

Revised
12/08/2009 to
correct factual error

Alternative Asbestos Control Method (AACM) Research

EPA Region 6

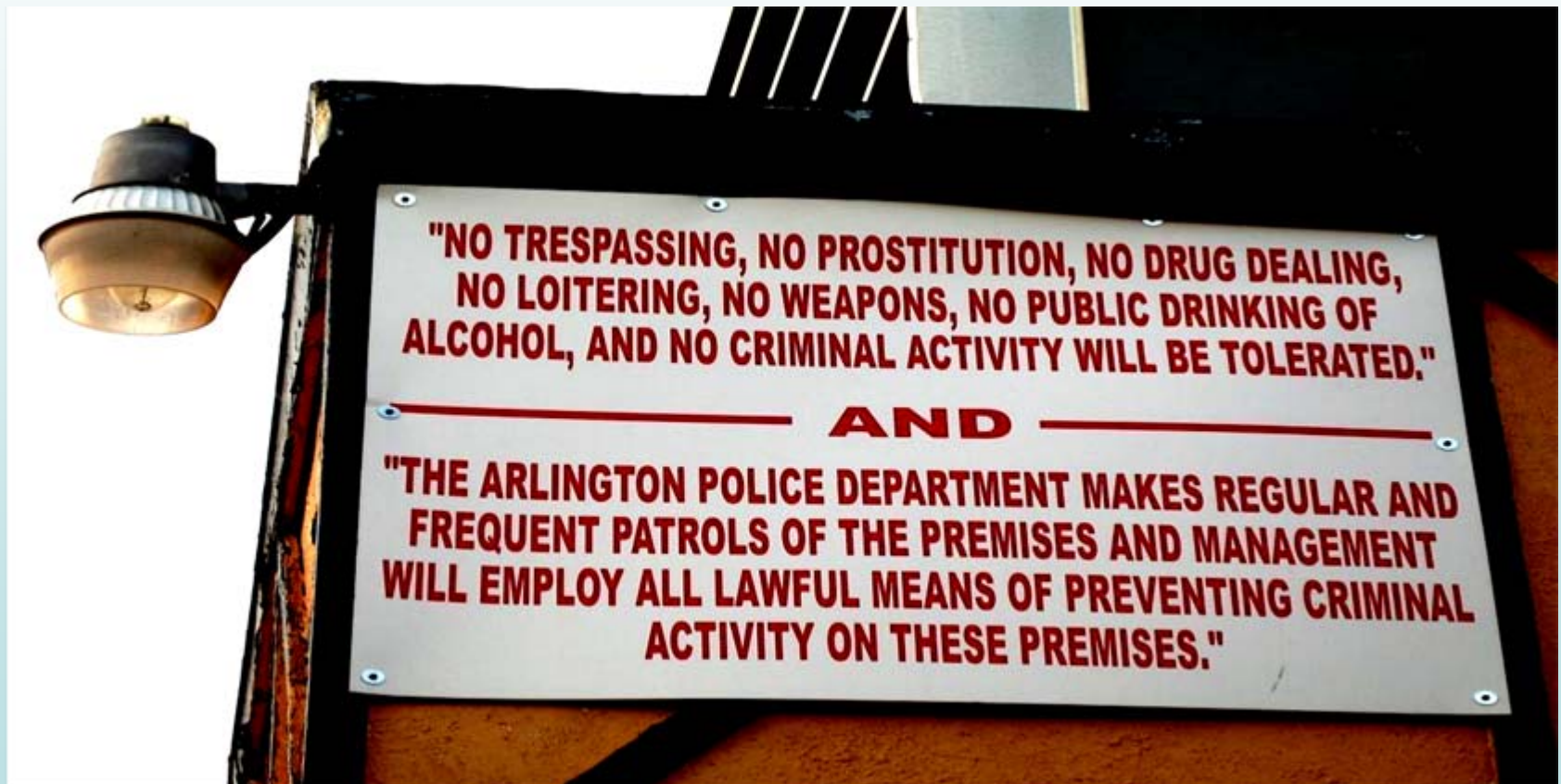
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**EPA Office of Research &
Development**

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**June 16, 2008 TRB Summer
Meeting**

Thousands of abandoned buildings across America posing risks to communities



**NO
TRESPASSING**



In the News....

