class III work described in the preceding paragraph is the only Class III work conducted by the employees, the employer may rely on the competent person it uses for asbestos projects to determine whether the O&M-type course is appropriate for these

employees. If the competent person determines that much of the curriculum in the O&M-type course is not relevant, the competent person may certify that the training contained in 29 CFR 1926[.1101](k)(9)(viii) is more applicable and may opt to designate this training for the employees provided relevant engineering and work practice controls, other controls, and "hands-on" training will be adequately covered. Both initial training and annual refresher training must be provided. There is no specified minimum time that must be devoted to refresher training. The duration of the initial training will depend on the complexity and hazard of the operation, but it is likely that at least 4 hours will be required to cover the topics, methods, and hands-on portion.

As to your inquiry about medical surveillance for employees performing that work you describe above that is Class III work, an employee must be offered medical surveillance if there are more than 30 days per year the employee spends any amount of time performing the activities. Those days on which an employee spends less than an hour performing the work are not excluded from the count because the work produces asbestos-containing aerosols or shavings. The days on which an employee spends less than an hour on Class III (or Class II) work are excluded only if the asbestos-containing material stays intact while being disturbed (or removed).

You are correct that regardless of exposure levels, regulated areas must be established wherever Class III asbestos work is conducted. According to 29 CFR 1926.1101(e)(1), all Class III asbestos work must be conducted within a regulated area. Moreover, the regulated area is required even should a negative exposure assessment be produced. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Signs shall be provided and displayed pursuant to the requirements of 29 CFR 1926.1101(k)(7).

You are correct that until the employer produces negative exposure assessments for Class III asbestos work, the employees performing the work must be provided and must use respirators and protective clothing. If Class III asbestos work is not performed using wet methods, or if the Class III asbestos work is performed on asbestos-containing surfacing material, then respirators shall be used even after negative exposure assessments have been produced.

The protective clothing required for Class III asbestos work if a negative exposure assessment has not been produced is coveralls or similar whole-body clothing, and head coverings, gloves, and foot coverings. In those instances where negative exposure assessments have been produced for Class III asbestos work, no protective clothing is required.

You end your inquiry into the requirements that pertain when pounding a nail or installing a molly anchor into a wall by asking whether the use of coveralls and a respirator, establishment of a regulated area, and posting of an asbestos warning sign are required just to hang a picture on a plaster wall or on a sheetrock wall coated with finishing material, even after a negative exposure assessment has been produced. As you will note from the answers we provide later in this letter to your questions about surfacing material, the project you ask

about may not involve surfacing material. Also, as we stated earlier in this letter, if the task is easy or simple enough to not require that construction workers, maintenance persons, or repair persons perform the work, then the work is covered by the general industry asbestos standard, 29 CFR 1910.1001, instead of the construction asbestos standard.

If the work is covered by the general industry asbestos standard, then if a negative exposure assessment has been produced, no respiratory protection or protective clothing is required, and neither the establishment of a regulated area nor the posting of an asbestos warning sign is required.

You ask for the definition of "routine facility maintenance." OSHA has not defined the term with regard to its relationship to the Asbestos Construction Standard because the term has no special application to the standard.

You ask that OSHA provide examples of materials it considers surfacing materials besides acoustical plaster and fireproofing coatings for structural members. Decorative plaster with a honeycombed structure and loosely bound fibers is an example of another material that OSHA considers surfacing material.

You list a number of materials and ask if they are surfacing materials as defined by OSHA. We repeat each of the materials you list and comment on them.

