



EMSL Analytical, Inc. - 107 Haddon Avenue
Westmont, NJ. 08108
(856) 858-4800

12/7/01

Attention: **Sven Roddenbeck**
U.S.EPA - Residential
ATSDR
Mail Stop E-32
1600 Clifton Road., NE
Atlanta, GA. 30333

Project: Residential Sampling
Ref. Number: 360100663

Silica Analysis Performed by Method NIOSH 7500
Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)

Sample ID	Identification	Analyte ID	Volume (L)	Nuisance Dust		Airborne Particulate			
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	Analytical Sensitivity (mg/m ³)
[R]IF-0-14		Quartz	1189	0.026	0.0222	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0103
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0034
		Portland/ Lime				<0.020	<AS		0.0171
		Gypsum				<0.004	<AS		0.0034
		Mica				<0.011	<AS		0.0084
		Halite				<0.008	<AS		0.0051
		Fibrous Glass				ND	<AS		0.0557
[R]RF-C-14		Quartz	719	0.095	0.1321	<0.004	<AS	N/A	0.0056
		Cristobalite				<0.012	<AS		0.0167
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0056
		Portland/ Lime				<0.020	<AS		0.0276
		Gypsum				<0.004	<AS		0.0056
		Mica				<0.011	<AS		0.0153
		Halite				<0.008	<AS		0.0083
		Fibrous Glass				ND	<AS		1.3904
[R]TF-C-14		Quartz	1134	0.574	0.5062	<0.004	<AS	N/A	0.0035
		Cristobalite				<0.012	<AS		0.0106
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0035
		Portland/ Lime				<0.020	<AS		0.0176
		Gypsum				<0.004	<AS		0.0035
		Mica				<0.011	<AS		0.0097
		Halite				<0.008	<AS		0.0053
		Fibrous Glass				ND	<AS		0.8819

John Newton
Analyst

7 December, 2001
Date of Analysis

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Hence, alpha-quartz, the most prevalent form of crystalline silica, will be assumed. "<" = Less than the stated value

The lowest reportable value is equivalent to the Analytical Sensitivity which is calculated from the lowest reproducible concentration of silica detectable by the instrument.
AIHA Accredited - Laboratory ID #100192

CONFIDENTIAL,

CITY_21MC100_003434061

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008



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Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)

X-Ray Diffraction (XRD)

Sample ID	Identification	Analyte ID	Volume (L)	Nuisance Dust		Airborne Particulate			
				Sample Weight (mg)	Sample Conc. (mg/m³)	Analyte Weight (mg)	Analyte Conc. (mg/m³)	% Analyte	Analytical Sensitivity (mg/m³)
[R]F-C-14		Quartz	1151	0.030	0.0281	<0.004	<AS	N/A	0.0035
		Cristobalite				<0.012	<AS		0.0104
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0095
		Portland/ Lime				<0.020	<AS		0.0174
		Gypsum				<0.004	<AS		0.0035
		Mica				<0.011	<AS		0.0086
		Halite				<0.006	<AS		0.0052
		Fibrous Glass				ND	<AS		0.8686
[R]RF-R1-14		Quartz	729	0.125	0.1714	<0.004	<AS	N/A	0.0055
		Cristobalite				<0.012	<AS		0.0185
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0055
		Portland/ Lime				<0.020	<AS		0.0274
		Gypsum				<0.004	<AS		0.0055
		Mica				<0.011	<AS		0.0151
		Halite				<0.006	<AS		0.0082
		Fibrous Glass				ND	<AS		1.3715
[R]TF-R1-14		Quartz	1179	0.453	0.3842	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0102
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0034
		Portland/ Lime				<0.020	<AS		0.0170
		Gypsum				<0.004	<AS		0.0034
		Mica				<0.011	<AS		0.0093
		Halite				<0.006	<AS		0.0051
		Fibrous Glass				ND	<AS		0.8482

Fibrous Glass Results are in fibers per cubic M

John Newton
Analyst

7 December, 2001
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CITY_21MC100_003434062

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Atlanta, GA. 30333

Project: Residential Sampling
Ref. Number: 360100663

Silica Analysis Performed by Method NIOSH 7500
Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)

Sample ID	Identification	Analyte ID	Volume (L)	Nuisance Dust		Airborne Particulate			
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	Analytical Sensitivity (mg/m ³)
[R]IF-R1-14		Quartz	1166	0.014	0.0120	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0103
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0034
		Portland/ Lime				<0.020	<AS		0.0172
		Gypsum				<0.004	<AS		0.0034
		Mica				<0.011	<AS		0.0094
		Halite				<0.006	<AS		0.0051
		Fibrous Glass				ND	<AS		0.2578
[R]RF-R2-14		Quartz	730	0.261	0.3573	<0.004	<AS	N/A	0.0055
		Cristobalite				<0.012	<AS		0.0164
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0055
		Portland/ Lime				<0.020	<AS		0.0274
		Gypsum				<0.004	<AS		0.0055
		Mica				<0.011	<AS		0.0151
		Halite				<0.006	<AS		0.0082
		Fibrous Glass				ND	<AS		1.3691
[R]TF-R2-14		Quartz	1161	0.276	0.2388	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0103
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0034
		Portland/ Lime				<0.020	<AS		0.0172
		Gypsum				<0.004	<AS		0.0034
		Mica				<0.011	<AS		0.0095
		Halite				<0.006	<AS		0.0052
		Fibrous Glass				ND	<AS		0.9813

