PACNY 2020 PRESENTATION

CONTAMINATION ASSESSMENT
What is a contamination assessment?

A. It is required by NYS Industrial Code Rule 56

B. It is required by AHERA

C. It was made-up by Angelo to get us to attend this Proficiency Day

D. None of the above
HOW CONTAMINATION ASSESSMENTS ARE LIKE GOPHER (FROM WINNIE THE POOH AND THE HONEY TREE – DISNEY MOVIE)
1. When does a contamination assessment need to be done?

a. For any incidental disturbance

b. For any small or large incidental disturbance

c. For a small or large incidental disturbance that cleans the whole area where the disturbance occurred

d. For any clean-up greater than 10 square feet or 25 linear feet of disturbed material that the cleanup is less than the whole area where the disturbance occurred.
CON T A M I N AT I O N A S S E S S M E N T

• What is the goal?

• What does the client want or need from the assessment?

• Do they know what they want or need?
REGULATIONS WITH CONTAMINATION ASSESSMENT REQUIREMENTS

EPA AHERA

OSHA 1926.1101

NYSDOL ICR 56
ASSESSMENT GUIDELINES

- ICR56 Guidance Document
- ASTM D5755 – 09 – MicroVac w/ TEM
- ASTM D6480-05 – Wipe Sampling w/ TEM
- NYS DOH ELAP – FAQ
2. Which of the following results are considered ACM?

a. 1.0% Chrysotile
b. .75% Amosite and .25% Chrysotile
c. 1.5% Tremolite
d. 1.5% winchite
3. ACM is a material which contains:

a. Asbestos equal to or greater than 1.0% by weight

b. Asbestos greater than 1.0% by weight

c. Asbestos less than 1.0% by weight

d. Asbestos in any amount
ASBESTOS IN GENERAL

A material is considered asbestos-containing if the material has >1% asbestos in it. The only way to know is to send a sample of the material to a lab for analysis.

PACM – OSHA terminology - Presumed Asbestos Containing Material means thermal system insulation and surfacing material found in buildings constructed no later than 1980.
NYS ICR56
ASBESTOS IN GENERAL

(a) Thermal System Insulation:
(1) Equipment Insulation;
(2) Boiler, Breathing, Duct, or Tank insulation, Cement or Mortar Used for Boilers and Refractory Brick;
(3) Piping and Fitting insulations including but not limited to, Wrapped Paper, Arscell, Milboard, Rope, Cork, Detergent Plaster, lath, Medicated plaster and coverings over spiral metal insulation.

(b) SUSPECT MISCELLANEOUS ACM
(a) Roofing and Siding Miscellaneous Materials:
(1) Insulation Board;
(2) Vapor Barriers;
(3) Coatings;
(4) Non-Metallic or Non-Wood Roof Decking;
(5) Felt;
(6) Cementitious Board (Transite);
(7) Flashing;
(8) Shingles and
grease;
(9) Gableboard;
(b) Other Miscellaneous Materials:
(1) Dust and Debris;
(2) Floor Tile;
(3) Grout;
(4) Floor Leveler Compound;
(5) Ceiling Tile;
(6) Vermiculite Insulation
4. Asbestos contamination assessments are considered what Class of work according to OSHA?

- a. Class I when disturbing TSI or Surfacing Materials
- b. Class II when disturbing materials which are not TSI or Surfacing Materials
- c. Class III work
- d. Asbestos surveys are considered unclassified work under OSHA
• Employers and building owners shall identify TSI and sprayed or troweled on surfacing materials in buildings as asbestos-containing, unless they determine in compliance with paragraph (k)(5) of this section that the material is not asbestos-containing. Asphalt and vinyl flooring material installed no later than 1980 must also be considered as asbestos containing unless the employer, pursuant to paragraph (g)(8)(i)(I) of this section determines that it is not asbestos-containing. If the employer/building owner has actual knowledge or should have known through the exercise of due diligence, that other materials are asbestos containing, they too must be treated as such.
Asbestos-containing material (ACM) when referring to school buildings means any material or product which contains more than 1 percent asbestos.