- Wall/ceiling plaster (cementitious-type) that has been troweled onto wire lath, button board, or other substrate -- Unless the plaster is acoustical plaster as indicated by a honeycombed structure, or the plaster is decorative plaster with an appearance similar to acoustical plaster, it is not surfacing material.
- Stucco -- This is not surfacing material.
- Paint that has been sprayed on or otherwise applied to wall/ceiling or other building surfaces -- This is not surfacing material.
- Finishing material that has been troweled onto or spray-applied to wall/ceiling sheetrock, concrete, or other surfaces (e.g., "joint compound" that has been applied to a sheetrock wall/ceiling surface to provide a textured finish and covers the entire surface [not just the joints], or a skimcoat application of a light cement finish coat that has been used to provide a smooth finish on sheetrock or concrete -- "Joint compound" used to provide a textured finish for the entire wall or ceiling is usually not surfacing material since usually any fibers it may contain are firmly bound. However, if the textured finish is not readily distinguishable visually from acoustical plaster, it is surfacing material within the meaning of the use of the term in the standard. Cement skimcoats applied to sheetrock or concrete to provide a smooth finish are not surfacing materials.
- Floor leveling compound -- This is not surfacing material.
- Mastic that has been troweled onto a concrete floor surface to adhere resilient tile -- This is not surfacing material.

We appreciate the opportunity to clarify these matters for you. If you have further questions please contact [the Office of Health Compliance Assistance at (202) 693-2190].

Sincerely,

John B. Miles, Jr

Director
Directorate of Compliance Programs

June 18, 1999

Mr. Ray Rivera
Department of Navy
Industrial Hygiene Division
Branch Medical Clinic
1 Administration Circle
China Lake, CA 93555-6100

Dear Mr. Rivera:

This is in further response to your facsimile of November 23, 1998, to Mr. Jorge Leong in the San Francisco Regional Office of the Occupational Safety and Health Administration (OSHA). It included, as an attachment, a letter dated April 21, 1998, concerning asbestos, by John B. Miles, Jr., Director, Directorate of Compliance Programs, National Office, OSHA. You requested verification of the letter's authenticity, asked whether certain information provided in the letter is correct, and requested information on the respiratory protection and other personal protective equipment required by employees during the removal of asbestos-containing stucco.

The San Francisco Regional Office replied to you on December 14, 1998 and verified the authenticity of the letter you sent. That Office also provided the information you requested regarding personal protection required during stucco removal. We are providing you with the remainder of the information you requested in your facsimile.

The letter you sent was written by OSHA in answer to a request for clarification regarding OSHA's asbestos standards. One of the questions involved "surfacing material" which is a term that OSHA defines and uses in its asbestos standards. Several items of material were listed and OSHA was asked if each is defined as "surfacing material."

OSHA replied that neither stucco, paint, floor leveling compound, nor resilient tile mastic is "surfacing material." You ask if this answer is correct for stucco. If it is, you ask that OSHA explain the logic behind the answer since stucco is troweled onto a surface. Moreover, you ask that OSHA explain why the other items are not "surfacing material."

It is true that stucco is not "surfacing material" as OSHA intends to define the term in its asbestos standards. The definition of "surfacing material" presented at 29 CFR 1926.1101(b) in the OSHA construction asbestos standard reads:

"Surfacing material" means material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

Removal of "surfacing material" requires the observation of stringent precautions as specified by the standard for Class I work. The reason for the stringent precautions is that "surfacing material" is intended to include materials that present especially high risk because they contain high concentrations of asbestos fibers and the fibers are loosely bound. It is our understanding that stucco does not normally contain asbestos and that any asbestos present would likely be in low concentrations. Nevertheless, whatever the fiber content, OSHA would not regard it to be "surfacing material" because the fibers are too tightly bound for the material to be in the "high risk" category. Similarly, neither paint, floor leveling compound, nor resilient tile mastic is "surfacing material" because the asbestos fibers in these materials are too tightly bound for the material to belong in the "high risk" category.

If stucco does contain more than 1% asbestos, its removal would be a Class II activity and would still require careful precautions, including:

supervision by a specially trained competent person;

use of wet methods to prevent fibers from becoming airborne;

use of HEPA vacuums to collect all debris and dust; and

prompt cleanup of all waste and debris in leak-tight containers.

In addition, respirator use would be required if the asbestos-containing material is not removed in a substantially intact state or wet method removal of the material is not feasible.

In this regard, the statement in the December 14, 1998 letter to you from Mr. Gilbert J. Gillotti that "OSHA does not base the requirements for respiratory protection or PPE on asbestos content" is not entirely accurate. Airborne asbestos fiber concentrations during Class II removal activities will vary widely and may well exceed permitted limits if the material is not substantially intact when removed or the removal is not performed using wet methods. For that reason, the standard requires respirator use without regard to measured airborne levels when asbestos-containing material (i.e., material containing more than 1% asbestos) is not removed in a substantially intact state or is not removed using wet methods.

