

Overview on Alternative Asbestos Control Method Research

A yellow excavator is demolishing a building with a red roof. A large spray of water is being directed at the demolition site. A worker in a white protective suit and helmet is visible in the foreground, holding a hose. The scene is set outdoors under a clear blue sky.

EIA Fall Technical Seminar
Nashville, TN

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November 7, 2008

History of AACM Method

- City of Fort Worth XL Project – 1997 – expanded use of emergency provision of Asbestos NESHAP for substandard structures – Phased approach
- Cow Town Inn – City of Fort Worth withdrew XL submittal – 2003
- EPA Region 6 and ORD continued dialogue for next steps – development of Alternative Asbestos Control Method Research

“Wet Method not AACM”

The AACM is not the “Wet Method or Fort Worth Method”

- Emergency Provision of Asbestos NESHAP
 - Provides owners of structures in “imminent danger of collapse” use of water, all asbestos remains, during demolition with notice to State

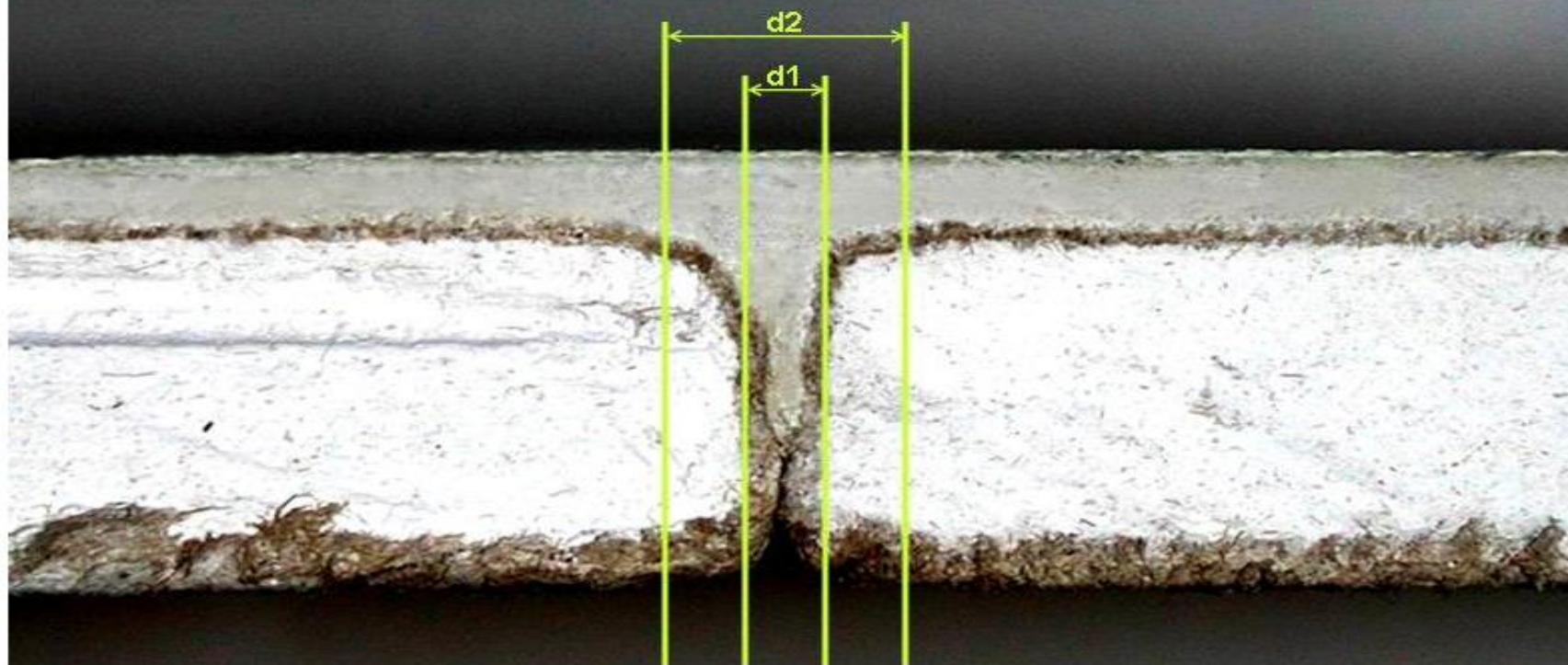
AACM1

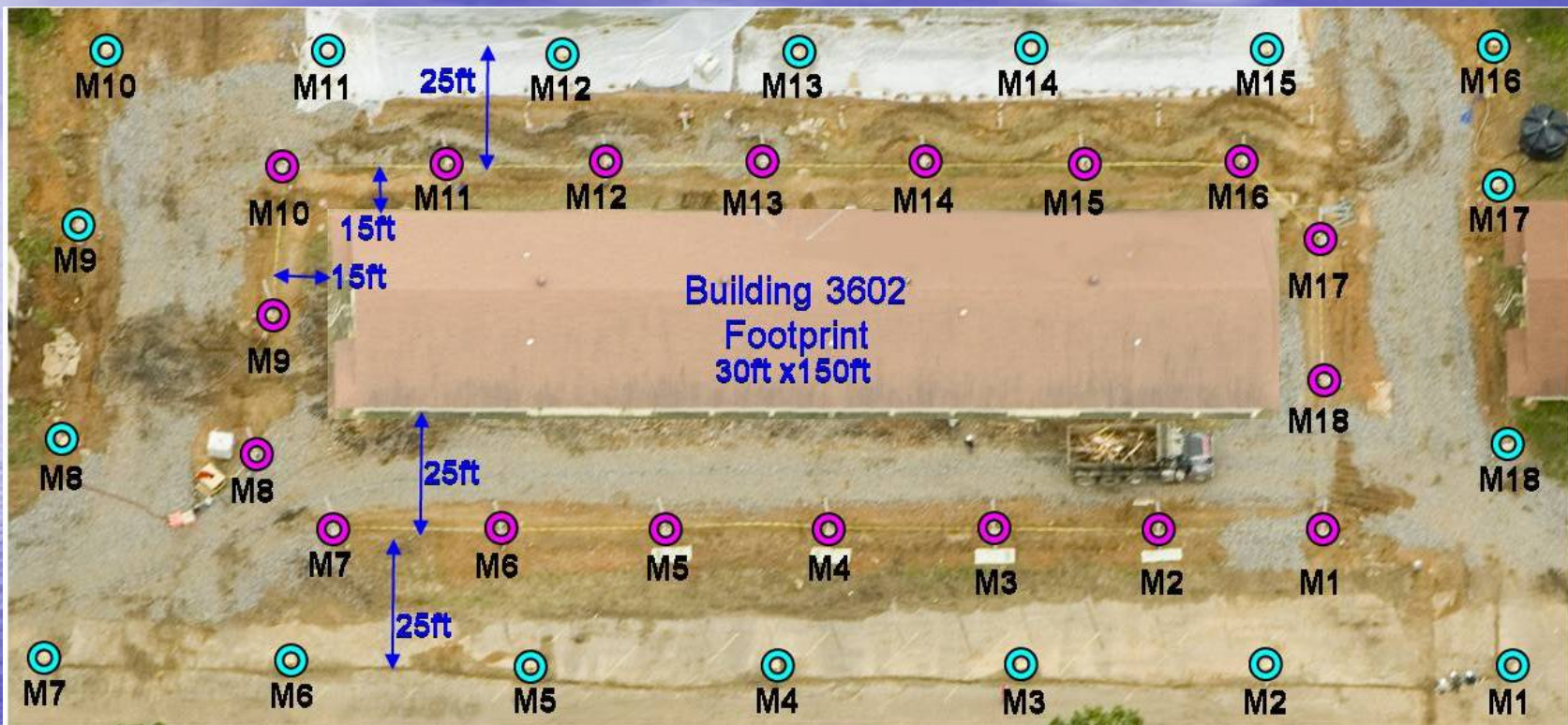
- Fort Chaffee, AR
- Identical buildings (one by AACM other by NESHAP)
- Positive Asbestos wall systems and VAT
- Soil