John Newton
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NIHA Accredited - Laboratory ID #100192

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CITY_21MC100_003434063

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Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)

Sample ID	Identification	Analyte ID	Volume (L)	Nuisance Dust		Airborne Particulate			
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	Analytical Sensitivity (mg/m ³)
[R]IF-R2-14		Quartz	1142	0.032	0.0280	<0.004	<AS	N/A	0.0035
		Cristobalite				<0.012	<AS		0.0105
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0035
		Portland/ Lime				<0.020	<AS		0.0175
		Gypsum				<0.004	<AS		0.0035
		Mica				<0.011	<AS		0.0098
		Halite				<0.006	<AS		0.0053
		Fibrous Glass				ND	<AS		0.8755
[R]BRF-A-14		Quartz	0	0.146	#DIV/0!	<0.004	N/A	N/A	N/A
		Cristobalite				<0.012	N/A		N/A
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	N/A		N/A
		Portland/ Lime				<0.020	N/A		N/A
		Gypsum				<0.004	N/A		N/A
		Mica				<0.011	N/A		N/A
		Halite				<0.006	N/A		N/A
		Fibrous Glass				ND	N/A		N/A
[R]BRF-B-14		Quartz	0	0.213	#DIV/0!	<0.004	N/A	N/A	N/A
		Cristobalite				<0.012	N/A		N/A
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	N/A		N/A
		Portland/ Lime				<0.020	N/A		N/A
		Gypsum				<0.004	N/A		N/A
		Mica				<0.011	N/A		N/A
		Halite				<0.006	N/A		N/A
		Fibrous Glass				ND	N/A		N/A

John Newton
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CITY_21MC100_003434064

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Ref. Number: 360100663

Silica Analysis Performed by Method NIOSH 7500
Crystalline Particle Analysis Performed by
X-Ray Diffraction (XRD)

				Nuisance Dust		Airborne Particulate			
Sample ID	Identification	Analyte ID	Volume (L)	Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	Analytical Sensitivity (mg/m ³)
[R]BTF-A-14		Quartz	0	A	N/A	<0.004	N/A	N/A	N/A
		Cristobalite				<0.012	N/A		N/A
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	N/A		N/A
		Portland/ Lime				<0.020	N/A		N/A
		Gypsum				<0.004	N/A		N/A
		Mica				<0.011	N/A		N/A
		Halite				<0.006	N/A		N/A
		Fibrous Glass				ND	N/A		N/A
		[R]STF-B-14					Quartz		0
Cristobalite	<0.012		N/A	N/A					
Tridymite	N/A		N/A	N/A					
Calcite	<0.004		N/A	N/A					
Portland/ Lime	<0.020		N/A	N/A					
Gypsum	<0.004		N/A	N/A					
Mica	<0.011		N/A	N/A					
Halite	<0.006		N/A	N/A					
Fibrous Glass	ND		N/A	N/A					
[R]TF-C-X-14			Quartz	1138	1.170		1.0279	<0.004	
		Cristobalite	<0.012			<AS		0.0105	
		Tridymite	N/A			N/A		N/A	
		Calcite	<0.004			<AS		0.0035	
		Portland/ Lime	<0.020			<AS		0.0176	
		Gypsum	<0.004			<AS		0.0035	
		Mica	<0.011			<AS		0.0097	
		Halite	<0.006			<AS		0.0053	
		Fibrous Glass	2.000			1.7571		0.8785	
		Fibrous Glass Results are in fibers per cubic M							

John Newton
Analyst

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Sample ID	Identification	Analyte ID	Volume (L)	Nuisance Dust		Airborne Particulate			
				Sample Weight (mg)	Sample Conc. (mg/m ³)	Analyte Weight (mg)	Analyte Conc. (mg/m ³)	% Analyte	Analytical Sensitivity (mg/m ³)
[R]IF-R2-X-14		Quartz	1149	0.020	0.0174	<0.004	<AS	N/A	0.0035
		Cristobalite				<0.012	<AS		0.0104
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0035
		Portland/ Lime				<0.020	<AS		0.0174
		Gypsum				<0.004	<AS		0.0035
		Mica				<0.011	<AS		0.0086
		Halite				<0.006	<AS		0.0052
		Fibrous Glass				ND	<AS		0.8700
[R]IF-R2-X2-14		Quartz	1171	0.010	0.0085	<0.004	<AS	N/A	0.0034
		Cristobalite				<0.012	<AS		0.0102
		Tridymite				N/A	N/A		N/A
		Calcite				<0.004	<AS		0.0034
		Portland/ Lime				<0.020	<AS		0.0171
		Gypsum				<0.004	<AS		0.0034
		Mica				<0.011	<AS		0.0094
		Halite				<0.006	<AS		0.0051
		Fibrous Glass				ND	<AS		0.6538

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NYC-WTC_000176087