Fermilab

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Memorandum

June 8, 2009

To: Nancy L. Grossman

From: Martha Michels Martha Michels

Subject: Revised FESHM Chapter 5052.4 – Asbestos Management Program

FESHM chapter 5052.4, Asbestos Management Program, was reviewed and revised. There were only minor changes made. There is no need to send it out for lab wide review.

After final approval, please return this approval page to Elizabeth Bancroft at MS119 for posting on the web.

Encl.

Approved:

Nancy L. Grossman _____ 6/8/09 Date

ASBESTOS MANAGEMENT PROGRAM

PURPOSE

Exposure to asbestos increases the risk of developing lung disease. It has been a component of a variety of building products, especially those made prior to 1980. These products are not health hazards unless they are damaged and can release asbestos fibers. The purpose of this chapter is to establish (1) work practices to maintain asbestos containing building materials in good condition and to ensure the clean-up, repair and/ or removal of damaged material, and (2) training requirements for those employees who may be exposed to asbestos containing material.

SCOPE

All employees, contractors, subcontractors, and visitors whose work activities may disturb asbestos-containing materials shall comply with this chapter.

POLICY

The ES&H Section shall coordinate all asbestos removal, repair, enclosure, encapsulation, or clean-up activities. In an emergency situation, Fermilab employees may be assigned Class III or Class IV asbestos work. This will be done **only** after consultation with the ES&H-Safety and Environmental Protection (ESH-SEP).

All subcontractor employees conducting Class I or Class II work shall be trained according to OSHA regulations 29 CFR 1910.1001 or 1926.1101, certified in asbestos abatement by an EPA Accredited Training organization, and licensed by the Illinois Department of Public Health.

DEFINITIONS

Asbestos is a term used to describe naturally occurring fibrous silicate minerals. This includes chrysotile, amosite and crocidolite.

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Asbestos Containing Building Material (ACBM) is building material that contains 1% or more of asbestos.

Building Inspector is one who has passed an EPA accredited Building Inspector class, and is licensed by the Illinois Department of Public Health.

Class I asbestos work means activities involving the removal of asbestos containing surfacing material or thermal system insulation.

Class II asbestos work means activities involving the removal of asbestos containing materials which are not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work means repair and maintenance operations involving asbestos containing materials.

Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb asbestos containing materials and activities to clean up dust, waste and debris resulting from Class I, Class II, and Class III activities.

EPA Accredited Training is accredited training class per the ASHARA EPA Model Accreditation Plan.

Encapsulation is treatment of ACBM with a material that surrounds or embeds asbestos fibers with an adhesive matrix to prevent the release of fibers.

Enclosure is an airtight, impermeable barrier around ACBM to prevent the release of fibers.

Fiber is a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Fiber Release Episode is any uncontrolled or unintentional disturbance of ACBM resulting in visible emission.

Friable is material that when dry may be crushed, pulverized, or reduced to a powder by applying hand pressure.

Inspection is those activities undertaken to specifically determine the presence or location, or to assess the condition of ACBM (this does not include visual inspections or air monitoring).

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Presumed Asbestos Containing Material is thermal system insulation and surfacing material found in buildings constructed no later than 1980.

Repair means returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.

Response Action is any method of controlling friable ACBM including removal, encapsulation, enclosure, repair, and asbestos maintenance program.

Surfacing Material is 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).

Thermal System Insulation is insulation applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Work Area Surveillance is visual examination of ACBM to determine condition. Air samples may supplement the visual examination.

RESPONSIBILITIES

Division/Section (D/S) Heads are responsible for:

- Assuring that ESH-SEP is notified of any Class I-IV work that needs to be performed.
- Assuring the D/ S SSO is notified of any projects (i.e. boiler/ furnace work, work on pipe insulation) involving the disturbance of known or presumed ACBM.
- Assuring that all presumed ACBM is identified in the asbestos inventory, and a response action has been selected. This inventory shall be updated annually.
- Assures that Fermilab employees or subcontractors whose work may disturb ACBM are informed of its presence, location and quantity.
- Assuring visual inspection of friable ACBM is performed annually. Results shall be maintained in a surveillance log.
- Assures that Fermilab personnel whose work may cause them to disturb ACBM or who may be potentially exposed to asbestos fibers receive asbestos awareness training upon initial assignment.

Division/Section Waste Coordinators are responsible for assisting in the characterization, packaging, labeling, and temporary storage of waste generated by

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subcontractors under their division/ section's management as requested by the Task Manager and whenever such waste is ultimately to be transferred to the HCT Team for disposal (see FESHM 8021).

The ES&H Section is responsible for:

- Providing trained personnel to act as Task Manager for the removal, repair, enclosure, encapsulation, or clean up of asbestos containing materials. This includes preparing the Work Notification and Hazard Analysis and auditing the subcontractor per FESHM 7010 to assure that work by subcontractor is performed in accordance with OSHA and EPA regulations.
- Provide for third party monitoring, in the event that the scope of the abatement job is great enough to warrant such additional precautions.
- Developing and maintaining a sitewide asbestos inventory database. The inventory shall include the location of the material and an assessment of the condition of the material.
- Developing lesson plan for general asbestos awareness training. ES&H-SEP will provide training upon request.
- Disposing of asbestos materials that have been removed (see FESHM 8021).