3607

Reference area for visual estimation of relative component percentages





Ring 1 Sampling Station



Ring 2 Sampling Station







**Asbestos
Sample Filter
Cassettes**

**Particulate
Sample Filter
Cassette**

**Dust Collection
Sampling
Device**

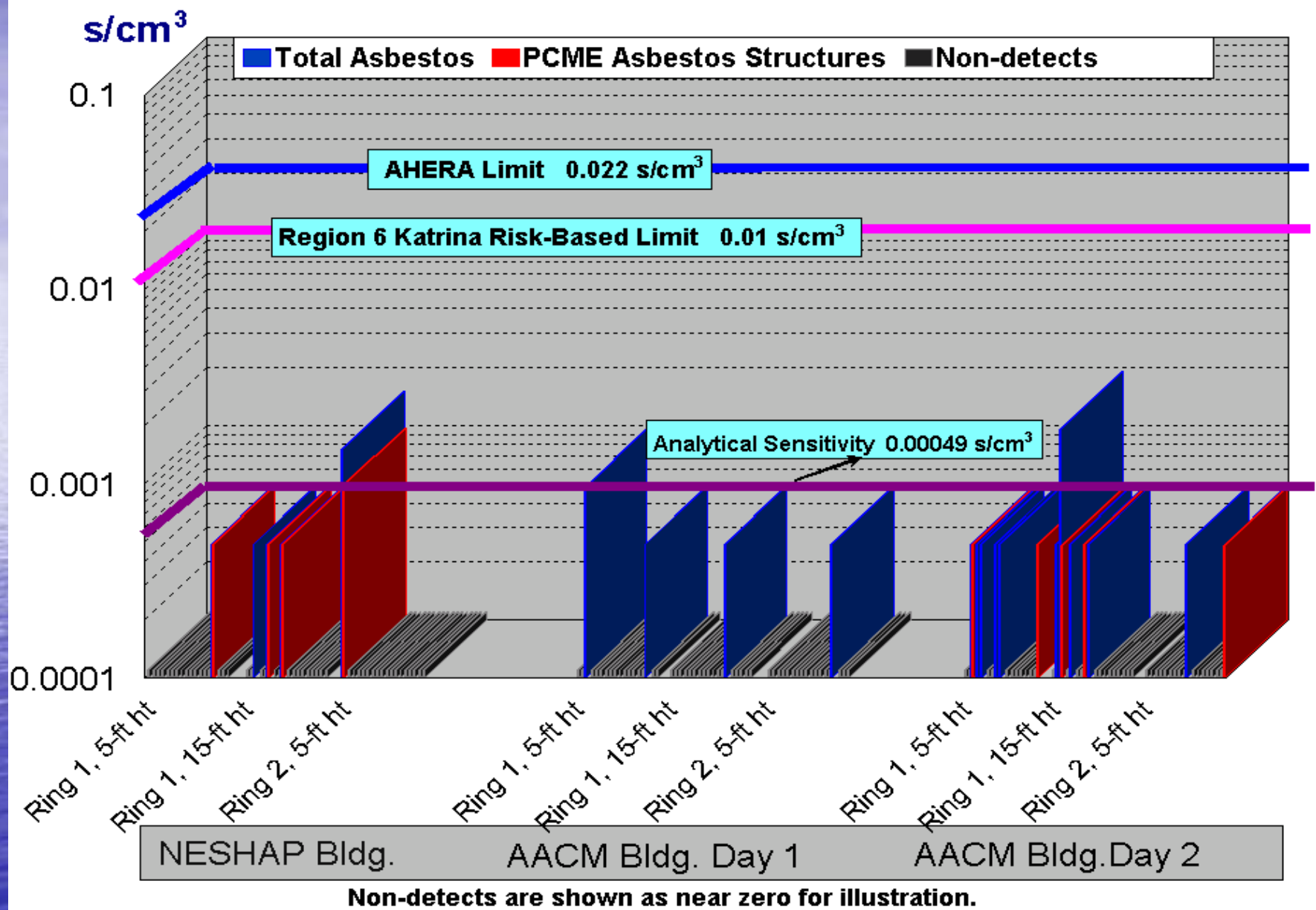




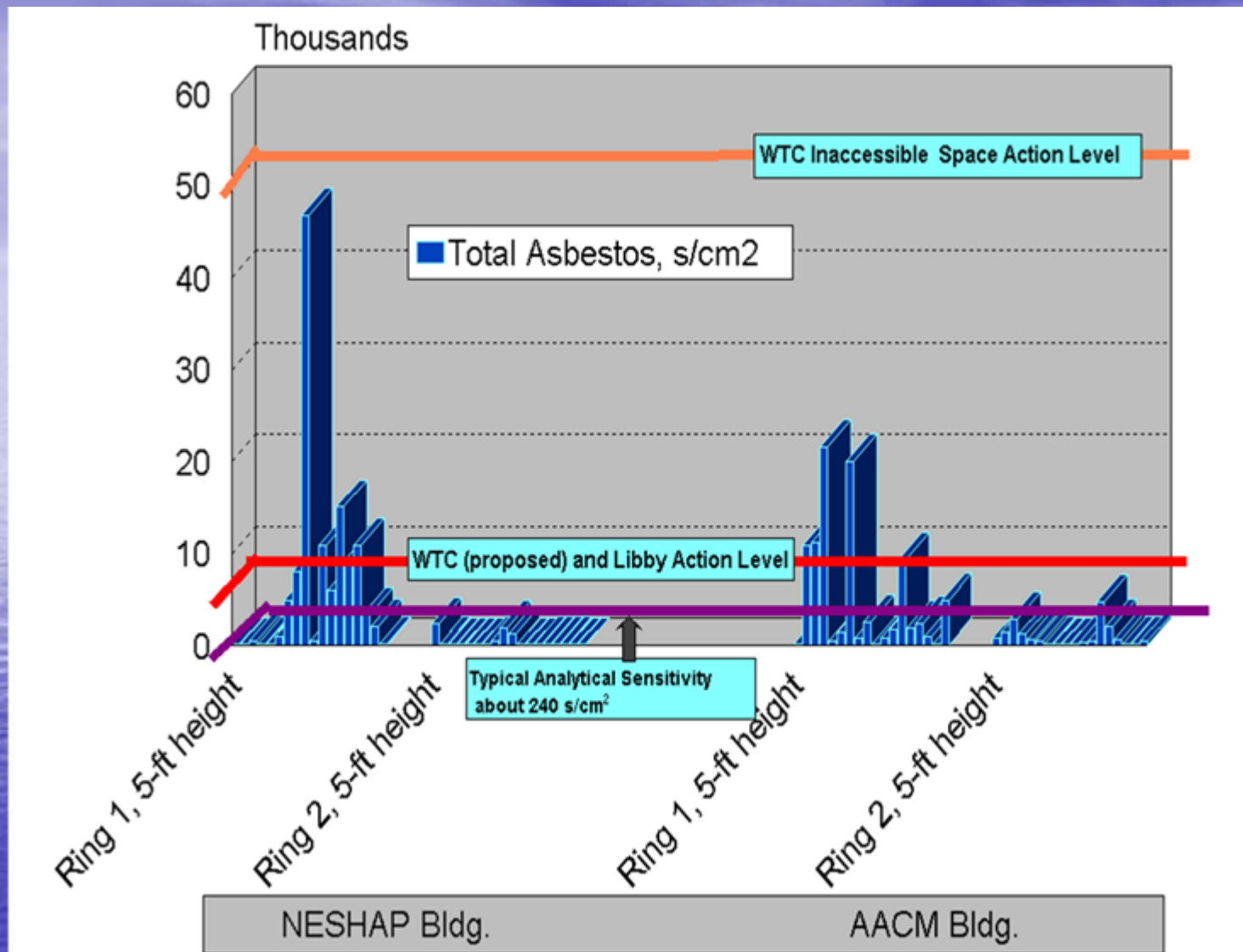