Asbestos-containing building material (ACBM) means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building.
AHERA ASBESTOS DEBRIS

- means pieces of ACBM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.
**AHERA HOMOGENEOUS AREA**

- means an area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture.
FRIABLE MISCELLANEOUS MATERIALS

2 samples for homogeneous area

Joint Compound - 3 samples for homogenous area

Add-on Material - 3 samples for homogenous area
AHERA RULES
(APPLIES TO
PUBLIC &
PRIVATE
SCHOOLS K-
12 ONLY)
FOR DEBRIS
CLEANUPS

• Initial Cleaning

• Minor Fiber Release Episodes - (i.e., the falling or dislodging of 3 square or linear feet or less of friable ACBM)

• Major Fiber Release Episodes - (i.e., the falling or dislodging of more than 3 square or linear feet of friable ACBM)
AHERA RULES (MINOR FIBER RELEASE EPISODES) FOR DEBRIS CLEANUPS

• Thoroughly saturate the debris using wet methods.

• Clean the area, as described in paragraph (e) of this section.

• Place the asbestos debris in a sealed, leak-tight container.

• Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, or insulation, or seal with latex paint or an encapsulant, …
AHERA RULES (MAJOR FIBER RELEASE EPISODES) FOR DEBRIS CLEANUPS

- Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.

- Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.

- The response action for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.
ICR56-1.4
MULTI-EMPLOYER WORKSITES

• Building Owner or Designated Representative:
  • Is responsible for contracting with a licensed asbestos contractor for the immediate isolation and clean-up of an incidental disturbance or other disturbance of ACM, PACM, etc. when it occurs.
  • The clean-up and isolation must follow the requirements of ICR56.
ICR56-2
DEFINITIONS

• 56-2.1 (bo) Incidental Disturbance – The unintentional disturbance of ACM, PACM, or asbestos material.

• 56-2.1 (bp) Incidental Disturbance Asbestos Project – The cleanup, repair, or encapsulation of less than 10 SF or less than 25 LF of incidentally disturbed ACM, PACM, or asbestos material.
5. Which license(s) are needed to perform a contamination assessment (greater than 10 SF)?

a. Project Designer
b. Air Sample Technician
c. Inspector
d. Management Planner
e. a, b, c
f. b, c
g. b, c, d
h. All of the above
The extent of contamination shall be determined by:

- A certified inspector, working with a project designer.
- These certified individuals shall:
  - Use visual debris/contamination identification and assessment,
  - static (ambient) air sampling of the potentially contaminated area (also requires certified individual project sampling technician), and
  - adequate bulk sampling/analysis of the remaining debris/residue to define the limits of the contamination that must be cleaned up.

The extent of contamination assessment is to be completed prior to submission of the variance petition, necessary for small and large size clean-up projects.
GENERAL REQUIREMENTS OF DISTURBANCE PROJECTS

• For all disturbances, the room/space/area must be vacated and isolated immediately.

• A licensed asbestos contractor must be hired for appropriate cleanup of affected room/area/space.

• All work must be done by workers with the appropriate asbestos certificate.

• Asbestos O&M workers are only allowed to work on repair or maintenance operations that fit into one 60” waste bag per worker per day (or by ICR56 only minor projects).

• Isolation or shut down of HVAC
MINOR PROJECT - INCIDENTAL DISTURBANCE OR OTHER DISTURBANCE

**Size**
- the square footage of the affected surfaces to be cleaned is the notifiable quantity - Less than or equal to 10 square feet.

**Notify**
- Notify local NYSDOL office.

**Follow**
- Then follow emergency project rules for clean-up.

**Asbestos Project Monitor**
- Performs visual inspection & clearance sampling after a 4-hour waiting period.
SMALL OR LARGE PROJECT - INCIDENTAL DISTURBANCE OR OTHER DISTURBANCE

- Isolate area
- Asbestos Inspector & Project Sample Technician Perform Contamination Assessment
- Size – greater than 10 square feet, the square footage of the affected surfaces to be cleaned is the notifiable quantity.
- Asbestos Project Designer write Variance for cleanup
- NYSDOL approves Variance
- Asbestos Contractor Notifies NYSDOL & pays fee
- Asbestos Contractor performs cleanup
- After a waiting period, Asbestos Project Monitor performs visual inspection & clearance sampling.
The project designer shall include within the variance petition:

- a plan for cleanup (along with any necessary removals or repair of damaged materials) that will take into account:
  - accessibility,
  - air movement and
  - other pertinent conditions that may affect the proposed procedures.

