

Gilsenan, Michael

From: Gilsenan, Michael [DEPNET1/DEPGPO2/MichaelGi]
Sent: Monday, April 01, 2002 12:39 PM
To: 'Radhakrishnan, Krish'; 'Theodorellys, Penny'
Cc: 'Avaltroni, Robert'; 'Chapin, Diana 001'; Subasic, Rosemarie
Subject: FW: Strawman benchmarks for a couple of probable indoor COCs



Final WTC Asbestos
 Action Leve...

-----Original Message-----

From: Rodenbeck, Sven [mailto:svr1@cdc.gov]
Sent: Monday, March 25, 2002 12:54 PM
To: 'Maddaloni.Mark@epamail.epa.gov'; grevatt.peter@epamail.epa.gov;
 smith.terry@epamail.epa.gov; Rodenbeck, Sven; rlc07@health.state.ny.us;
 kcarlino@health.nyc.gov; DeVoney, Danielle;
 laposta.dore@epamail.epa.gov; david.ippolito@osha.gov;
 dan.crane@osha.gov; njeffery@health.nyc.gov
Subject: RE: Strawman benchmarks for a couple of probable indoor COCs

Hello Everyone!!

Attached below is the Asbestos Action Levels developed by the DHHS, EPA, OSHA Environmental Assessment Working Group. This Action Levels were approved by all agencies that participate on the Working Group. Therefore, I would propose that we use them for asbestos in air.

Sven

-----Original Message-----

From: Maddaloni.Mark@epamail.epa.gov
 [mailto:Maddaloni.Mark@epamail.epa.gov]
Sent: Monday, March 25, 2002 11:29 AM
To: grevatt.peter@epamail.epa.gov; smith.terry@epamail.epa.gov;
 svr1@cdc.gov; rlc07@health.state.ny.us; kcarlino@health.nyc.gov;
 dld7@cdc.gov; laposta.dore@epamail.epa.gov; david.ippolito@osha.gov;
 dan.crane@osha.gov; njeffery@health.nyc.gov
Subject: Strawman benchmarks for a couple of probable indoor COCs

I was hoping to have a more formalized package to distribute this morning, but this somewhat crude approach will have to suffice. Listed below is the paradigm and I've taken a shot a filling in asbestos and lead for both settled dust and indoor air. Enjoy.

Tier	Screening Value	Action
I	> E-04 (1 yr) or HQ = 10	aggressive cleaning (professional?) - if readings persist take additional action to reduce exposure

II	background or E-04 (30 yr)/HQ = 1 to E-04 (1 yr)/HQ = 10	maintain recommended (i.e., diligent wet/HEPA) cleaning methods - consider additional monitoring
III	< background or E-04 (30 yr)/HQ = 1	no further action

Asbestos (settled dust)

Tier	Screening Value	Action
I	> 10,000 fibers/cm2 (TEM AHERA counting rules)	aggressive cleaning (professional?) - if readings persist take additional action to reduce exposure
II	1,000 (or background) - 10,000 f/cm2	maintain recommended (i.e., diligent wet/HEPA) cleaning methods - consider additional monitoring
III	< background or 1,000 f/cm2 (whichever is greater)	no further action

Asbestos (indoor air)

Tier	Screening Value	Action
I	> .028 f/cc (E-04 x 1 yr) PCM/PCME measurement	aggressive cleaning (professional?) - if readings persist take additional action to reduce exposure
II	.0004 (or background) - .028 f/cc	maintain recommended (i.e., diligent wet/HEPA) cleaning methods - consider additional monitoring
III	< background or .0004 f/cc (whichever is greater)	no further action

Lead (settled dust)

Tier	Screening Value	Action
I	> 40 ug/ft ² or 1,200 ppm	aggressive cleaning (professional?) - if readings persist take additional action to reduce exposure
II	400 - 1,200 ppm	maintain recommended (i.e., diligent wet/HEPA) cleaning methods - consider additional monitoring
III	< 40 ug/ft or 400 ppm	no further action

Lead (indoor air)

Tier	Screening Value	Action
I	> 1.5 ug/m ³ (NAAQS)	aggressive cleaning (professional?) - if readings persist take additional action to reduce exposure
II	background - 1.5 ug/m ³	maintain recommended (i.e., diligent wet/HEPA) cleaning methods - consider additional monitoring
III	< background	no further action