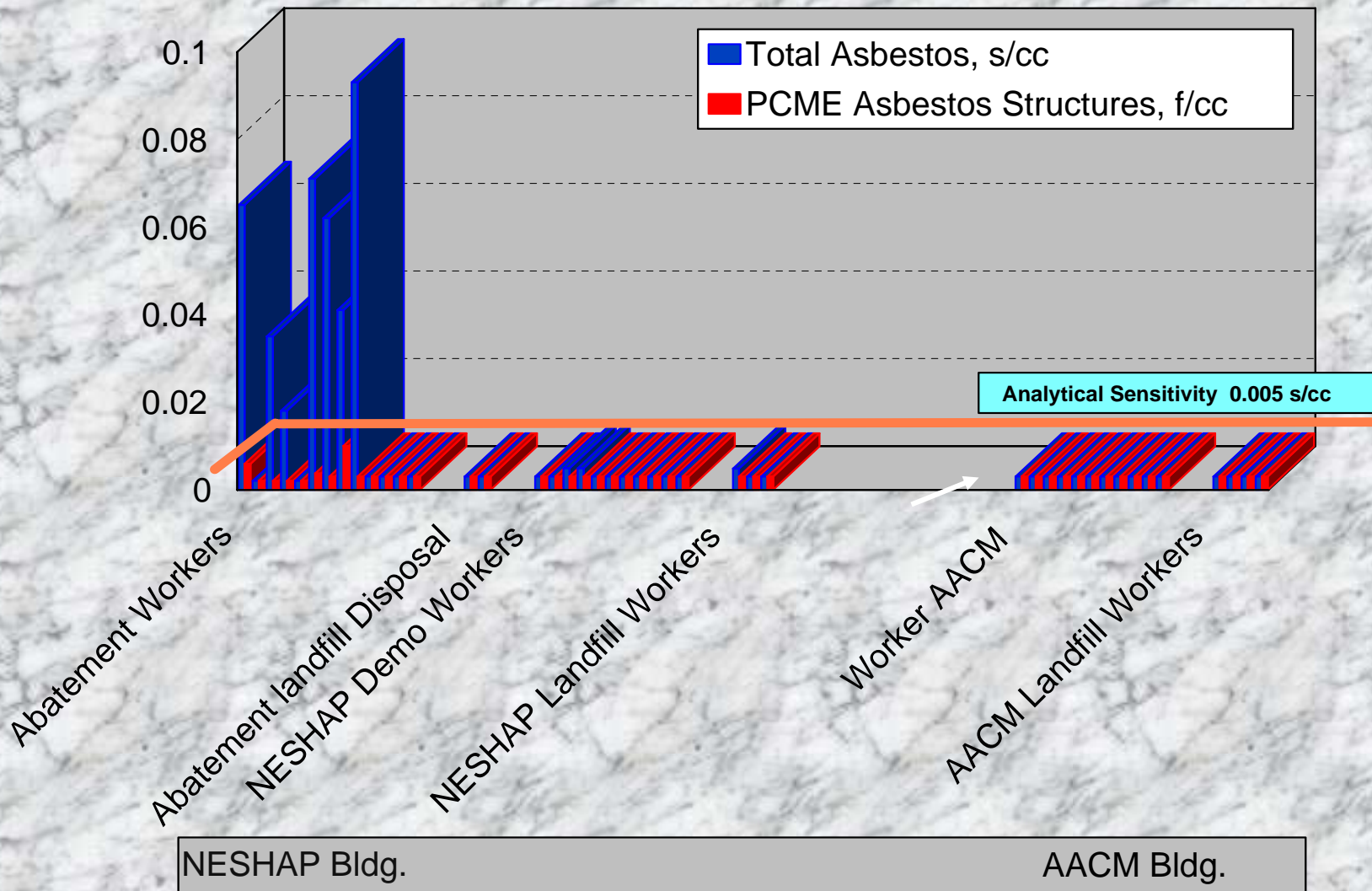




AACM1 Airborne Asbestos , s/cm³

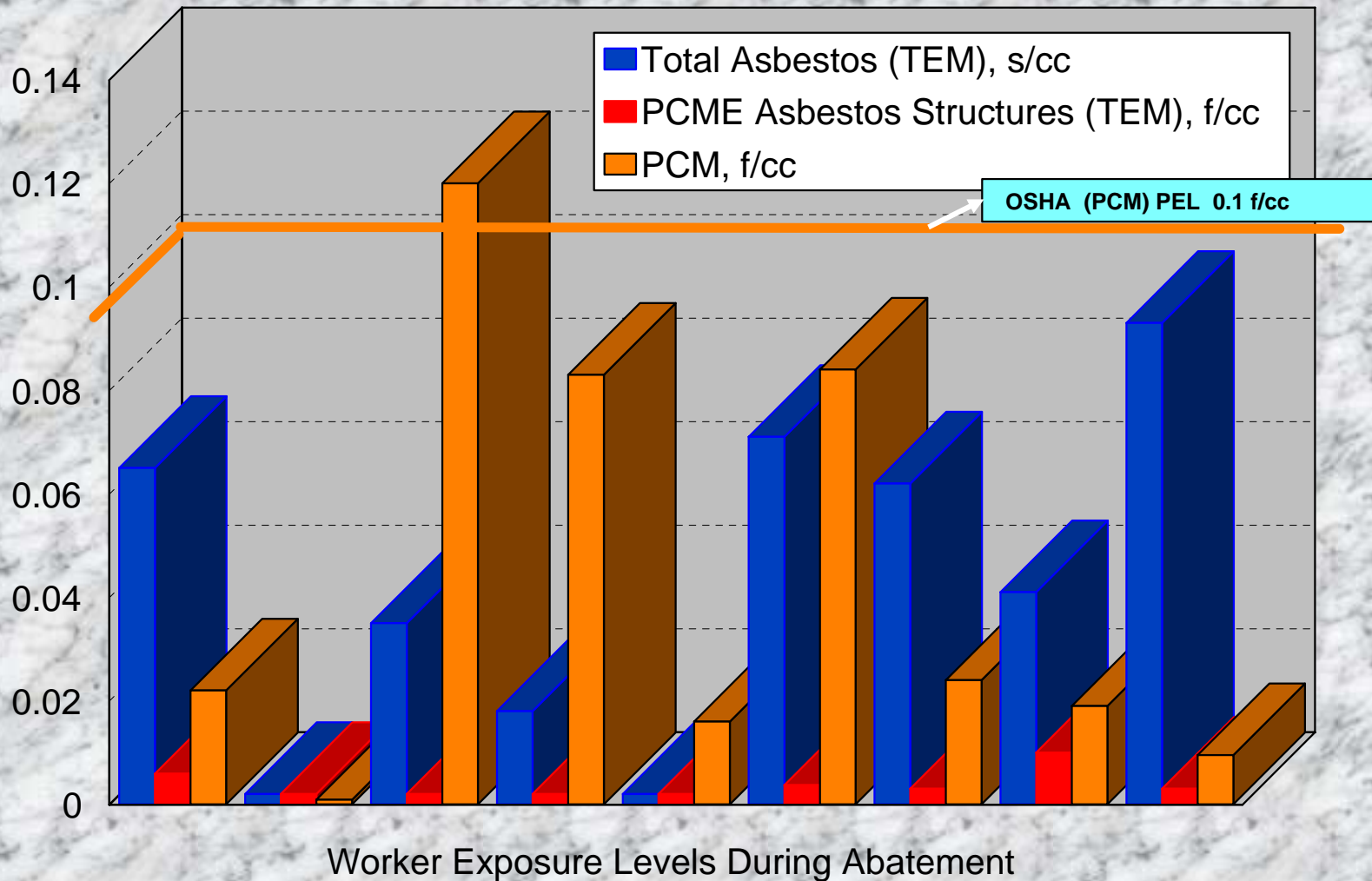


AACM1 Dust Asbestos Loading , s/cm²

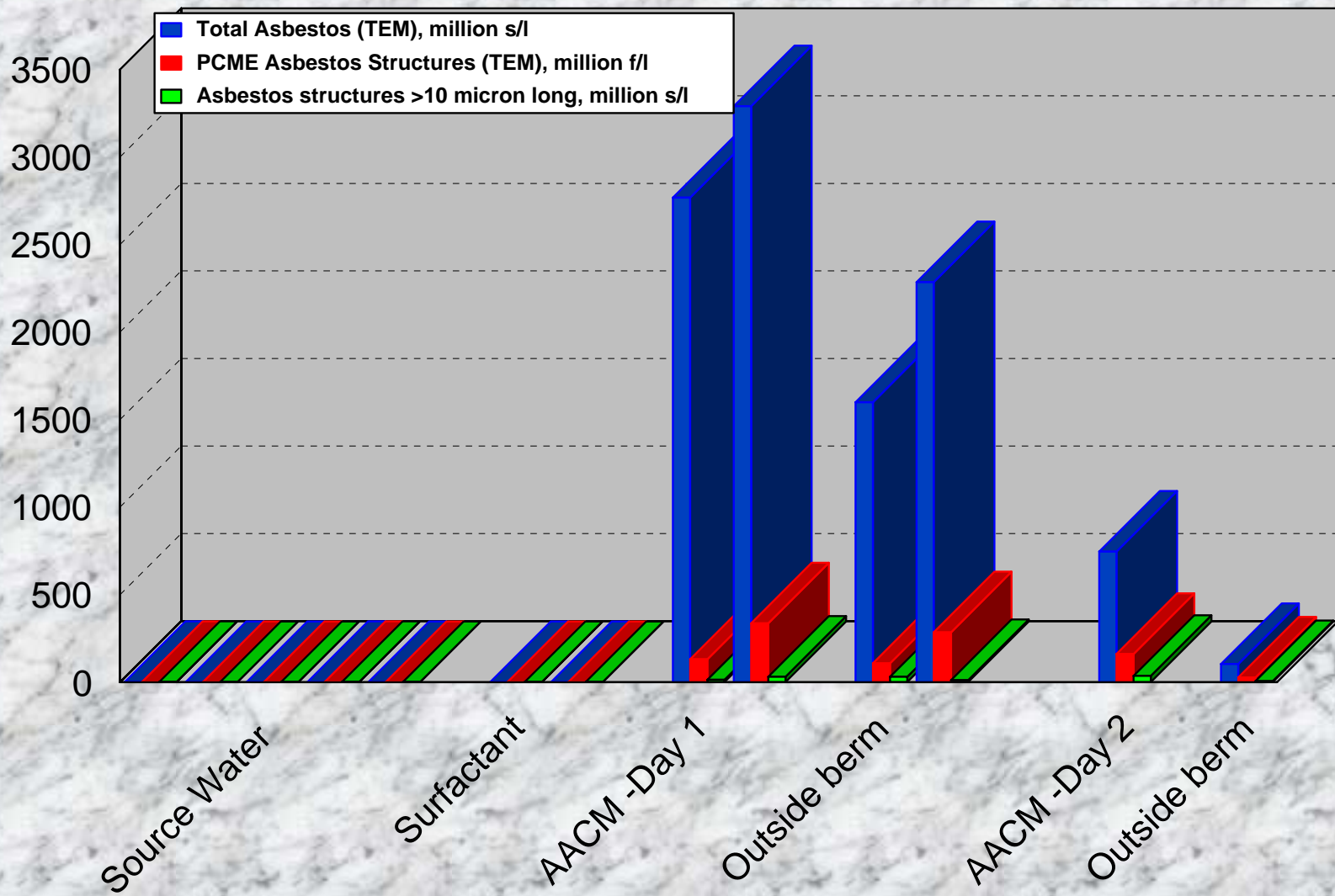


AACM1 Worker Breathing Zone Asbestos , s/cm³

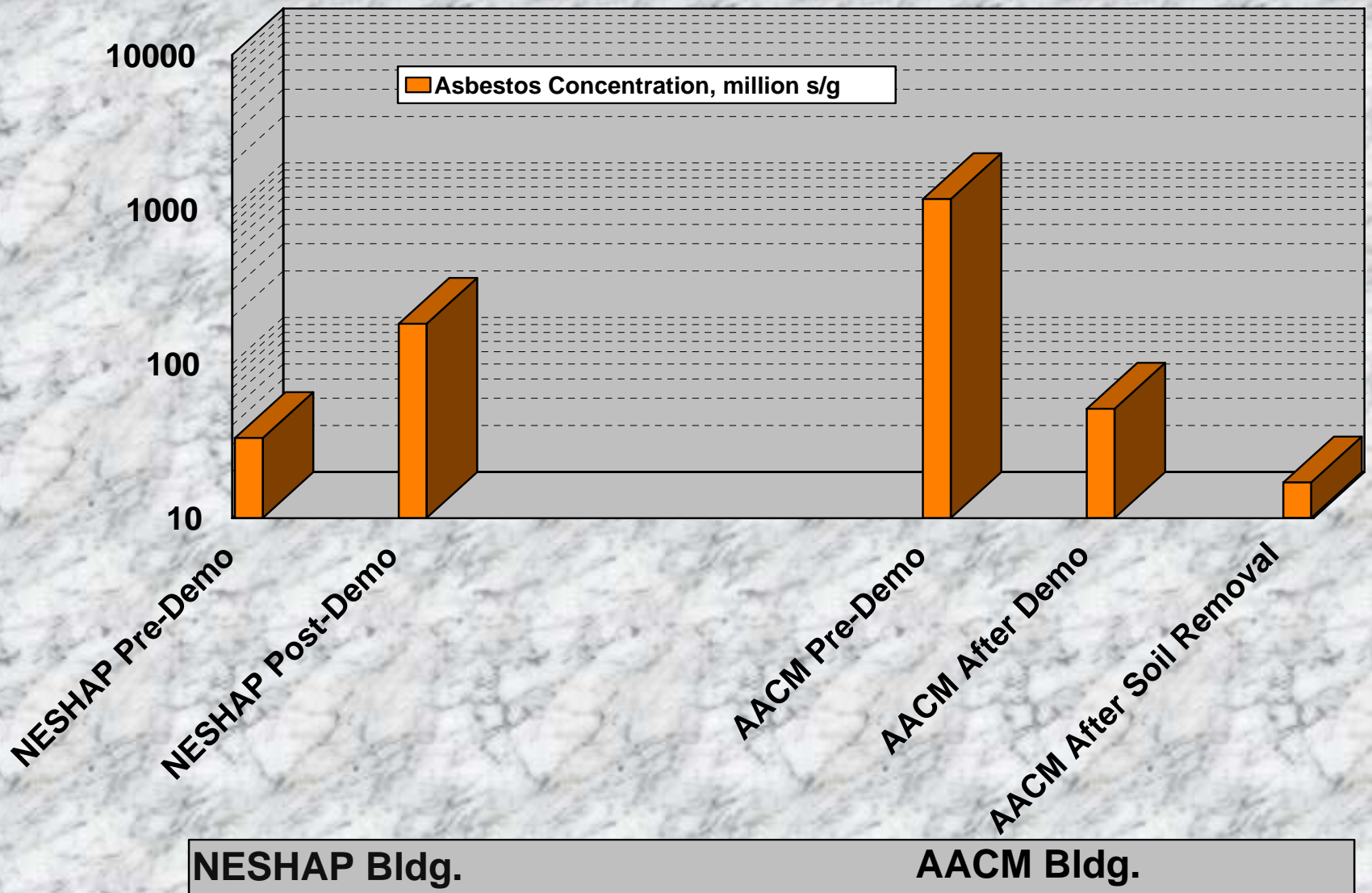
Worker Asbestos Fiber/Structure Concentrations During Abatement of NESHAP Building at Fort Chaffee