If the project designer requests delay of scheduling the necessary cleanup projects, appropriate supporting information must be provided, and necessary precautions must be included for maintaining isolation of the affected area until cleanup is scheduled and completed.
CONTAMINATION ASSESSMENT REPORT

- Location of the ACM, quantities, & types of ACM
- Friability & condition of the identified ACM
- Copies of the certificates, & licenses of all inspectors, project sampling technicians, & designers
- Copies of the laboratory report & laboratory license
- Listing of homogeneous areas identifying which ones are ACM
- Air Sample Results
- Asbestos Contamination Assessment & Variance to be kept at the construction site with the asbestos notification.
8. How often do you take samples using the ASTM dust sampling methods?

a. Never used them

b. Once or twice, as of today

c. Use at least once or twice annually

d. Use them regularly
Considering to the two dust sampling method, which do you prefer?

a. Micro-vacuum
b. Wipe sampling
c. Neither
STANDARD TEST METHOD FOR MICROVACUUM SAMPLING AND INDIRECT ANALYSIS OF DUST BY TRANSMISSION ELECTRON MICROSCOPY FOR ASBESTOS STRUCTURE NUMBER SURFACE LOADING

ASTM D5755-09

MICROVAC W/ TEM
THIS TEST METHOD IS GENERALLY APPLICABLE FOR AN ESTIMATE OF THE SURFACE LOADING OF ASBESTOS STRUCTURES STARTING FROM APPROXIMATELY 1000 ASBESTOS STRUCTURES PER SQUARE CENTIMETRE.

ASTM D5755 – 09 MICROVAC W/ TEM
THE SAMPLE IS COLLECTED BY VACUUMING A KNOWN SURFACE AREA WITH A STANDARD 25 OR 37-MM AIR SAMPLING CASSETTE USING A PLASTIC TUBE THAT IS ATTACHED TO THE INLET ORIFICE WHICH ACTS AS A NOZZLE.

THE SAMPLE IS TRANSFERRED FROM INSIDE THE CASSETTE TO AN AQUEOUS SUSPENSION OF KNOWN VOLUME. ALIQUOTS OF THE SUSPENSION ARE THEN FILTERED THROUGH A MEMBRANE. A SECTION OF THE MEMBRANE IS PREPARED AND TRANSFERRED TO A TEM GRID USING THE DIRECT TRANSFER METHOD. THE ASBESTIFORM STRUCTURES ARE IDENTIFIED, SIZED, AND COUNTED BY TEM, USING SAED AND EDXA AT A MAGNIFICATION OF 15 000 TO 20 000×.

ASTM D5755 – 09 MICROVAC W/ TEM
THIS MICROVACUUM SAMPLING AND INDIRECT ANALYSIS METHOD IS USED FOR THE GENERAL TESTING OF NON-AIRBORNE DUST SAMPLES FOR ASBESTOS. IT IS USED TO ASSIST IN THE EVALUATION OF DUST THAT MAY BE FOUND ON SURFACES IN BUILDINGS SUCH AS CEILING TILES, SHELVING, ELECTRICAL COMPONENTS, DUCT WORK, CARPET, ETC. THIS TEST METHOD PROVIDES AN INDEX OF THE SURFACE LOADING OF ASBESTOS STRUCTURES IN THE DUST PER UNIT AREA ANALYZED AS DERIVED FROM A QUANTITATIVE TEM ANALYSIS.

THIS TEST METHOD DOES NOT DESCRIBE PROCEDURES OR TECHNIQUES REQUIRED TO EVALUATE THE SAFETY OR HABITABILITY OF BUILDINGS WITH ASBESTOS-CONTAINING MATERIALS, OR COMPLIANCE WITH FEDERAL, STATE, OR LOCAL REGULATIONS OR STATUTES. IT IS THE USER’S RESPONSIBILITY TO MAKE THESE DETERMINATIONS.

ASTM D5755 – 09 MICROVAC W/ TEM

SIGNIFICANCE & USE
AT PRESENT, NO RELATIONSHIP HAS BEEN ESTABLISHED BETWEEN ASBESTOS-CONTAINING DUST AS MEASURED BY THIS TEST METHOD AND POTENTIAL HUMAN EXPOSURE TO AIRBORNE ASBESTOS. ACCORDINGLY, THE USERS SHOULD CONSIDER OTHER AVAILABLE INFORMATION IN THEIR INTERPRETATION OF THE DATA OBTAINED FROM THIS TEST METHOD.