FINAL (October 11, 2001)		ATSDR, CDC, EPA, OSHA Environmental Assessment Workgroup		Asbestos Action Levels for World Trade Center Response	
Action Level & Analysis Method	General Public/Recommendations ¹	Supporting Information ²	Comments		
NYC Background ³ PCM/PCMe ⁴ f/cc (see footnotes 2 and 3)	● No restriction on access to any area.	AHERA standards (40 CFR 763); ATSDR Toxicological Profile for Asbestos; OSHA 29 CFR 1926.1101	● Remediation goal is to achieve background levels. ● AHERA guidance for schools requires that when schools are remediated for asbestos, the indoor air levels of asbestos should be similar to local outdoor air levels. ● Lowest attainable cancer risk		
NYC Background to 0.01 fcc PCM/PCMe ³	● No restriction on access to streets and public commercial building; continue to monitor ● Evaluate to determine if long-term access is acceptable; evaluate trends over months. ■ Identify source ■ Take action, as practical, to reduce levels to background	AHERA standards (40 CFR 763); ATSDR Toxicological Profile for Asbestos; IRIS; OSHA 29 CFR 1926.1101	● No significant cancer risk for short-term occupancy for residential and school buildings. ● AHERA guidance for schools requires that when schools are remediated for asbestos, the indoor air levels of asbestos should be similar to local outdoor air levels		
70 structures/mm ² TEM	● If < than 70 s/mm², no restrictions on access to buildings ● If > 70 s/mm², resample to confirm and analyze field blanks; take action to identify source and reduce levels to < 70 s/mm²	AHERA standards (40 CFR 763) NYC Clearance standard for buildings	● AHERA standards apply only to schools, and by NYC ordinance to buildings. ● Method sensitivity and counting rules should follow Appendix A (Table 1) in AHERA 40 CFR 763; Method sensitivity based on # grids analyzed and air sample volume and must be maintained at 0.005 fcc.		
0.01 - 0.1 fcc PCM/PCMe ³	● Continue to monitor; consider the need for additional sampling sites. ● If air levels are consistently between 0.01 to 0.1 fcc, evaluate the need for advisories, the need to limit access and the need for dust suppression..	Lowest limit set at 1/10 PEL/REL/TLV; AHERA standards (40 CFR 763); ATSDR Toxicological Profile for Asbestos; IRIS; OSHA 29 CFR 1926.1101;	● Long-term exposures may increase cancer risk in the general public. ● Unlike workers the general population, includes children and sensitive persons, does not receive exposure monitoring and does not participate in annual health screening		
> 0.1 fcc PCM/PCMe ³	● Evaluate the need to restrict general public access. ● Continue to monitor; consider the need for additional sampling sites..	Unacceptable cancer risk following long-term exposure; AHERA standards (40 CFR 763); ATSDR Toxicological Profile for Asbestos; IRIS; OSHA 29 CFR 1926.1101	General public should not be exposed to levels suspected of adverse health effects upon long-term exposure		
Action levels (f/cc) for workers involved in emergency response and recovery activities	Disaster Response and Recovery Workers (follow applicable OSHA standards)	Basis	Comments		
0.1 PCM only	● Respiratory protection required for workers, based on an 8 hour time weighted average (TWA) of exposure of 0.1 PCM. Longer shift work, i.e., lower levels of exposure	PEL	Value, 0.1 f/cc based on an eight hour time weighted average, is the Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limit for asbestos, as specified in the OSHA Construction Industry Regulation for Asbestos, 29 CFR 1926.1101.		

1.0 PCM only	● The maximum allowable level for workers average over 30 minute period (OSHA short term exposure level). ● PPE required above 1.0 f/cc PCM.	STEL	Value, 1.0 f/cc measured over a 30-minute period, is the Occupational Safety and Health Administration's (OSHA) Short-Term Exposure Limit for asbestos, as specified in the OSHA Construction Industry Regulation for Asbestos, 29 CFR 1926.1101.
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1. General public includes adults and children not directly involved in emergency response and recovery activities. 2. Documents and information that were considered in setting the action level. 3. Background levels for NYC are being determined. 4. PCM equivalents (PCMe) is determined using TEM analysis and counting fibers $> 0.3 \mu\text{m}$ in diameter and $> 5 \mu\text{m}$ in length. PCMe should be determined using consistent methods to provide comparable concentrations. If PCM is exceeded, may need to determine PCMe using TEM. Use professional judgment to determine if PCMe is needed by evaluating the frequency and magnitude of exceedance, size of geographic area involved, and trends in data.