AACM1 Worker Breathing Zone Asbestos , s/cm³



AACM1 Water Asbestos , Ms/l



AACM1 Mean Soil Asbestos , million s/g

AACM vs NESHAP at AACM1 Research

- Over six times faster
- Cost half as much
- Less asbestos in final soil
- Lower worker breathing zone asbestos levels

AACM 2

- Fort Chaffee, AR
- Single building in danger of imminent collapse
- Transite siding
- Pavement





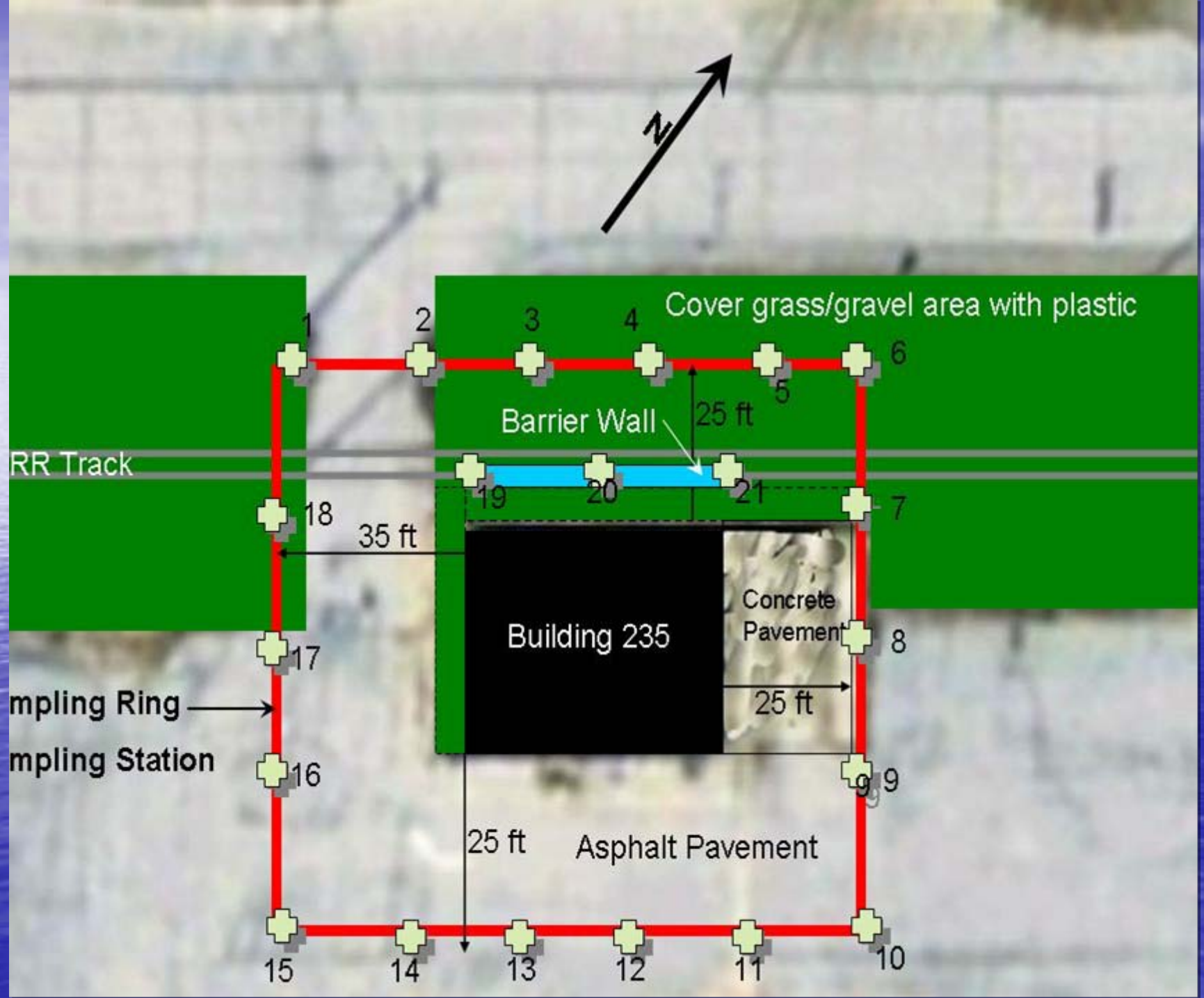




























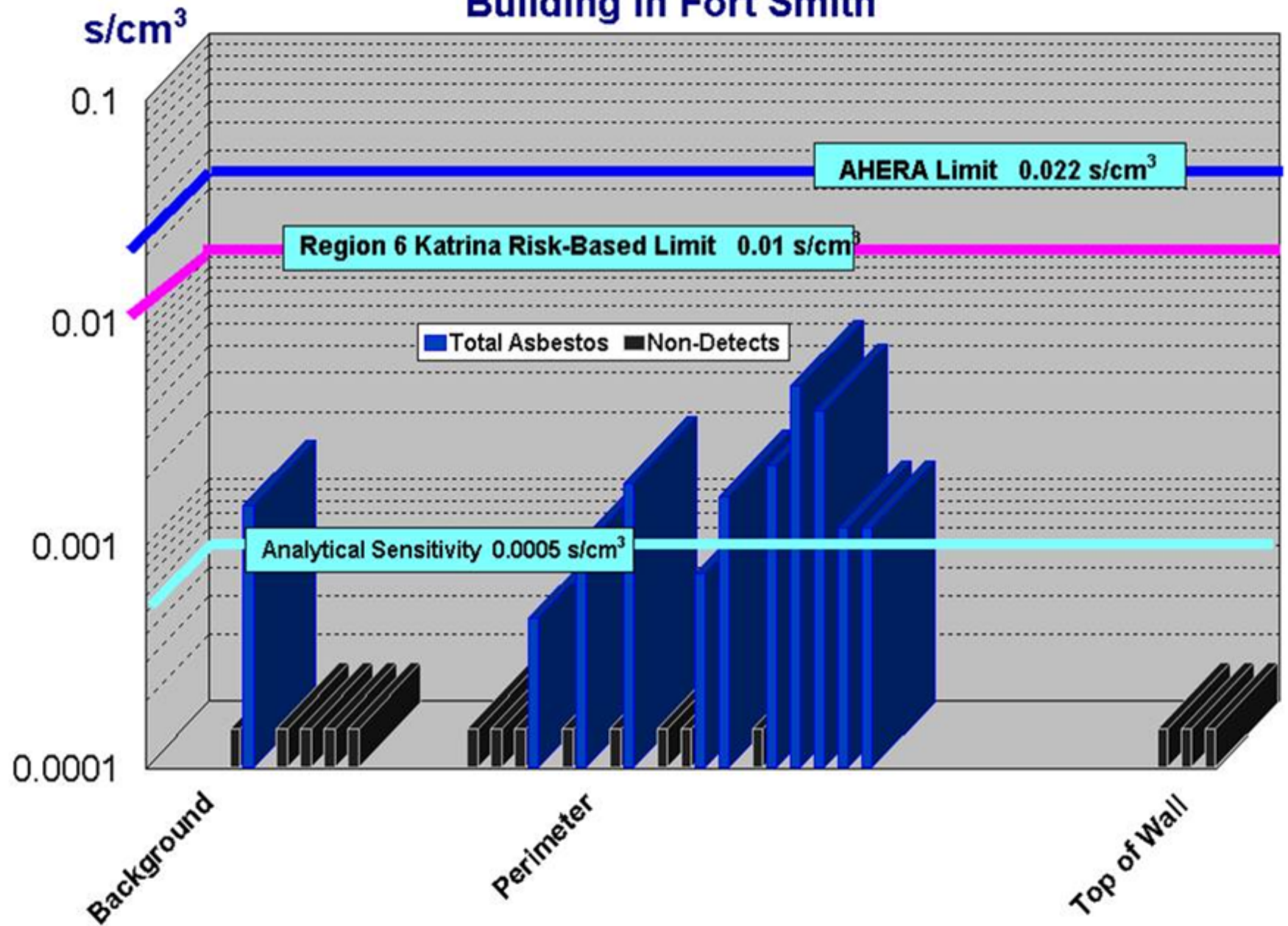






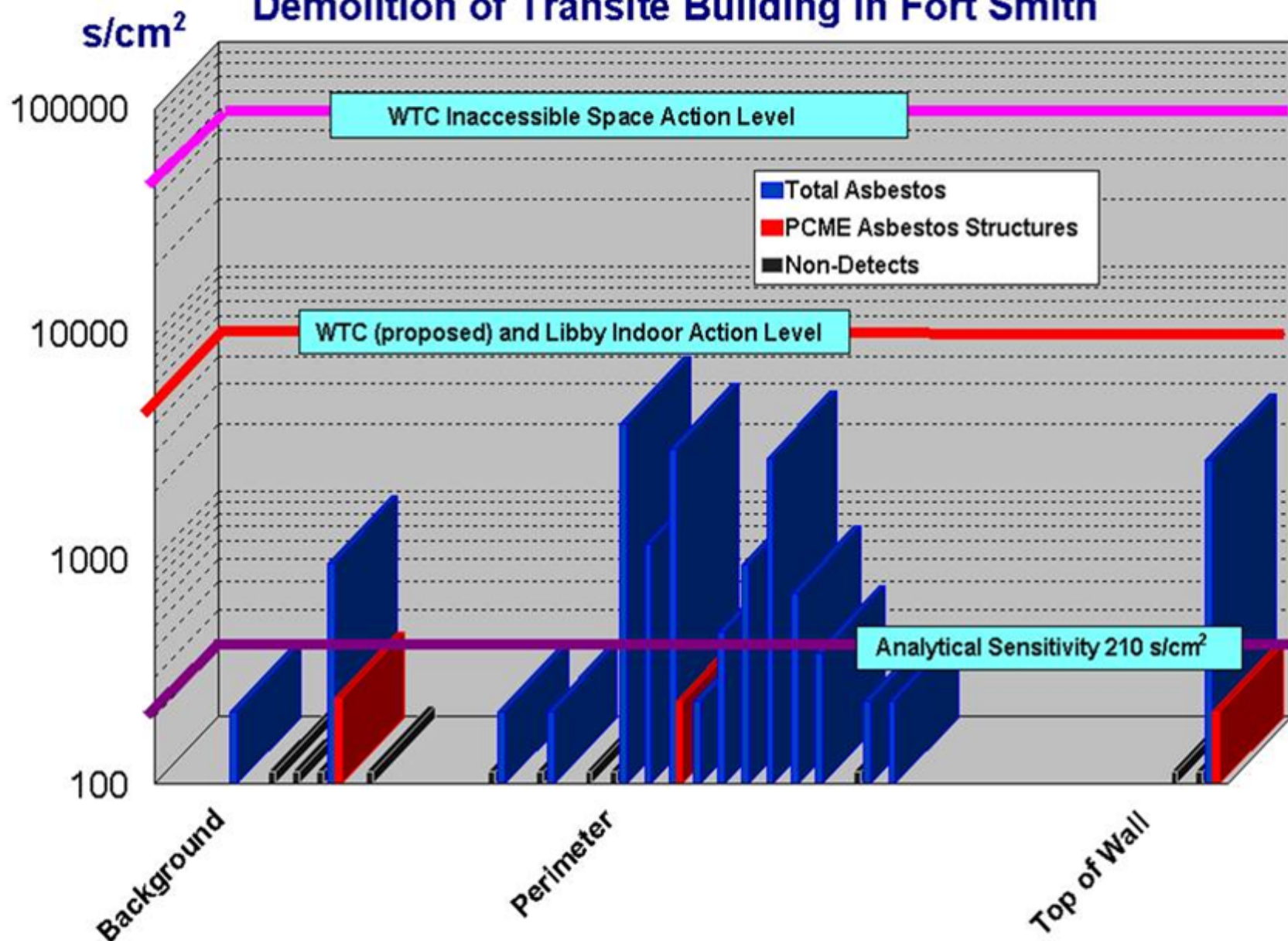