The Asbestos Subcontractor is responsible for

- Performing work in accordance with OSHA, EPA, and Fermilab requirements.
- Submitting written hazard analysis for asbestos removal activities.
- Providing all records regarding the specific abatement job, including air monitoring results and training records of all subcontractor personnel involved.

PROCEDURES

1. Inspection

The divisions/ sections must identify presumed ACBM in their areas. Thermal system insulation, sprayed or troweled on surfacing material and asphalt and vinyl flooring material installed no later than 1980 are presumed to be asbestos containing building materials. To determine if a material contains asbestos, the division/ section shall contact the D/ SSSO or ESH-SEP for an inspection. The inspection shall follow the Bulk Sampling in Asbestos Containing Materials

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procedure 5052.4 TA and be conducted or supervised by an EPA certified and State of Illinois licensed inspector.

The inspector shall take a bulk sample(s) of the material, determine if the material is friable, and assess if the material is damaged or has a potential for damage. This information will be recorded in the Industrial Hygiene Sampling Report database and asbestos inventory.

2. Inventory

The ESH Section shall maintain an inventory of all known ACBM locations for their division/ section facilities. Each D/ S shall update the inventory as needed (e.g., damage noted during surveillance, material removed, etc.).

3. Surveillance

Each division/ section shall visually inspect all friable ACBM materials or barrier annually. Air sampling may be used to supplement the visual inspection. The surveyor shall note the date of the surveillance, name of surveyor, and any changes in the condition of the material. If conditions have changed significantly, a response action shall be initiated.

4. Response Actions

Once ACBM has been identified, a response action must be selected that is sufficient to protect human health and the environment. The D/ S SSO or ESH-SEP can provide consultation on available response actions. The division/ section shall select the most cost-effective solution. The response actions are removal, encapsulation, enclosure, repair or a maintenance program (visual inspection, labeling, awareness training, etc.).

Removal, encapsulation, enclosure and repairs must be done by specially trained workers and follow OSHA and EPA regulations. Due to the complexity of these regulations, the ES&H Section shall coordinate these activities.

The ES&H Section shall notify the Medical Department if any Fermilab employees are assigned to perform Class III, or Class IV work.

In the event of a fiber release episode, a response action shall be initiated to prevent future episodes.

5. Labels

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a. Labels shall be affixed to all friable ACBM. Labels shall be printed in large, bold letters on a contrasting background. The label shall contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

b. The number and location of these labels is at the discretion of the division/ section. The entrance to mechanical rooms/ areas in which employees reasonably can be expected to enter and which contain ACBM, may be posted with signs in lieu of labels, which identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that ACBM will not be disturbed.

c. Labels indicating that the building is not asbestos-free may also be affixed to the material.

1. Training

a. Awareness training must be given to personnel who may inadvertently disturb asbestos containing building materials.

1. The training must be given upon initial assignment. It may be incorporated into other training such as Hazard Communication training; however, the asbestos portion must be documented.

2. Training shall include, but not be limited to:

- Information regarding asbestos and its various uses and forms.
- Information on the health effects associated with asbestos exposure.
- Locations of ACBM in their work area which have the potential to release fibers if disturbed.
- Recognition of damaged, deteriorated, and delaminated ACBM.
- Requirements for providing good housekeeping.

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- Identification of ES&H personnel responsible for asbestos program.

b. Personnel involved in Class III and Class IV work must receive training per OSHA and EPA requirements, and be licensed by the Department of Public Health.

APPLICABLE STANDARDS

29 CFR 1910.1001, OSHA General Industry Standard

29 CFR 1926.1101, OSHA Construction Standard

40 CFR Part 61, Subpart M, (NESHAP) National Emission Standards for Hazardous Air Pollutants

40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA/ ASHARA)

FESHM 7010, Subcontractor Construction Safety
FESHM 8021, Regulated Chemical Waste Disposal

State of Illinois:

a.) Asbestos Abatement Act (105 ILCS 105))
b.) Commercial and Public Building Asbestos Abatement Act (225 ILCS 207)
c.) Rules for Asbestos Abatement for Public and Private Schools and Commercial and Public Buildings in Illinois (77 Ill. Adm. Code 855)

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Elizabeth Bancroft

From: "David Baird, Jr." <baird@fnal.gov>
To: "ESH_Admin" <esh_admin@fnal.gov>
Cc: "Martha Heflin" <martha@fnal.gov>
Sent: Tuesday, December 09, 2008 12:33 PM
Attach: 5052_4_0812.doc; 5052_2TA_0812.doc
Subject: Asbestos FESHM Chapter Updates

Liz,

Please post as final the attached two documents. There were only minor changes that do not need a lab-wide review.

Chapter 5052.4 and 5052.4 TA are located at:

http://www-esh.fnal.gov/pls/default/esh_home_page.page?this_page=5052

NOTE: 5052.4 TA procedure used to be named 5052 TA. Please correct the link to the new name.

Let me know if you have any questions,

Thanks,

Dave

David I. Baird, MS, CIH, CSP

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