Thank you for your interest in occupational safety and health. We hope this provides you the clarification you were seeking and apologize for any confusion the earlier documents may have caused. As this letter demonstrates, OSHA's re-examination of an issue may result in the clarification or correction of previously stated enforcement guidance. In the future, should you wish to verify that the guidance provided herein remains current, you may consult OSHA's website at http://www.osha.gov. If you have any further questions, please feel free to contact OSHA's Office of Health Compliance Assistance at (202) 693-2190.

Sincerely,

Richard E. Fairfax
Director
Directorate of Compliance Programs

November 24, 2003

Kurt Varga, Ph.D.
The InService Training Network
6813 Flags Center Drive
Columbus, OH 43229

Dear Dr. Varga:

Thank you for your April 18, 2002 letter to the Occupational Safety and Health Administration (OSHA). Your letter was forwarded to the Directorate of Enforcement Programs for a response. You are writing on behalf of the Ohio School Facilities Commission, which deals with the construction of schools in Ohio. As a preliminary matter, it should be noted that the Commission, as an agency of a state, and the public schools, as entities of political subdivisions of a state, are not subject to the Occupational Safety and Health Act of 1970. See 29 U.S.C. Sec. 652(b)(5). However, in light of your concerns about the costs imposed on school building contractors of complying with the asbestos standard, we are answering your questions. You have questions concerning the OSHA requirements covering the renovation of school buildings that have hard plaster containing some asbestos, but the amount is not more than 1%. This letter constitutes OSHA's interpretation only of the requirements discussed and may not be applicable to any question not delineated within your original correspondence. We apologize for the long delay of this response; our replies to your paraphrased questions are provided below.

Question 1: Are the OSHA letters dated April 17, 1997; August 7, 1998; and August 13, 1999 correct? They all say that items that do not contain >1% asbestos are covered to at least some extent by the Construction Asbestos Standard.

Reply: Yes, those letters are correct although some requirements of the Construction Asbestos Standard, 29 CFR 1926.1101 were not addressed. 29 CFR 1926.1101 would apply even if neither asbestos permissible exposure limit (PEL) is exceeded1. The standard contains numerous work practice requirements and prohibitions which apply, regardless of the exposure levels. However, only two of the requirements and three of the prohibitions must be observed in the case of work activities involving installed construction materials that do not contain >1% asbestos. Those work practice requirements and prohibitions that must be observed regardless of the exposure levels and of the percentage of asbestos in the installed construction materials are:

29 CFR 1926.1101(g)(1)(ii), which requires: wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to, for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provided in paragraph (g)(8)(ii)2 of this section;

29 CFR 1926.1101(g)(1)(iii), which requires: prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in paragraph (g)(8)(ii)3 of this section apply;

29 CFR 1926.1101(g)(3)(i), which prohibits: high-speed abrasive disc saws that are not equipped with point-of-cut ventilator or enclosures with HEPA filtered exhaust air;

29 CFR 1926.1101(g)(3)(ii), which prohibits: compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air; and

29 CFR 1926.1101(g)(3)(iv), which prohibits: employee rotation as a means of reducing employee exposure to asbestos.

There are also some other provisions that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos. However, if neither asbestos PEL is exceeded, only the following few provisions apply:

29 CFR 1926.1101(f)(2)(i), the provision for establishing that neither asbestos PEL is exceeded: Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly;

29 CFR 1926.1101(f)(6)(i), a provision covering the observation of monitoring: The employer shall provide affected employees and their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section;

29 CFR 1926.1101(f)(5)(i), a provision covering employee notification of monitoring results: The employer shall notify affected employees of the monitoring results that represent that employee's exposure as soon as possible following receipt of monitoring results;

29 CFR 1926.1101(f)(5)(ii), another provision covering employee notification of monitoring results: The employer shall notify affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees; and

29 CFR 1926.1101(n)(2)(i)-(iii), a set of provisions covering recordkeeping for measurements of exposures to airborne asbestos.

