Appendix B. EPA Sampling Results

Table 1. Results of Analysis of Surface Soil Samples*

Sample Type	Sample Location	Asbestos Concentration (Percent by Volume)	Type of Asbestos
Grab	Soil stockpile	Trace†	Chysotile, tremolite-Actinolite
Grab	Soil stockpile	Not detected	
Composite	Soil stockpile	Trace	Chrysotile
Grab	Soil stockpile	Trace	Chysotile, tremolite-Actinolite
Grab	Soil stockpile	Trace	Chysotile, tremolite-Actinolite
Composite	Soil stockpile	Trace	Tremolite-actinolite
Composite	Yard area east of stockpile	Trace	Chrysotile
Composite	Eastern portion of yard	Not detected	
Composite	Along north fence	Not detected	
Composite	Planter east of sales office	Not detected	
Composite	Fence, northeast corner	Not detected	
Composite	Along rail spur	Trace	Chrysotile
		4%	Tremolite-actinolite
Composite	Along rail spur (duplicate of previous sample)	Trace	Chrysotile
		4%	Tremolite-actinolite
Composite	Along rail spur	Trace	Chrysotile
		2%	Tremolite-actinolite

Source: US Environmental Protection Agency. Focused removal assessment report for W.R. Grace & Co. Newark: CDM for EPA; 2001.

* All soil samples were analyzed by polarized light microscopy.

† Asbestos fibers were detected but concentration not quantifiable by analyst.

Table 2. Results of Analysis of Product Samples*

Sample Type	Sample Location	Asbestos Concentration (Percent by Volume)	Type of Asbestos
Grab	Product pile near former conveyor at rail spur	3%	Tremolite-actinolite
Grab	Product pile outside west wall of production building	3%	Tremolite-actinolite
Grab	Bulk sample; overspray on ceiling in attic in sales office	15%	Chrysotile
Grab	Bulk vermiculite product in wall space in machine shop	2%	Tremolite-actinolite

* All soil samples were analyzed by polarized light microscopy.

Table 3. Results of Analysis of Microvacuum Surface Dust Samples*

Sample Type	Sample Location	Area Sampled	Number of Asbestos Structures Detected (on the filter sample)	Grid Openings (grid opening area = 0.0105 mm^2)	Effective Filter Area	Dilution Factor	Total Asbestos Concentration (s/cm^2) (estimated for the surface area sampled)
Composite	Two wood shelves and perimeter wall I-beam in machine shop	300 cm^2	69 tremolite-actinolite	2	201 mm^2	0.00125	1,761,143
			2 chrysotile	2	201 mm^2	0.00125	51,048
Composite	South, east, and west perimeter wall I beams in warehouse	300 cm^2	1 tremolite-actinolite	10	201 mm^2	0.00125	5,105
			1 chrysotile	10	201 mm^2	0.00125	5,105
Composite	Three areas on roof of the office in the warehouse	300 cm^2	3 tremolite-actinolite	10	201 mm^2	0.00125	66,362
			13 chrysotile	10	201 mm^2	0.00125	15,314
Blank	Blank	N/A	Not detected	10			
Blank	Blank	N/A	Not detected	10			

* All microvacuum dust samples were analyzed by ISO method 10312 (TEM). Results reported as "Number of Asbestos Structures Detected" correspond to the actual number of structures observed during analysis of a portion of the microvacuum filter. The "Total Asbestos Concentration" values are estimated for the surface area sampled.

$$Total\ Asbestos\ Concentration\ (s/cm^2) = \frac{\left(\frac{number\ of\ asbestos\ fibers \times effective\ filter\ area}{dilution\ factor \times number\ of\ grid\ openings \times grid\ opening\ area}\right)}{Area\ Sampled}$$

Table 4. Results of Analysis of Indoor Air Samples*

Sample Type	Sample Location	Asbestos Result	Concentration
Air	Machine shop	Not detected†	
Air	Production area	Not detected	
Air	Warehouse area	2 structures, tremolite-actinolite	0.0019 s/cc
Air	Sales office building	Chrysotile	0.0018 s/cc
Air	Warehouse office area	4 structures, tremolite-actinolite	0.0046 s/cc
		9 structures, chrysotile	0.0104 s/cc
Blank	Blank	Not detected	
Blank	Blank	Not detected	

* All air samples were analyzed by ISO method 10312 (TEM).
† The limit of detection was 0.0009 s/cc.