THIS DEFINITION OF DUST ACCEPTS ALL PARTICLES SMALL ENOUGH TO PASS THROUGH A 1-MM (NO. 18) SCREEN. THUS, A SINGLE, LARGE ASBESTOS CONTAINING PARTICLE(S) (FROM THE LARGE END OF THE PARTICLE SIZE DISTRIBUTION) DISPERSED DURING SAMPLE PREPARATION MAY RESULT IN ANOMALOUSLY LARGE ASBESTOS SURFACE LOADING RESULTS IN THE TEM ANALYSES OF THAT SAMPLE. IT IS, THEREFORE, RECOMMENDED THAT MULTIPLE INDEPENDENT SAMPLES ARE SECURED FROM THE SAME AREA, AND THAT A MINIMUM OF THREE SAMPLES BE ANALYZED BY THE ENTIRE PROCEDURE.

ASTM D5755 – 09 MICROVAC W/ TEM

SIGNIFICANCE & USE
STANDARD TEST METHOD FOR WIPE SAMPLING OF SURFACES, INDIRECT PREPARATION, AND ANALYSIS FOR ASBESTOS STRUCTURE NUMBER SURFACE LOADING BY TRANSMISSION ELECTRON MICROSCOPY

ASTM D6480-05 WIPE SAMPLING W/ TEM
THIS TEST METHOD IS GENERALLY APPLICABLE FOR AN ESTIMATE OF THE SURFACE LOADING OF ASBESTOS STRUCTURES STARTING FROM APPROXIMATELY 1000 ASBESTOS STRUCTURES PER SQUARE CENTIMETRE.
Wiping a surface of known area with a wipe material collects a sample. The sample is transferred from the wipe material to an aqueous suspension of known volume. Aliquots of the suspension are then filtered through a membrane filter. A section of the membrane filter is prepared and transferred to a TEM grid, using the direct transfer method. The asbestiform structures are identified, sized, and counted by TEM, using ED and EDXA at a magnification from 15,000 to 20,000 ×.

ASTM D6480-05 – WIPE SAMPLING W/ TEM
THIS WIPE SAMPLING AND INDIRECT ANALYSIS TEST METHOD IS USED FOR THE GENERAL TESTING OF SURFACES FOR ASBESTOS. IT IS USED TO ASSIST IN THE EVALUATION OF SURFACES IN BUILDINGS, SUCH AS CEILING TILES, SHELVING, ELECTRICAL COMPONENTS, DUCT WORK, AND SO FORTH. THIS TEST METHOD PROVIDES AN INDEX OF THE CONCENTRATION OF ASBESTOS STRUCTURES PER UNIT AREA SAMPLED AS DERIVED FROM A QUANTITATIVE MEASURE OF THE NUMBER OF ASBESTOS STRUCTURES DETECTED DURING ANALYSIS.

THIS TEST METHOD DOES NOT DESCRIBE PROCEDURES OR TECHNIQUES REQUIRED FOR THE EVALUATION OF THE SAFETY OR HABITABILITY OF BUILDINGS WITH ASBESTOS-CONTAINING MATERIALS, OR COMPLIANCE WITH FEDERAL, STATE, OR LOCAL REGULATIONS OR STATUTES. IT IS THE USER’S RESPONSIBILITY TO MAKE THESE DETERMINATIONS.

ASTM D6480-05 – WIPE SAMPLING W/ TEM
SIGNIFICANCE & USE
At present, a single direct relationship between asbestos sampled from a surface and potential human exposure does not exist. Accordingly, the user should consider these data in relationship to other available information (for example, air sampling data) in their evaluation.

One or more large asbestos-containing particles dispersed during sample preparation may result in large asbestos surface loading results in the TEM analyses of that sample. It is, therefore, recommended that multiple replicate independent samples be secured in the same area, and that a minimum of three such samples be analyzed by the entire procedure.

ASTM D6480-05 – WIPE SAMPLING W/ TEM
SIGNIFICANCE & USE
9. How does your laboratory report the results for ASTM dust sampling methods?

a. Structures per square centimeter (s/cm²)

b. Percent by weight (%)
FAQ #8: ASTM method D5755 and D6480, which utilize microvacuum sampling and wipe sampling, respectively, are standard methods for the collection and analysis of surface dust/residue bulk samples. What are the accepted methods for collecting bulk samples of suspet materials (including bulk samples of surface dust/residue) for bulk sample analyses by ELAP method or ASTM method, to determine asbestos content?