There are numerous additional provisions of the standard that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos if at least one of the asbestos PELs is exceeded.

Question 2: Did OSHA intend to regulate material that is found to contain asbestos at <1% when it promulgated the Construction Asbestos Standard that it issued in 1994?

Reply: Yes. Instead of making all of the engineering controls and work practices applicable to all materials containing asbestos, OSHA made most of them applicable only to installed building materials that contain >1% asbestos and assigned the term "asbestos-containing material" (ACM) to those materials. However, to prevent needless worker exposures to asbestos, OSHA made a few common-sense work practices and prohibitions applicable if any asbestos is present in materials.

Thus, the current standard contains engineering controls and work practices that apply regardless of the exposure levels to certain work activities involving only installed building materials that meet the definition of ACM. It also contains a few work practices and prohibitions for work involving material that contains any amount of asbestos regardless of the exposure levels. And the standard has exposure-based requirements, consisting of a 0.1 fiber/cc 8-hour TWA PEL and a 1 fiber/cc 30-minute excursion limit, and other requirements that apply whenever worker exposures exceed either or both of the limits, regardless of the amount of asbestos contained in the materials involved.

Question 3: If OSHA had intended to regulate material with <1% asbestos, why aren't we required to communicate information about material with <1% asbestos?

Reply: Most of the requirements for communication of information occur under 29 CFR

1910.1101(k), Communication of Hazards. Any of the requirements which apply only to building or facility owners are inapplicable because the buildings are entities of political subdivisions of the State of Ohio and not subject to the OSHAct. On the other hand, any of the provisions that apply to employers are applicable to private contractors doing the asbestos work. The information that sections (k)(7), (9), and (10) require to be communicated applies to materials not having >1% asbestos which are the source of employee asbestos exposures exceeding one or both of the asbestos PELs as well as to materials containing >1% asbestos. Also, 29 CFR 1926.1101(k)(8), which specifies labeling requirements, applies to materials that contain 1% or more asbestos. On the other hand, it is correct that the information which (k)(1)4-(k)(6) require to be communicated pertains only to materials containing >1% asbestos. However, it should be noted that under (k), surfacing material, thermal system insulation and asphalt and vinyl flooring material found in buildings constructed no later than 1980 or installed no later than 1980 must be considered to contain >1% asbestos, unless the employer demonstrates otherwise in accordance with (k)(5).

Question 4: Under 29 CFR 1926.1101(k)(8) are employers required only to communicate information about ACM?

Reply: 29 CFR 1926.1101(k)(8) requires employers to communicate information about ACM and also material that contains 1% asbestos. (ACM, again, is material that contains >1% asbestos.)

Question 5: Should the phrase "products containing asbestos" as used in paragraph (k)(8)(i) be read "ACM" and not as including materials with <1% asbestos, because otherwise there is a contradiction in (k)(8)?

Reply: No. There is no contradiction. Paragraph (k)(8)(i) deals broadly with products containing asbestos. Paragraph (k)(8)(vi)(B) provides for an exclusion from labeling for products with <1% concentrations of asbestos.

Question 6: Why, if material containing <1% asbestos is to be considered hazardous (employers are to wet it, put it in containers, and perform air monitoring), are employers not required to warn workers about its presence when they know it is present at a work site or in a building?

Reply: You must inform employees about the presence of material containing <1% asbestos when you know it is present. When employees perform work activities involving such material, you are required per 29 CFR 1926.1101(f)(2)(i) to assess their exposures to asbestos. In connection with this requirement you must, per 29 CFR 1926.1101(f)(6)(i), provide affected employees an opportunity to observe any monitoring of asbestos exposure. After the monitoring, you must, per 29 CFR 1926.1101(f)(5)(i) and (ii), inform employees of the monitoring results representing their asbestos exposures. In accordance with 29 CFR 1926.1101(e) and (k)(7), if asbestos exposures exceed or are likely to exceed one or both of the PELs, then you must provide warning by posting the area where these overexposures are occurring as a regulated area.

