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Environmental Monitoring Update
Data reported to NYC DOH 9/25/01 as of 4 pm

Asbestos

Ambient air monitoring

Agency	Date	Location	N samples	N above 0.01 fibers/cc *	N above OSHA PEL @	Maximum (fibers/cc)	Comment
USEPA	**9/21/01-9/22/01**	New Jersey	12	0	0	--	All were less than detection limit; highest detection limit was <0.006 by TEM.
	9/21/01-9/22/01	Inside controlled zone	10	0	0	0.007 by PCM	Highest was Location #E at South End and Liberty. TEM was <0.004.
	9/21/01-9/22/01	Perimeter of controlled zone	3	0	0	--	All were less than detection limit; highest detection limit was <0.004 by TEM.
	9/21/01-9/22/01	Neighborhood near controlled zone	5	0	0	--	All were less than detection limit; highest detection limit was <0.006 by PCM.
	9/21/01-9/22/01	Fresh Kills Landfill	11	0	0	--	All were less than detection limit; highest detection limit was <0.008 by PCM.
ConEd	**9/21/01-9/23/01**	Inside controlled zone	17	0	0	0.008 PCM	Max values recorded at Albany and West & also at WTC plaza. No TEM given.
	9/21/01-9/23/01	Perimeter of controlled zone	3	0	0	0.007 PCM	Max value recorded at Church and Fulton. No TEM given.
	9/21/01-9/23/01	Neighborhood near controlled zone	1	0	0	0.003 PCM	Max value recorded at Park Row and Greenwich. No TEM given.

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Agency	Date	Location	N samples	N above 0.01 fibers/cc *	N above OSHA PEL @	Maximum (fibers/cc)	Comment
NYC-DEP	**9/24/01**	5 schools, distant from controlled zone	15	0	0	0.008 by PCM	Highest was PS64, 600 East 6th Street (no TEM analysis done).
US Public Health Service	**9/18/01-9/19/01**	Fresh Kills Landfill	10	9	0	0.07 by PCM	No TEM analysis was done.
	9/19/01	Inside controlled zone	2	1	0	0.019 by PCM	No TEM analysis was done.

* Approximately equivalent to indoor clearance level for residences or schools. EPA results by TEM method, NYC-DEP by PCM

@ 0.1 fibers per cc by PCM method; US-OSHA permissible exposure limit for 8 hour time weighted average.

Interpretation: Dusty work in control zone or Fresh Kills Landfill continues to have the potential to generate elevated levels of asbestos fibers. Continued use of appropriate respiratory protection for workers in or near potentially dusty locations or tasks is indicated. Dust suppression measures should be enhanced. Additional personal monitoring underway.

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Bulk (settled) dust

Agency	Date	Location	N samples	N asbestos detected	N > 1%	Maximum (%)	Comment
US Public Health Service	**9/18/01**	Fresh Kills Landfill	4	2	0	unknown	Chrysotile detected by TEM (written as chrysotile 'yes' but no percentage given).
	9/19/01	Inside controlled zone	3	1	1	35 - 40	Location is 'ground zero'. *Reported range of 35-40% needs to be verified with PHS.*

Interpretation: While asbestos containing materials in dust at WTC and Fresh Kills is generally below permissible exposure limits for occupational exposure, the potential for higher exposures exist based on bulk dust and debris samples. Continued use of appropriate respiratory protection for workers in or near potentially dusty locations or tasks is indicated. Dust suppression measures should be expanded. Additional personal monitoring underway.

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Personal air monitoring

Agency	Date	Location (see notes on page 3)	Activity	N samples	N above TWA OSHA PEL*	Maximum (fibers per cc)	Comment
ConEd	**9/21/01-9/23/01**	Inside Controlled Zone	Splicing	7	0	0.026 f/cc PCM	Max value was taken at Rector and Washington. No TEM given.
		Unknown	Walking	2	-	-	All were less than detection limit; highest detection limit was <0.011 by PCM method
		Inside Controlled Zone	No Stated Activity	8	0	0.02 f/cc PCM	Max value was taken at Rector and Washington. No TEM given.
US Public Health Service	**9/19/01**	Inside Controlled Zone	Unknown	7	2	0.2777 by TEM	Location is 'ground zero.' *Result needs to be verified with PHS b/c PCM result was only 0.046 f/cc.*
	9/18/01-9/19/01	Fresh Kills Landfill	Unknown	21	7	0.175 by PCM	(No analysis done by TEM for this location.)
Union of Operating Engineers	9/21/01	Unknown location	Operating engineers	2	0	0.0373 by TEM	

* 0.1 fibers per cc by PCM method; US-OSHA permissible exposure limit for 8 hour time weighted average.

Interpretation: Dusty work in control zone continues to have the potential to generate elevated levels of asbestos fibers. Continued use of appropriate respiratory protection for workers in or near potentially dusty locations or tasks is indicated. Dust suppression measures should be enhanced. Additional personal monitoring underway.

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Particulate monitoring (PM 2.5)

Agency	Date	Location	N samples (continuous monitoring)	N above threshold *	Max (of 24 hour averages)	Comment
NYSDEC	**9/24/01**	Fresh Kills Landfill	1 (24 hour average)	0	30.2	
	9/24/01	Schools and neighborhoods distant from controlled zone	10 (24 hour averages)	0	34.3	

* Proposed National Ambient Air Quality Standard is 65 ug/m3 maximum for a 24 hour period and 15 ug/m3 annual arithmetic mean.

Interpretation: No immediate public or occupational health threat.

Other Monitoring

Hudson river and water runoff from site: As reported by EPA Sunday Sept 24: ambient results to date show no observed effects due to the WTC disaster. Samples collected in the vicinity of the WTC are generally diluted relative to the up-river sample. The East River sample results are similar to those from the Hudson River background location.

Sediment results: As reported in EPA's Sunday Sept 24 Dredge Material Sediment Sampling Summary, dioxin and furan (TCDD/TCDF) samples collected on Sept. 15 (recently rec'd) greatly exceed HARS disposal criteria. The material is being disposed of in the Newark Bay Borrow Pits, which is designed to accommodate dredge material. PCBs (aroclors) detected in the dredge sample were weathered suggesting a relatively old source.

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Locations are defined according to:

Inside controlled zone
- Location #A = West Broadway & Barclay
- Location #B = Church & Dey
- Location #D = Greenwich & Albany
- Location #E = South End & Liberty
- Location #F = West & Vesey
- Location #K = West & Albany
- Location #O = Pier 25 (West and N. Moore)

Perimeter of controlled zone
- Location #C = Broadway & Liberty
- Location #I = Broadway & Wall Street
- Location #J = West & Warren

Neighborhood near controlled zone
- Location #H = One Chase Plaza (Nassau, William and Cedar)
- Location #G = Church & Duane
- Location #N = West side highway near Community College
- Location #M= Broad and Liberty
- Location #P = West and Harrison

Neighborhoods distant from controlled zone

Fresh Kills Landfill

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