EPA AHERA bulk sample collection methods shall be used for collection of all bulk samples for asbestos surveys. For contamination assessments, if quantities of dust or residue are insufficient to utilize standard EPA AHERA bulk sample collection techniques, other accepted standard bulk sampling methods (e.g., ASTM D5755, ASTM D6480, etc.) may be utilized by the asbestos contractor inspection/survey firm completing the assessment, based upon their professional judgment. However, all bulk samples collected must be analyzed by ELAP approved methodology at an ELAP accredited laboratory. ASTM method D5755 and D6480 are not certified as ELAP approved methods of analysis.
6. Laboratories who perform analysis of bulk samples for asbestos contamination assessments conducted in New York state must be:

   a. Located in New York State
   b. Only NVLAP certified
   c. Only ELAP certified
   d. Both ELAP and NVLAP certified
   e. Both a and d.
198.1 - Polarized-Light Microscope Methods for Identifying and Quantitating Asbestos in Bulk Samples

198.4 - Transmission Electron Microscope Method for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples

198.6 - Polarized-Light Microscope Method for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples

198.8 - Polarized-Light Microscope Method for Identifying and Quantitating Asbestos in Surfacing Material Containing Vermiculite Bulk Samples
WHAT DO THE RESULTS MEAN?
Structures per square centimeter (s/cm²)

Versus

Percent by weight (>1%)

Versus

Fibers per cubic centimeter (<0.01 f/cc).

Versus

Structures per square millimeter (70 S/mm²).
How Do You Resolve:

Millette and Hays – less than 1,000 structures/cm² is low

EPA WTC & Libby greater than 5,000 structures/cm² warrant a response action

Millette and Hays – 10,000 structures/cm² unacceptably elevated

Versus:

The USEPA, OSHA, World Health Organization (WHO) and International Labour Organization (ILO) say there is “no known safe level of exposure”…to asbestos…of any type.

EPA NESHAPS – No visible emissions
OSHA INTERPRETATION LETTER REGARDING DUST SAMPLING

Q: Assess asbestos contamination where there is no visible debris but potential for contamination of dusts for the purposes of objective data.

A: No. Key Points Regarding Dust Sampling from OSHA:

- Results may be useful to employers to determine if asbestos is present in a building.
- Interpretation of surface dust sampling results must be conducted on a case-by-case basis due to the wide spectrum of potential circumstances.
- ASTM method is of limited value when used without reference to historical work and actual breathing zone air samples.

Standard Interpretations / Asbestos sampling protocol cannot be used for objective data


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.

October 7, 2015

Mr. Donald A. Allard, Jr.
ALEC Services LLC
185 3rd Street
Troy, New York 12180

Dear Mr. Allard:

Thank you for your letter to the Occupational Safety and Health Administration’s (OSHA) Directorate of Standards and Guidance. Your letter was referred to OSHA’s Directorate of Enforcement Programs for a reply. You asked if your asbestos sampling protocol would meet the exposure assessment requirements of OSHA’s Asbestos Construction standard, 29 CFR 1926.1101. This reply letter constitutes OSHA’s interpretation only of the requirements discussed and may not be applicable to any question not detailed in your original correspondence. We apologize for the delay in our response. After a summary, your paraphrased question and our reply are below.

Background and Summary of Sampling Protocol: You provided an asbestos sampling and evaluation protocol to help building owners assess the extent of asbestos contamination inside their buildings after an asbestos-containing material (ACM) is incidentally disturbed. You emphasized that this protocol is only to be used to assess asbestos contamination in areas where there is no visible ACM debris but there exists the potential for the contamination of dusts due to the disturbance of an ACM, such as an area adjacent to or adjoining an area with visible debris.

Your protocol includes the collection and analysis of five (5) non-aggressive area air samples and five (5) vacuumed dust samples collected within areas of up to 5,000 square feet. Air samples are analyzed by NIOSH Method 7402, which uses phase contrast microscopy (PCM) by direct-light microscope to count total fibers of...
7. Materials containing 1% or less of asbestos are regulated by?

a. Are not regulated.
b. NESHAPS
c. ICR56
d. OSHA
e. AHERA
OSHA INTERPRETATION LETTER REGARDING MATERIALS CONTAINING LESS THAN 1% ASBESTOS

- Wet methods, or wetting agents, to control employee exposures during handling, mixing, removal, cutting, application and cleanup.

- Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers.

- Competent person to perform an exposure assessment.
ASTM HOMOGENEOUS AREA

- means surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture and apparent or known date of installation
• **Project Design Surveys** – Section 7 – is more focused than a Baseline Survey and is used to provide information to the Project Designer for preparing abatement plans & specifications.

• Areas inspected are limited to areas that will be affected by the abatement project.