Although employers do not have to label containers of waste and debris containing <1% asbestos, promptly placing the waste and debris in leak-tight containers is a work practice that reduces the exposures of the employees producing the waste and debris. That is especially so because this work practice is to be used in conjunction with wet methods or wetting agents. By promptly cleaning up the waste and debris and placing it in containers, it is kept from drying out and possibly releasing airborne asbestos into the work environment. Leak-tight containers prevent the asbestos from seeping out and reintroducing an asbestos exposure hazard.

Question 7: If OSHA had intended to regulate material containing <1% asbestos, why do not employers have to use HEPA-filters when using vacuum cleaners to clean up material containing <1% asbestos?

Reply: An employer does not have to use vacuum cleaners to clean up material containing **<1%**

asbestos. However, if an employer uses vacuum cleaners to clean up the material, then per 29 CFR 1926.1101(l)(1), it must use HEPA-filtered vacuuming equipment.

Question 8: If OSHA had intended to regulate material containing <1% asbestos, why does it not discuss the distinction between ACM and material containing <1% asbestos in the preamble to the regulation?

Reply: OSHA was already regulating materials that contained <1% asbestos. In promulgating the 1994 standard, OSHA was determining which materials to regulate further by additional work practice and engineering control requirements.

Question 9: If OSHA had intended to regulate material containing <1% asbestos, why did it not examine the compliance costs for working with this material?

Reply: As we stated above, OSHA was already regulating materials with <1% asbestos. In promulgating the 1994 standard, OSHA was determining the cost of complying with additional work practice and engineering control requirements.

Question 10: If OSHA had intended to regulate material containing <1% asbestos, why did it not mention this in its CPLs dealing with asbestos in construction?

Reply: That was simply an oversight by the preparers of the Asbestos Compliance Directive. It will be corrected when the directive is next updated.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at http://www.osha.gov. If you have any further questions, please feel free to contact the Office of Health Enforcement at (202) 693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Enforcement Programs

5/25/2011

Vermiculite (again....)
Michael Breu [michaelb@fiberquant.com]

Good morning gentlemen. I just got off of another vermiculite issue and that reminded me I needed to send you all an email.

Larry has finally made a permanent decision not to perform point counts any more. Scott, I know you are well aware of the limitations and that you are stuck with a law that is not really subject to interpretation.
1% is 1% and that is it. But we can no longer do point counts in good conscience as we are certain that we are under-reporting the asbestos concentration in vermiculite when tremolite is present. I cannot overemphasize enough that we are fully aware of the problems this will create for Fiberquant clients. But we cannot let ourselves be goaded in producing lousy data to make our clients happy. I am sure this is going to cost us some revenue but I think it is the right move.

Again, my apologies for the "flip-flop-flip" we have done. We should never have compromised in the first place. When I run into this issue again (which is pretty much about every week) I will offer to send the samples to the laboratory of the clients choice if they want a point count done.

As always, please call me if you have any questions.

M

> Michael,
> What is your take on using gravimetry and TEM on vermiculite? It
> would be more accurate than point counting, and just acceptable to EPA
> (I think).
> Bill

Gravimetry is only successful if part of the matrix burns off in the oven or dissolves in acid. Vermiculite is incredibly good about being resistant to both; you pretty much end up with what you started with.
And TEM/gravimetry still won't help with the problem of how we account for the sheets of tremolite sandwiched between the mica. You cannot tell how much of the rock consists of tremolite by looking at the surface. Trust me Bill, if there was a way to produce vermiculite accurate data, I would be all over it and out there trying to educate the labs.

M

Control Number: A090001

Category: Asbestos
EPA Office: Region 5
Date: 05/02/2008
Title: Vermiculite in Facility Demolished for Safety Reasons
Recipient: Vaughn, Lawrence
Author: Czerniak, George T.
Comments:
Subparts: Part 61 M Asbestos
References: 61.141
61.145
61.150

Abstract:

Q: Does EPA approve a variance from 40 CFR part 61, subpart M, the asbestos NESHAP, to allow vermiculite material to be left in place during demolition at the former Coachman Motel in Bloomington, Illinois?