- **City of Fort Worth**
 - **443 Abandoned buildings that cannot be demolished because of cost of asbestos removal (2005)**
- **City of Baltimore**
 - **15,000 abandoned buildings (asbestos unknown)**
- **City of Detroit**
 - **Projected 1300 demolitions but could only afford 684 in FY2003; down from 2500 in FY 2001; NESHAP regulations increased cost by one third**
- **City of Philadelphia**
 - **25,000 abandoned buildings, asbestos unknown**
- **City of Cincinnati**
 - **“About 50% of the demolitions are done at night or on weekends when no inspectors are around” (personal communication)**

Impacts to Environmental Justice Areas

- **Building owners abandon properties**
- **Owners unwilling to demolish due to cost**
- **Property Values low**
- **Higher occurrence of buildings deteriorating in low income areas.**

Impacts to Environmental Justice Areas (continued)

- **Communities inherit abandoned properties**
- **Abatement and Demolition costly...increase property list for communities**
- **Crime and community eye sores...unsafe**
- **Buildings deemed “imminent danger of**

AACM is NOT the “Fort Worth Wet Method”

- **Alternative Asbestos Control Method utilizes Amended Water which is a “soapy water” mixture.**
- **The Fort Worth XL Project utilized the existing NESHAP emergency provision which allows the use of water during the demolition procedures.**

The Alternative Asbestos Control Method (AACM)

- **AACM = an alternative best practice method developed by ORD, OAQPS, OECA, and R6 for buildings 1-3 stories tall, w/ these elements:**
 - **Remove accessible friable asbestos materials;**
 - **Wet with amended (soapy) water before, during, & after demolition;**
 - **Contain and treat wastewater;**
 - **Remove 3+ inches of soil;**
 - **Properly dispose of contaminated materials as ACM.**

Who is Impacted from the Asbestos NESHAP?

- **Asbestos industry
(abatement/demolition)**
- **Environmental Consultants**
- **Environmental/Health Trainers**
- **Communities/EJ areas**
- **Federal Agency's (HUD,
DOD, DOT...etc)**

Who would be Impacted by the AACM?

- **Asbestos Industry
(Abatement/Demolition Co.- potential new business partners formed)**
- **Environmental/Health Trainers**
- **Environmental Consultants**
- **Communities/Redevelopers/EJ Areas**
- **Federal Agency's**

Transportation Agency Impacts

- **Land Purchases**
- **Highway Development –**
 - a) Right of Ways**
 - b) Easements**
- **Potential Project Cost Reduction**

Rulemaking Process

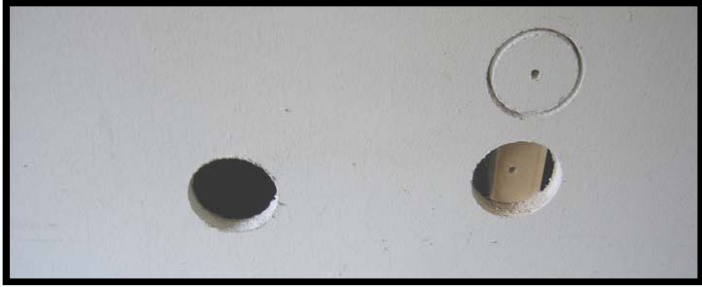
- **NO Rulemaking.**
- **Science - AACM Demolitions must be evaluated, EPA Administrator Decision.**
- **If deemed equivalent, National Workgroup formed.**
- **Regulations must be proposed (Draft).**
- **Cost/benefit analyses conducted (SBRFRA)**
- **Public process conducted (comment/public meetings, etc.)**
- **Rulemaking..... Time Intensive (3-? Years)**