Asbestos Fiber/Structure Concentrations During Demolition of Transite Building in Fort Smith



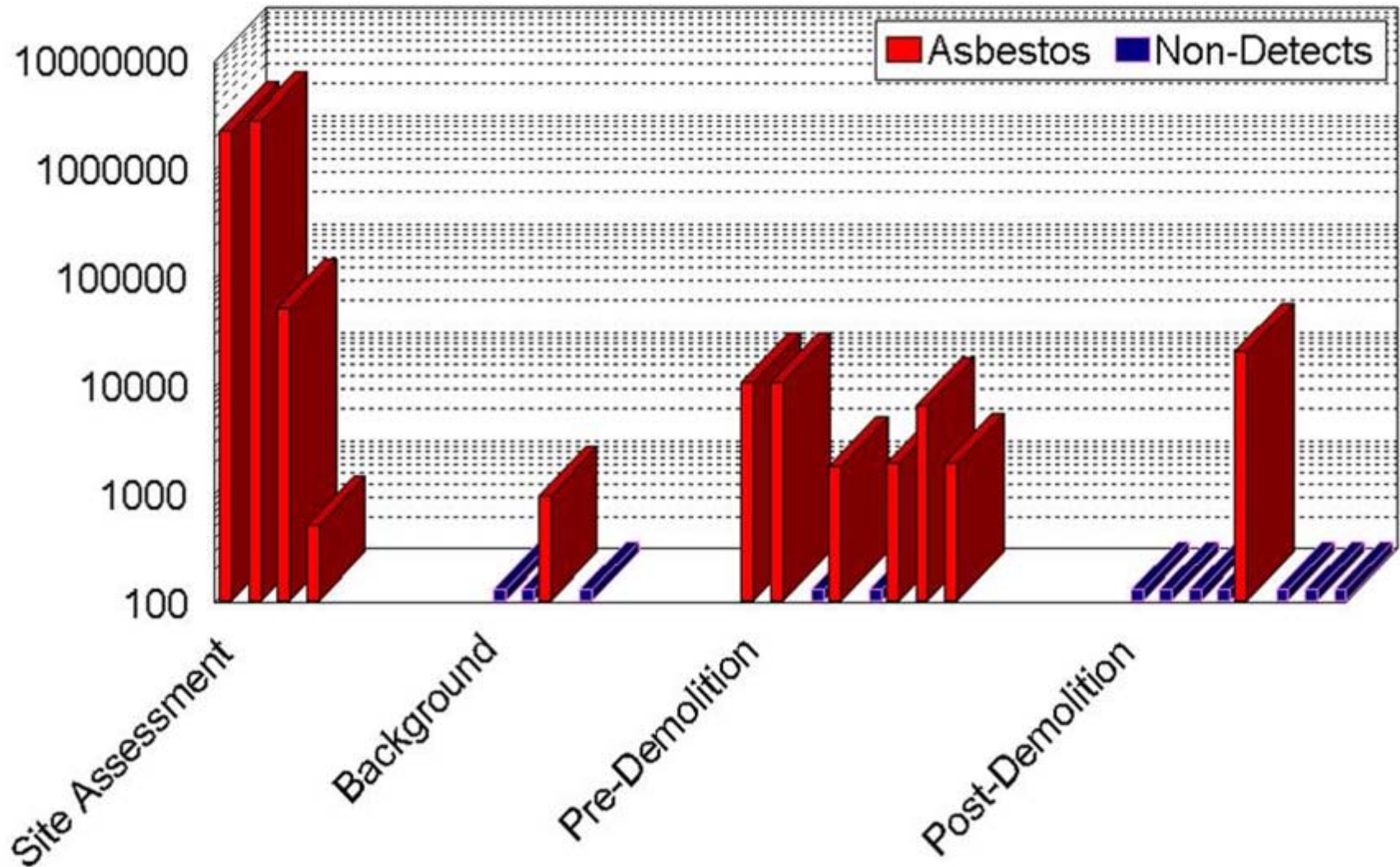
Non-detects are shown as near zero for illustration.

Settled Dust Asbestos Loading During Demolition of Transite Building in Fort Smith



Non-detects are shown as near zero for illustration.

Pavement Asbestos Loadings at the Transite Building, s/cm²



Non-detects are shown as near zero for illustration.

AACM 3

- Fort Worth, Texas
- Single building
- Popcorn Ceiling, troweled on surfacing on walls
- Pavement and soil