A: No. EPA does not approve a variance to the asbestos NESHAP under any circumstance. However, the asbestos NESHAP identifies situations where regulated asbestos-containing material (RACM) need not be removed prior to demolition, including a situation where the RACM was not accessible for testing and not discovered until after demolition, and as a result of the demolition, cannot be safely removed. The loose vermiculite material in between the walls at this motel appears to fall into this situation because, to remove it, the walls would need to be taken down, causing the ceiling to collapse. All exposed RACM and all contaminated debris must be treated as asbestos-containing waste material in this situation.

Letter:

(AE-17J)

Mr. Lawrence Vaughn
Manager, Industrial Hygiene Services
MATEC Engineering & Consulting
8901 North Industrial Road
Peoria, Illinois 61615-1509

Re: Former Coachman Motel, Bloomington, Illinois

Dear Ms. Vaughn:

Thank you for your letter dated April 14, 2008, to the U.S. Environmental Protection Agency requesting a "variance" to the asbestos National Emission Standard for Hazardous Air Pollutants ("NESHAP"), 40 CFR Part 61, Subpart M. Specifically, 40 CFR Sec. 61.145(c)(1) requires that the owner or operator of a facility remove all Regulated Asbestos-Containing Material ("RACM") from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal.

MACTEC Engineering & Consulting, Inc. ("MACTEC") is involved in a demolition activity at a hotel in Bloomington, Illinois (the "facility"). During a phone conference on May 1, 2008 with Ms. Linda H. Rosen, of my staff, and Mr. Everett Bishop of the Office of Enforcement and Compliance Assurance ("OECA"), you explained that upon opening up one of the concrete masonry walls at the facility, MACTEC discovered loose asbestos-containing vermiculite material in between the walls. According to MACTEC, the vermiculite cannot be safely removed prior to the walls being demolished because the walls are load-supporting.

The asbestos NESHAP does not allow a variance to be granted under any circumstance. According to 40 CFR Sec. 61.145(c)(1), RACM need not be removed before demolition if: (i) It is Category I nonfriable ACM that is not in poor condition and is not friable; (ii) It is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition; (iii) It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of; or (iv) They are Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

EPA has determined that the exceptions in 40 CFR Sec. 61.145(c)(1)(i), (ii), and (iv) noted above, do not apply to this demolition. The asbestos-containing vermiculite is not Category 1 or Category II ACM. Rather, it is a friable ACM. The exception in 40 CFR Sec. 61.145(c)(1)(ii) does not apply because the material is not on a facility component which is encased in concrete. It is loose between the walls.

The exception noted in 40 CFR Sec. 61.145(c)(1)(iii) applies in this specific instance because the asbestos-containing material ("ACM") cannot be safely removed. In order to remove the material, the walls would need to be taken down and because they are load-supporting, the ceiling would collapse.

Therefore, in accordance with 40 CFR Sec. 61.145(c)(1)(iii), MACTEC can leave the vermiculite ACM material in place between the walls during demolition. However, all exposed RACM and all asbestos-contaminated debris must be treated as asbestos-containing waste material and kept adequately wet at all times until disposed of in accordance with 40 CFR Secs. 61.145(c) and 61.150.

If you have any questions regarding this letter, feel free to contact Linda H. Rosen, of my staff, at (312) 886-6810.

Sincerely yours,

George T. Czerniak, Chief
Air Enforcement and Compliance Assurance Branch

cc: Ray Pilapil, Manager
Bureau of Air - Compliance and Enforcement Section
Illinois Environmental Protection Agency

Control Number: A090004

Category: Asbestos
EPA Office: Region 5
Date: 08/06/2008
Title: Demolition Procedures Involving Asbestos-containing Vermiculite
Recipient: Faust, Jeffrey M.
Author: Czerniak, George T.
Comments:
Subparts: Part 61 M Asbestos
References: 61.141
61.145

Abstract:

Q: Does EPA approve Environmental Consultants' request under 40 CFR part 61, subpart M, to leave vermiculite asbestos-containing material (ACM), which is loose between the load-supporting concrete block walls of a vacant commercial building in O'Fallon, Illinois, in place during the building's demolition?