AACM1

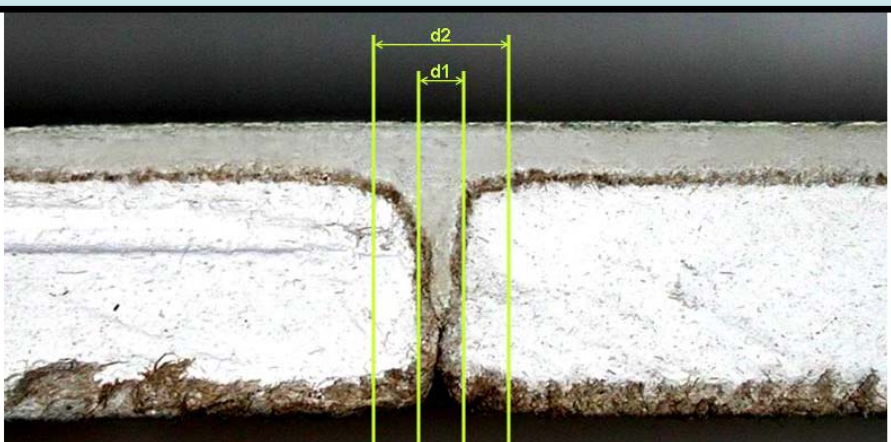
Side-by-Side NESHAP vs AACM RACM wall systems and VAT, on soil



AACM1 Bulk Sampling



	NESHAP		AACM	
	PLM	GR/TEM	PLM	GR/TEM
Joint Compound	1-5%	10-19%	1-5%	4-10%
Interval Composite	NA	4-7%	NA	1-4%
VAT	10-20%	14-24%	10-20%	17-20%



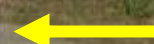
Bulk Asbestos Results
Methods: PLM and
Gravimetric Reduction/TEM

15-ft height



Ring Two

5-ft height



Ring One



AACM1 at Work - Interior



AACM1 at Work - Exterior



AACM1 at Work – Haul Off



AACM2

Transite, on pavement











AACM3

**Popcorn Ceilings, VAT, wall surfacing,
on soil and pavement**











Compactor Service
AW Systems, LLC
888-699-2783

CAUTION
DO NOT STEP ON
THIS DANGER OF
FALLING DEBRIS

18-25

Environmental Results AACM1

- **The airborne asbestos concentrations measured during both the NESHAP and the AACM demolition processes *were near or below the detection limit***
- **No visible emissions were observed during conducted AACM Research demolitions**

PARAMETER –AACM1	MORE EFFECTIVE		EQUAL
	NESHAP	AACM	
Visible Emissions			
Asbestos in Air			
Asbestos in Settled Dust			
Asbestos in Soil			
Asbestos Debris in Soil			
Asbestos in Worker Breathing Zone			
Non -Asbestos Particulate in Air			
Time			
Cost			

Next Steps

- **Draft Report for Demolition #2**
 - **Targeted June 2008**
 - **Peer Review Process/Public Notice July 2008**
 - * **30 day comment period**
- **Draft Report for Demolition #3**
 - **Targeted June 2008**
 - **Peer Review Process/Public Notice July 2008**
 - * **30 day comment period**

Lessons Learned

- **Every Demolition Site Specific....varying asbestos materials, surrounding areas, local requirements, etc.**
- **More Sampling than done in History of Asbestos NESHAP....study the science/collect data.**
- **Demolitions provide Agency perspective of a 30+ -yr-old regulation.**
- **Does adding a new tool to the tool box make sense...?**

Websites

- **EPA Regulatory Brochure:**

www.epa.gov/lawsregs/brochure/developing.html

- **EPA Region 6 Website:**

www.epa.gov/region06/6xa/asbestos.htm

Contact Information

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