Popcorn-Ceiling
Building Location

Background
Samplers Location





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N29516



25 CU. YD.
EMPTY WT.
6.334



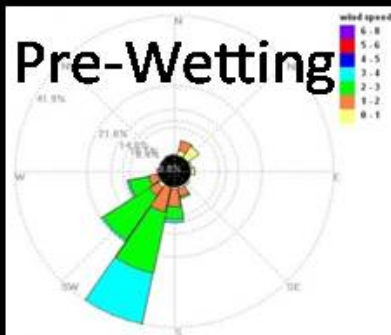
OPEN AND BOX
COMPLETELY CLEAN
BEFORE BOX CAN BE
PICKED UP AND RETURNED

N-34031

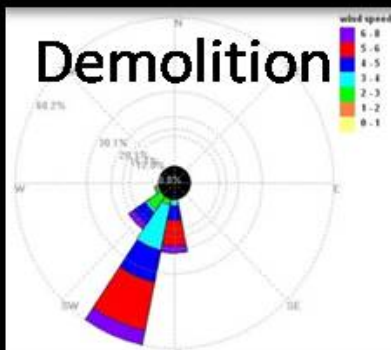
N2851

2212

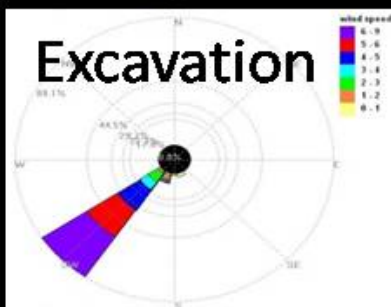
Pre-Wetting



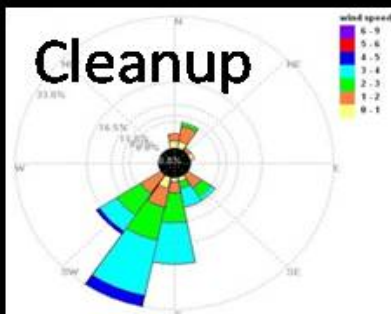
Demolition



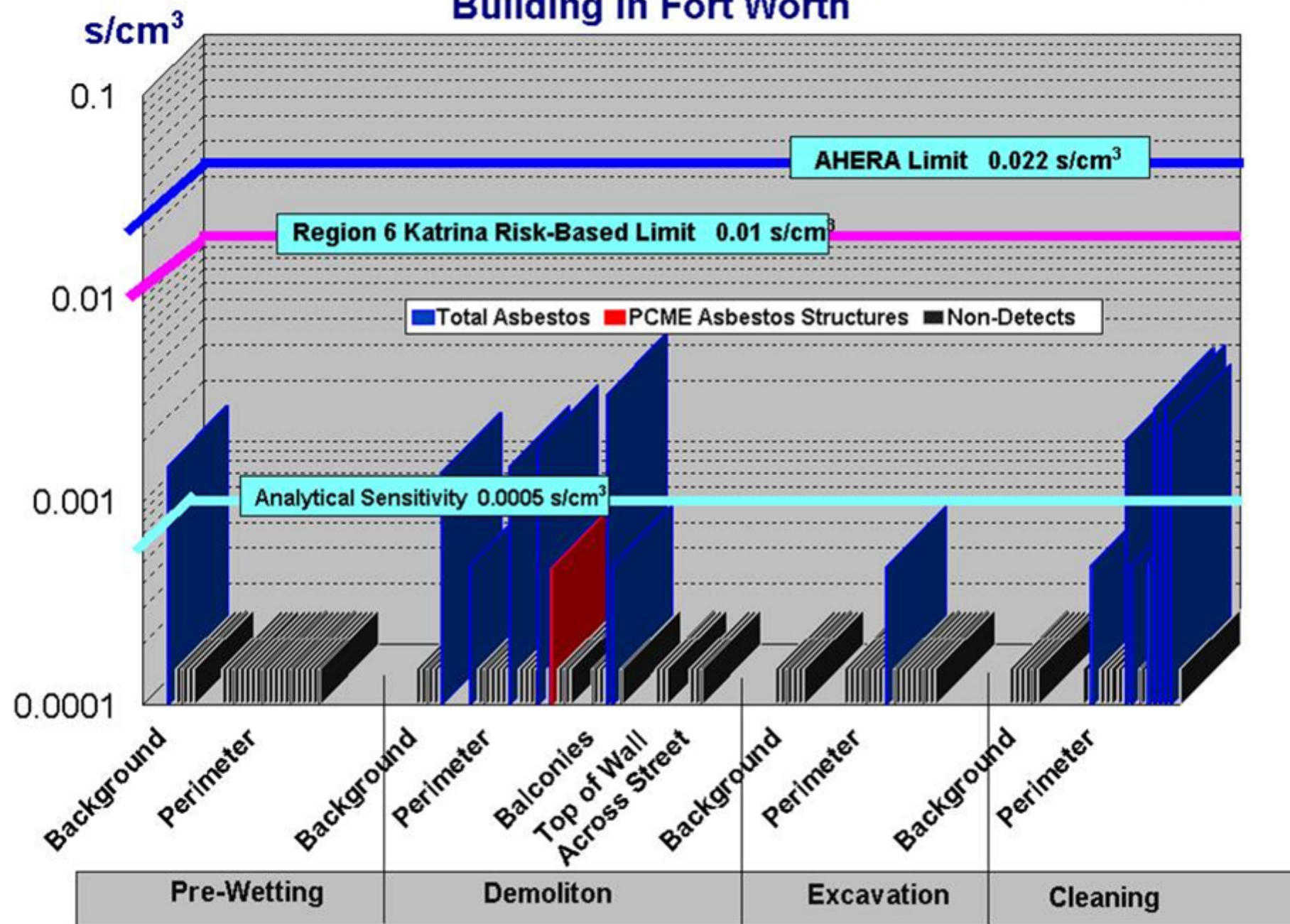
Excavation



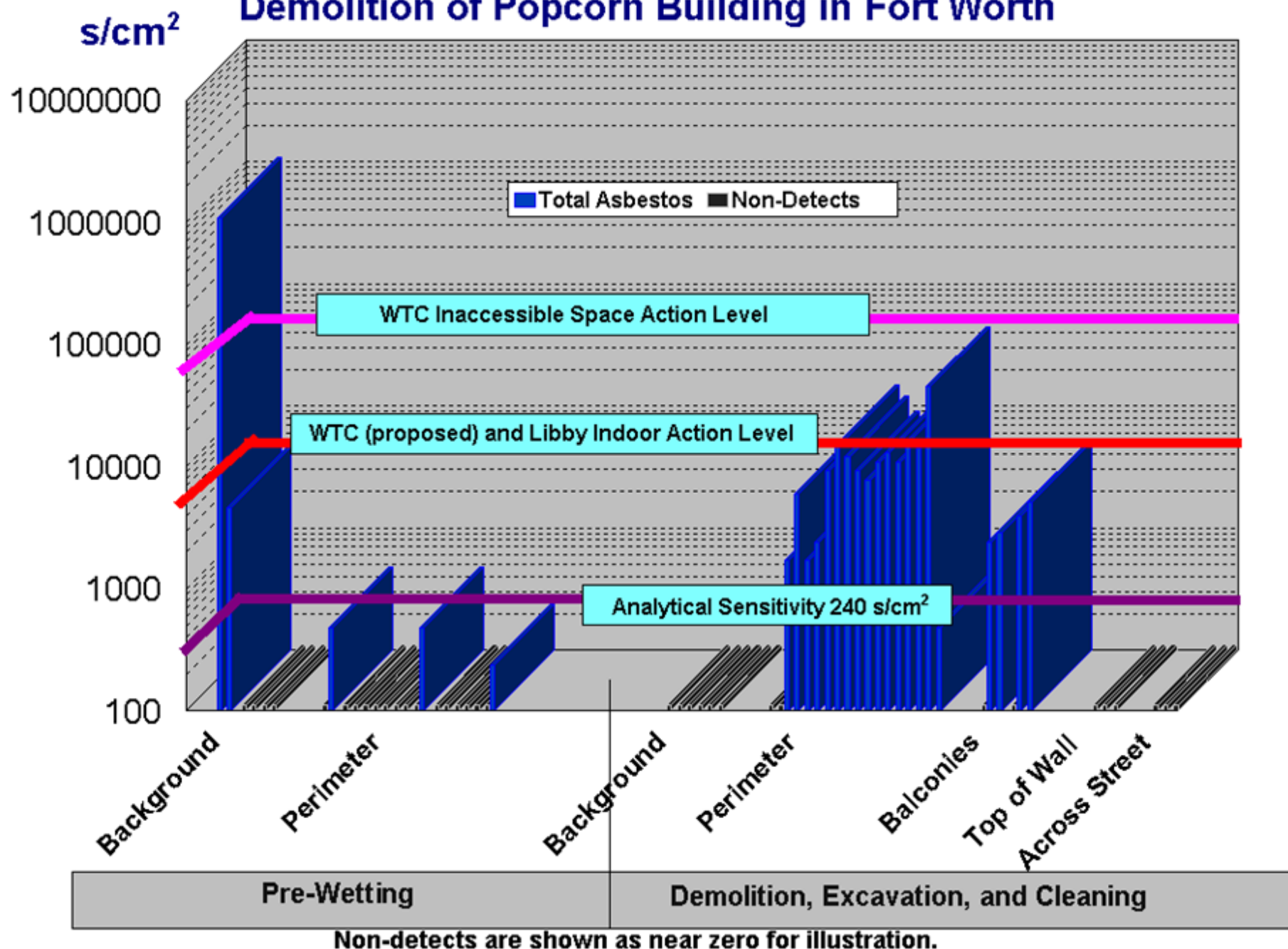
Cleanup



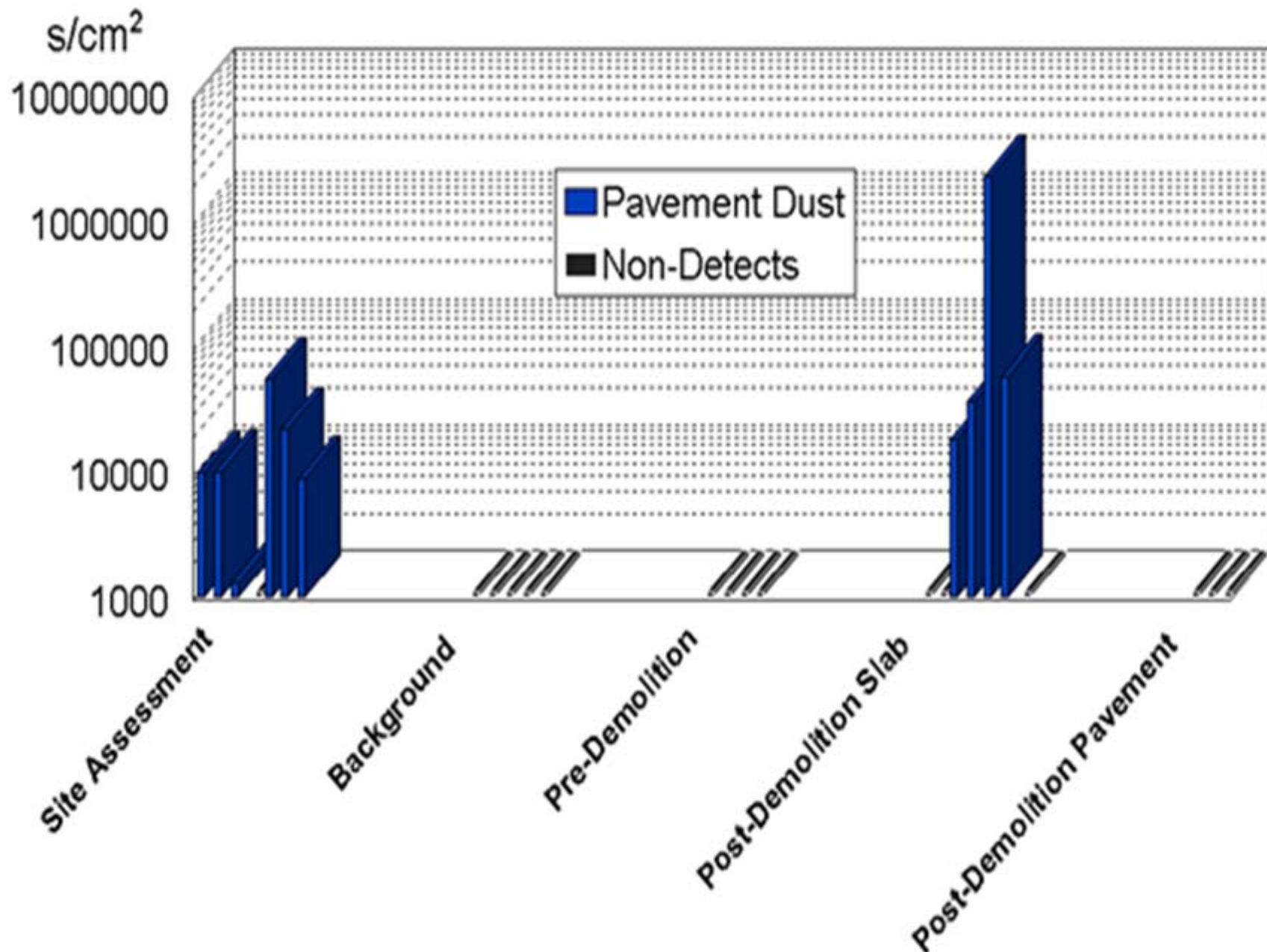
Asbestos Fiber/Structure Concentrations During Demolition of Popcorn Building in Fort Worth