A: Yes. EPA has determined that Environmental Consultants can leave ACM in place during demolition because it is a friable ACM, and the exception in 40 CFR 61.145(c)(1)(iii) applies since it cannot be safely removed prior to demolition without causing the ceiling to collapse. All exposed regulated ACM and all asbestos-contaminated debris must be treated as asbestos-containing waste material and kept adequately wet at all times until properly disposed of.

Letter:

(AE-17J)

Mr. Jeffrey M. Faust
Principal
Environmental Consultants, LLC
#6 Meadow Heights Professional Park Drive
Collinsville, Illinois 62234

Re: Request for Alternative Demolition Procedures Vacant Commercial Structure, O'Fallon, Illinois

Dear Mr. Faust:

Thank you for your letter dated July 30, 2008, to the U.S. Environmental

Protection Agency requesting an alternative demolition procedure to the asbestos National Emission Standard for Hazardous Air Pollutants ("NESHAP"), 40 CFR Part 61, Subpart M.

Specifically, 40 CFR Sec. 61.145(c)(1) requires that the owner or operator of a facility remove all Regulated Asbestos-Containing Material ("RACM") from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. "RACM" is defined in 40 CFR Sec. 61.141 as: "(a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable material that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart."

Environmental Consultants, LLC ("Environmental Consultants") is involved in a demolition activity at a vacant commercial building located at 1701 West US Highway 50, O'Fallon, Illinois (the "facility"). During a recent phone conversation with Ms. Linda H. Rosen, of my staff, and in the July 30, 2008 letter, you explain that there is friable asbestos-containing vermiculite material within the concrete block walls of the facility. According to Environmental Consultants, this RACM cannot be safely removed prior to the walls being demolished because the walls are load-supporting. Your July 30, 2008 letter explains that in addition to the asbestos-containing vermiculite material, there is also asbestos in the facility's roofing system and window caulk/glazing. According to you, the asbestos-containing roofing material is Category I nonfriable ACM and the asbestos-containing window caulk/glazing is Category II nonfriable ACM. Your letter requests that the asbestos-containing vermiculite material be left in place during demolition.

The asbestos NESHAP does not allow a variance to be granted under any circumstance. According to 40 CFR Sec. 61.145(c)(1), RACM need not be removed before demolition if: (i) It is Category I nonfriable ACM that is not in poor condition and is not friable; (ii) It is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition; (iii) It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of; or (iv) They are Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

EPA has determined that the exceptions in 40 CFR Sec. 61.145(c)(1)(i), (ii), and (iv) noted above, do not apply to this demolition. The asbestos-containing vermiculite is not Category 1 or Category II ACM. Rather, it is a friable ACM. The exception in 40 CFR Sec. 61.145(c)(1)(ii) does not apply because the material is not on a facility component which is encased in concrete. It is loose between the walls.

The exception noted in 40 CFR Sec. 61.145(c)(1)(iii) applies in this specific instance because the asbestos-containing material ("ACM") cannot be safely removed. In order to remove the material, the walls would need to be taken down and because they are load-supporting, the ceiling or roof would collapse. Therefore, in accordance with 40 CFR Sec. 61.145(c)(1)(iii), Environmental Consultants can leave the vermiculite ACM material in place between the walls during demolition. However, all exposed RACM and all asbestos-contaminated debris must be treated as asbestos-containing waste material and kept adequately wet at all times until disposed of in accordance with 40 CFR Secs. 61.145(c) and 61.150.

In addition, all other RACM in the facility must be removed prior to the facility being demolished. RACM includes, among other things, Category I nonfriable material that will be or has been subjected to sanding, grinding, cutting or abrading and Category II nonfriable material that has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of the demolition. It is EPA's view that the Category II nonfriable window caulking has a high probability of becoming crumbled, pulverized or reduced to powder by the forces expected to act on it during a normal demolition and therefore should be removed prior to demolition.

This response has been reviewed by the Office of Enforcement and Compliance Assurance. If you have any questions regarding this letter, feel free to contact Linda H. Rosen, of my staff, at (312) 886-6810.

Sincerely yours,

George T. Czerniak
Chief
Air Enforcement and Compliance Assurance Branch

cc: Ray Pilapil, Manager
Bureau of Air - Compliance and Enforcement Section
Illinois Environmental Protection Agency