• Destructive testing is often required.
If the project is being done prior to renovation or demolition, the construction/demolition plans or at least a clear statement of the scope of the renovation or demolition work are required for a Project Design Survey.

Presence of asbestos in suspect material is always confirmed, rather than assumed or presumed.
PRE-DESIGN SURVEYS – SECTION 7

• Main purpose is to provide information for preparing abatement plans & specifications.

• Presumption or Assumption of asbestos content is not permitted in this type of survey

• All suspect materials are sampled & analyzed so that materials which were not determined to be ACM may be left in place.
PRE-DESIGN SURVEYS
SECTION 7 – PLANNING THE SURVEY

• Review Baseline Survey or Pre-Construction Survey Reports pertaining to the functional space(s) that may be affected by the abatement project.

• Plans & specifications prepared by the architect or engineer for renovation or demolition should be consulted to determine the scope.
The survey must include all spaces within the “limits of construction” as well as adjacent areas where ACM may be disturbed by construction activities.

The survey must define these “limits of abatement”
PRE-DESIGN SURVEYS
SECTION 7 – CONDUCTING FIELD WORK

- Mobilizing Equipment – lifts, ladders, etc.
- Destructive testing may be required. Penetrating building surfaces may create objectionable dust or may require determination if ACM before penetrating. Measures to control dust must be taken.
- Locate & inspect functional space(s) that will be impacted by the construction project.
PRE-DESIGN SURVEYS
SECTION 7 – CONDUCTING FIELD WORK

- Any excluded areas or functional spaces that cannot be inspected due to restricted accessibility or other reasons must be documented.
- Identify suspect ACM by type of material & its description.
- Document if no suspect ACM is present in a functional space(s).
- Identify homogeneous areas within each functional space, & those that overlap adjacent functional spaces.
**PRE-DESIGN SURVEYS**
**SECTION 7 – CONDUCTING FIELD WORK**

- For each homogeneous area, determine the number of samples to be taken from random & non-random locations.

- If samples taken during the Baseline Survey or Pre-Construction Survey reported either positive or negative results for asbestos re-sampling is not required, assuming the proper number of samples were taken.
Determine quantities of suspect ACM or determine quantities of ACM in a subsequent visit.
PRE-DESIGN SURVEYS
SECTION 7 – CONDUCTING FIELD WORK

• SF is used for surfacing material, floor tile, tank & duct insulation & other materials for which area is the most logical unit. Some items may require a thickness measure to estimate disposal quantities.

• LF is used for straight runs of pipe insulation, window caulking, asbestos-cement pipe & ducts and other materials where length is more descriptive of the quantities.

• For pipe fittings either count the number of insulated valves, tees, elbows, etc. or include in pipe quantities.
Collect bulk samples using methods & equipment being careful to maintain the integrity of layered samples.

In multi-story buildings, stairwells, pipe & duct chases, elevator & cable shafts, and air shafts are separate & distinct functional spaces from the floors they traverse.
PRE-DESIGN SURVEYS
SECTION 7 – NON-SAMPLING CONSIDERATIONS

• These additional items are dependent upon if the Project Designer will use a “means and methods” design or if details of execution will be left to the abatement contractor.
  • Phased Abatement
  • Emergency Egress
  • Essential Facility Services
  • HVAC
  • Contractor Mobilization
PRE-DESIGN SURVEYS
SECTION 7 – NON-SAMPLING CONSIDERATIONS

• These additional items, cont.
  • Restricted Access
  • Hazardous Working Conditions
  • Water and Power
  • Decontamination & Load-out
  • Negative Pressure Enclosures
  • Waste Disposal
  • Visibility Barriers
  • Demolition
  • Spot Removal
PRE-DESIGN SURVEYS
SECTION 7 – NON-SAMPLING CONSIDERATIONS

• These additional items, cont.
  • Testing Fireproofing
  • Substrates
  • Asbestos-Cement Materials
  • Consultant’s Field Office
  • ACM Inaccessible for Removal
PRE-DESIGN SURVEYS
SECTION 7 – DOCUMENTATION

• Sample data sheets for bulk samples taken
• Record of inspection of all functional spaces, including:
  • Where no samples were taken
  • Floor plans or drawings showing sample locations, functional spaces, & homogeneous areas
  • Photographs of representative or significant inspection or sampling locations
• Is a resource for preparing the plans & specifications and not a substitute for it.

• Must not be used as a document with which to solicit bids for abatement
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