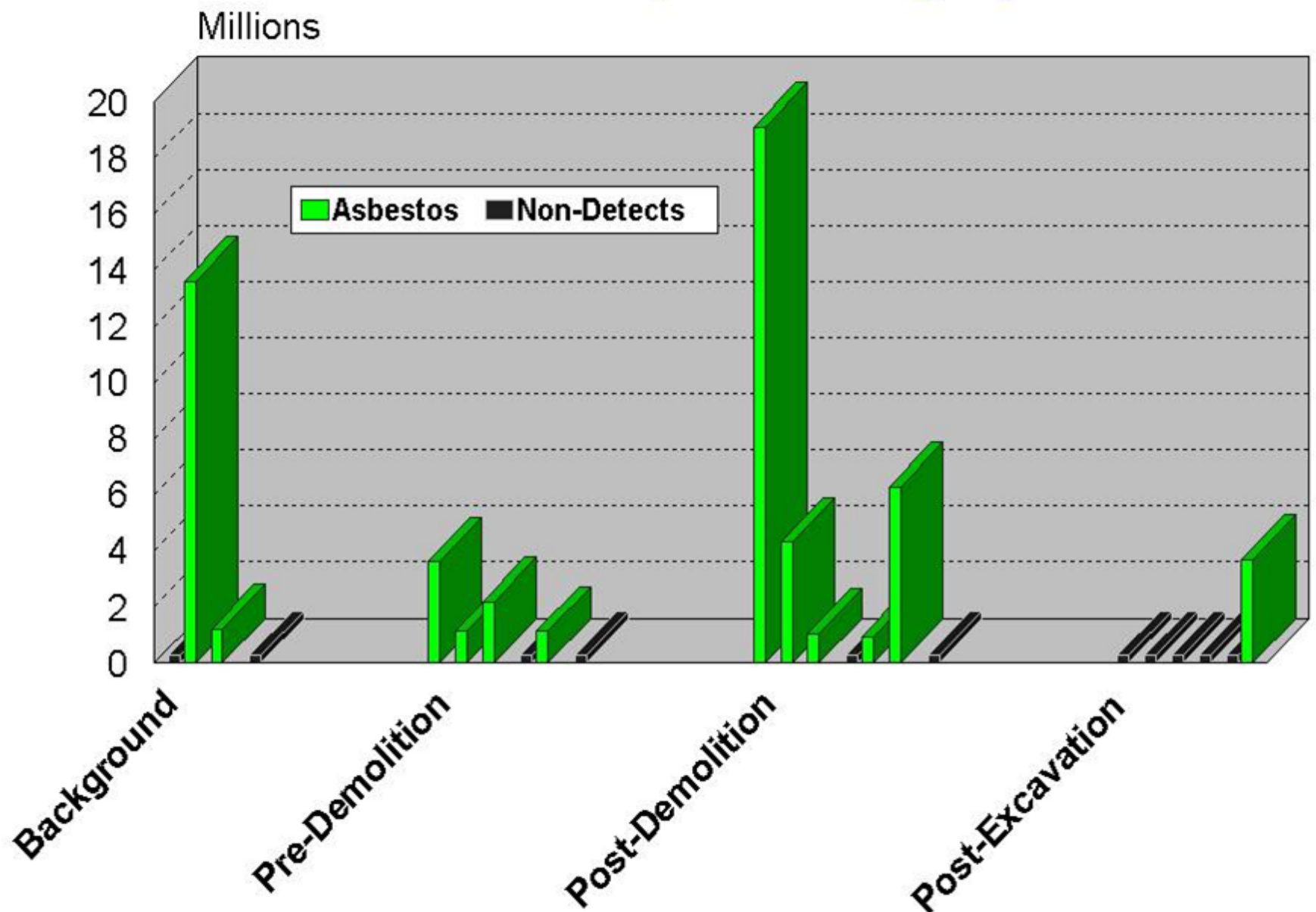
Settled Dust Asbestos Loading During Demolition of Popcorn Building in Fort Worth



Pavement Dust at Popcorn Building Demolition

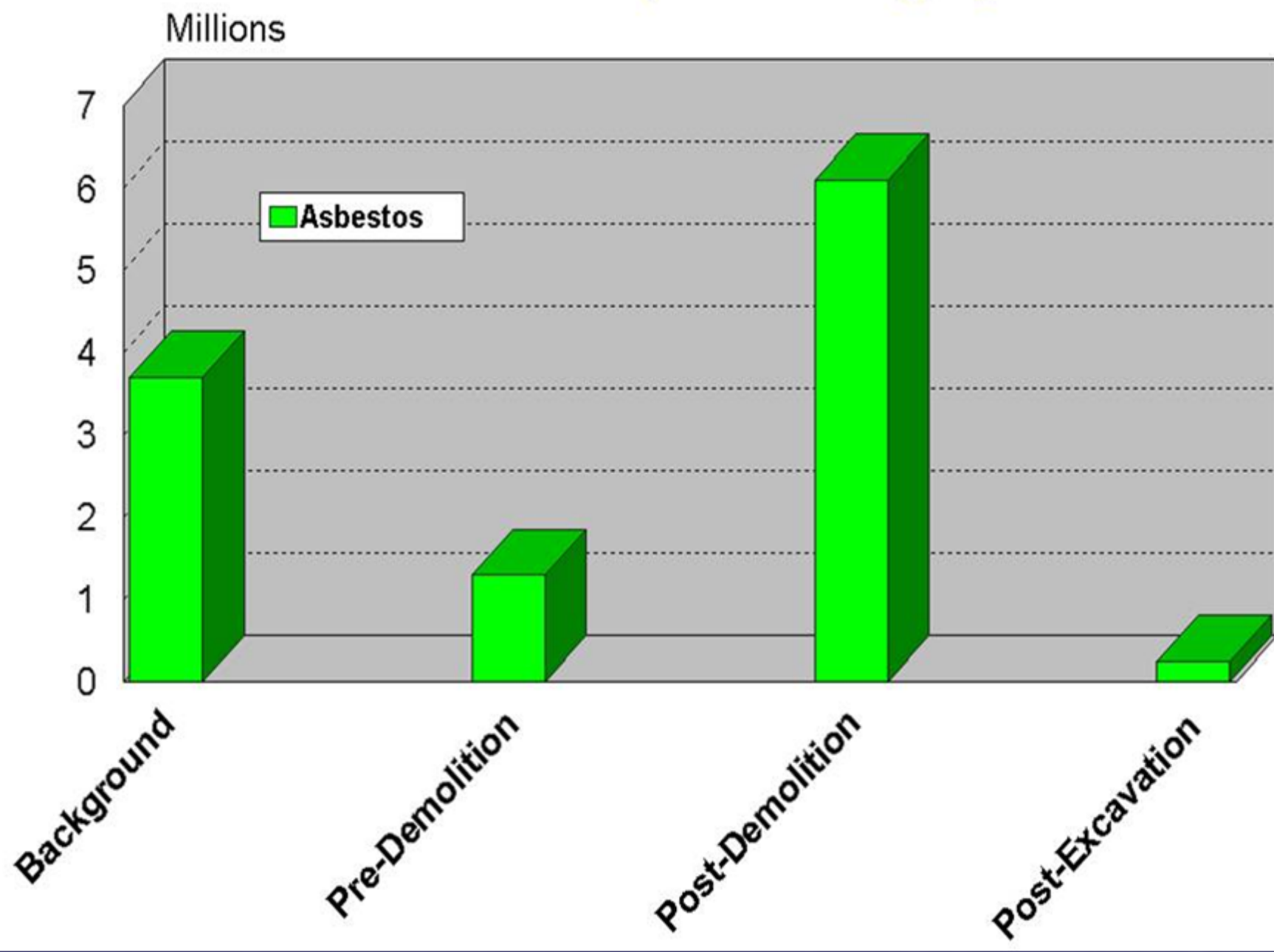


Soil Asbestos Concentrations (TEM) During Demolition of Popcorn Building, s/g



Non-detects are shown as near zero for illustration.

Mean Soil Asbestos Concentrations (TEM) During Demolition of Popcorn Building, s/g



COMPARISON OF AACM1,2, and 3

All asbestos has been removed before a NESHAP demolition.....?

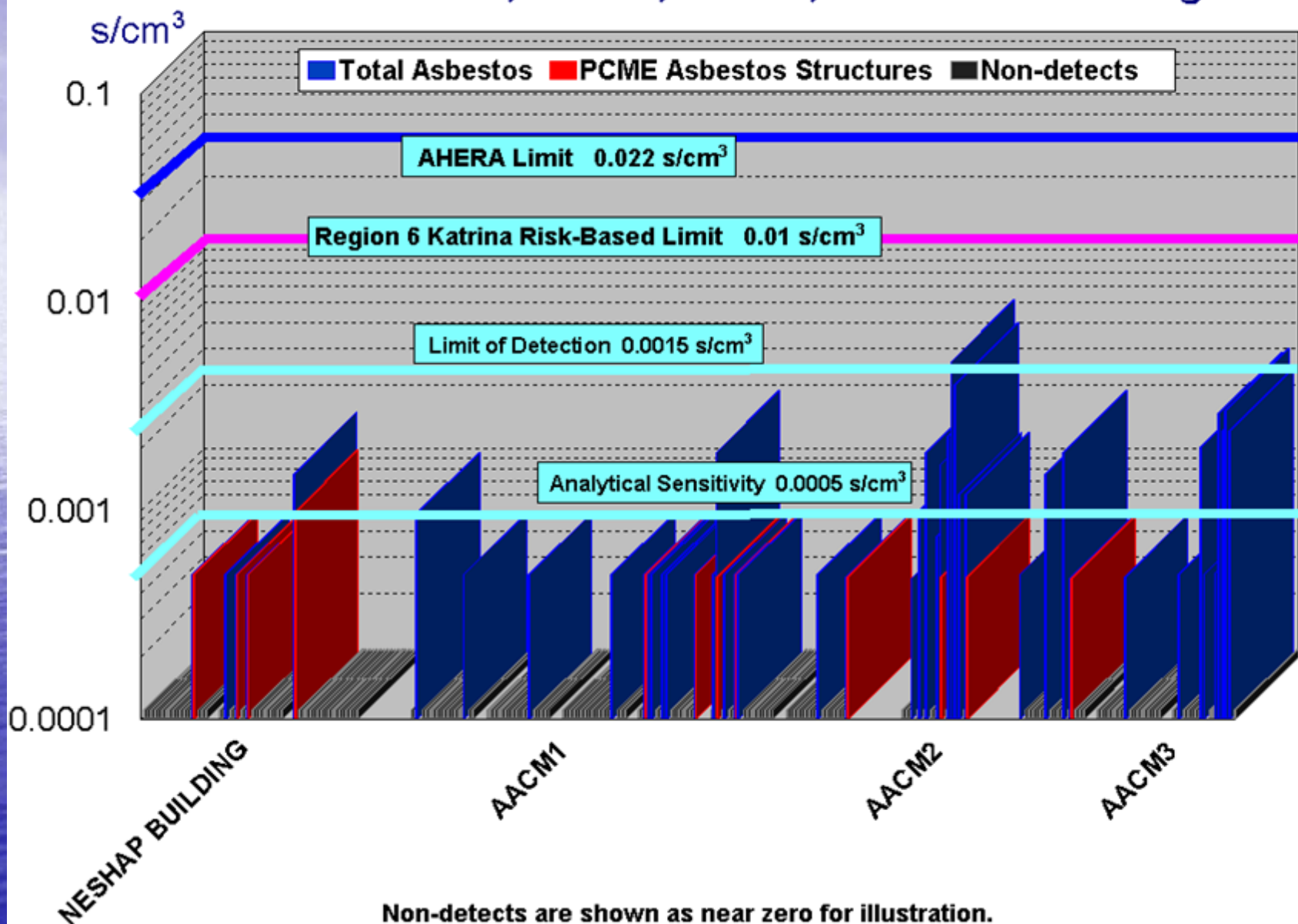
Material

- Joint Compound
- Surfacing
- VAT
- Pipe wrap
- Caulk
- Roofing
- Mastic

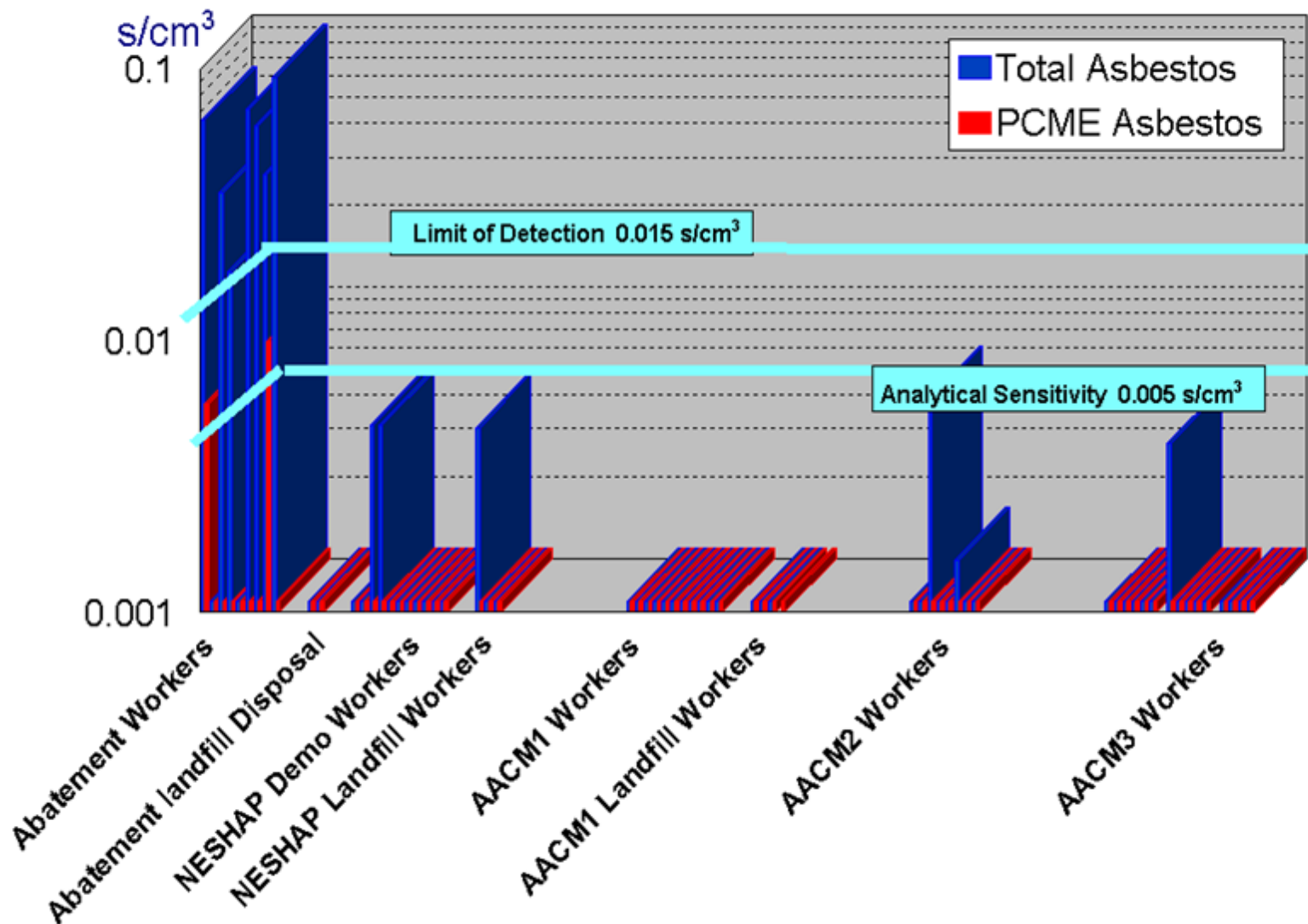
Amounts

- Less than 260 sq ft
- content less than 1.5%
- Less than 160 lb

Airborne Asbestos Concentrations (TEM) During Demolition of AACM1 NESHAP, AACM1, AACM2, and AACM3 Buildings

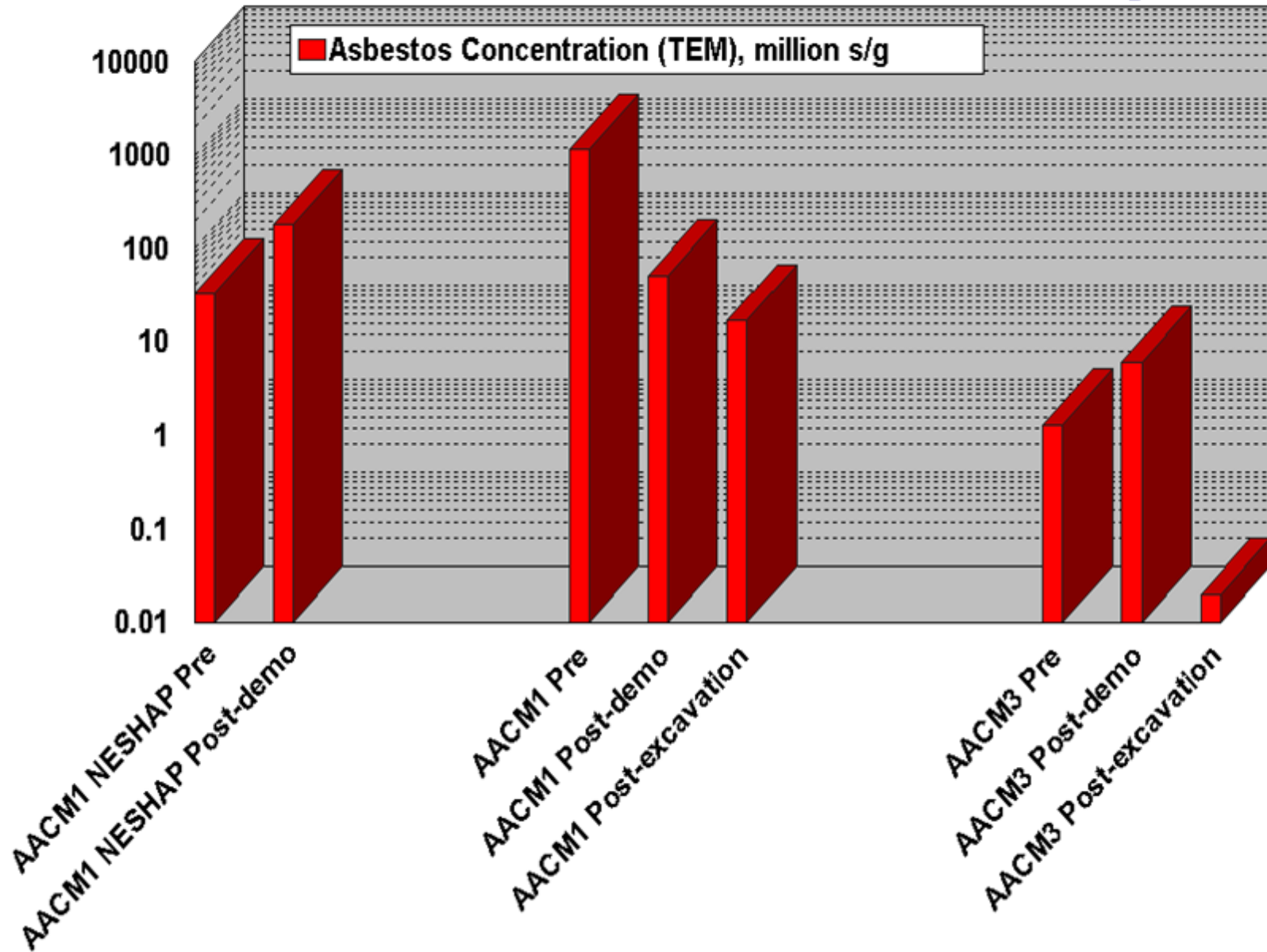


Worker Breathing Zone Asbestos Concentrations (TEM) During Demolition of AACM1 NESHAP, AACM1, AACM2, and AACM3 Buildings



Non-detects are shown as near zero for illustration.

Mean Soil Asbestos Concentrations (TEM) During Demolition of AACM1 NESHAP, AACM1, and AACM3 Buildings



Lessons Learned

- Location, location, location
- The AACM Research Demonstrated Site specific on results, State, local, contractors and cost analysis (landfill distance, abatement practices, etc.)
- Research places additional emphasis on oversight and implementation efforts – is this real world application?

EPA Responsibilities To Public

- EPA Research driven by questions raised on issues and concerns raised internally as well as externally to the Agency.(Champion Necessary)
- Under the Clean Air Act – Asbestos NESHAP first air rule written in 1973, amended in 1990
- CAA requires Reg review every 5 years - has it run it's course, what changes are necessary, etc.?

Peer Review Schedule

- Peer Review Process:

FR Notice Published July 21, 2008

Comment Period Ended September 1, 2008

Second FR Notice – Published August 27, 2008 -
Peer Review Committee Convened/Public
Meeting Held on September 11-12, 2008 ,
Cincinnati Lab

Public Comments Located

- Docket ID number EPA-HQ-ORD-2008-0523
- Reports Located:
<http://www.regulations.gov> and through
<http://www.epa.gov/region6/6xa/asbestos.htm>

Next Steps

- Peer Review Final Report – inclusion of panel comments, public comments and summary report of 2-day meeting
- EPA receipt of Final Peer Review Report

Next Steps- Continued

- EPA Finalizes AACM#2 and AACM#3 Research Reports - Release of Peer Review Report and Final EPA Reports – occur simultaneously –posted on web
- Agency will prepare for internal discussions on next steps once Science completed.

Next Steps - Continued

- What should EPA do next? Open Forum Discussions with outside parties: States, Tribes, Municipalities, Counties, Redevelopers, trainers, asbestos workers, unions, environmental groups, interested stakeholders, federal partners, etc.
- Should Asbestos NESHAP be reviewed? Should these discussions occur? If so, how should these discussions be convened? When? Where?

Questions??

For additional Information:

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