EMS Laboratories Inc.
117 West Bellevue Drive, Pasadena, CA 91105
Phone: 626-568-4065 Fax: 626-796-5282
Email: akolk@emslabs.com

Attn: Derrick Wills
Tronox-LLC-Henderson
PO Box 55
Henderson, NV 89009

Phone: (947) 375-7004

Customer ID: TRNX26
Customer PO: 2027.001
Received: 11/1/2010 9:36 AM
EMS LAB No: 141276
Date Prepared: 11/3/2010 12:30 AM
Analysis Date: 11/4/2010 10:00 AM

Project: Tronox LLX Henderson, 560 W. Lake Mead Dr., Henderson, NV/2027.001

Report Date: November 8, 2010

Date Sampled: 10/28/2010 17:30

NIOSH 7402/ISO

DRAFT, MODIFIED ELUTRIATOR METHOD FOR THE DETERMINATION OF ASBESTOS IN SOILS AND BULK MATERIAL METHOD

EMS Laboratory Number:	141276		Mass of Respirable Dust on Filter:	136	µg
Customer Sample Number:	SSAN4-01-0.00_01_BPC		Area of collection filter:	385	mm^2
Minimum Level of Analysis (chrysotile):	CD		Grid openings area:	0.0094	mm^2
Minimum Level of Analysis (amphibole):	ADX		Grid Openings Analyzed:	120	
Magnification used for fiber counting:	9,200	x	Min. Str. Length/Max Str. Diameter:	>5/<0.4	microns
Aspect ratio for fiber definition:	3:1				
			Analyst(s):	Radha Singh	

Dust Generator - Total Dried Sample Weight-75.3g

	Soil % Moisture	4.6	%
	Air Flow Rate Through ME Opening of Dust Generator:	1370	
Not Used	Air Flow Rate Through IST Opening of Dust Generator:	100	
Used in Tumbler	Estimate Total Air Flow Through Elutriator:	1470	

Analytical Sensitivity: 2.51E+06 Structure /g PM 10 Limit of Detection: 7.52E+06 Structure /g PM 10

Test For Uniformity (Chi-Square results)

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density St/mm²	Conc. Str/g PM10	Poisson 95% Confidence Interval Lower Limit Str/g PM10	Poisson 95% Confidence Interval Upper Limit Str/g PM10
Asbestos Structures>5um, ≤10um	ADX/CD	0	0	0	0	0	7.52E+06
Asbestos Structures>5um, ≤10um (Chrys)	CD	0	0	0	0	0	7.52E+06
Asbestos Structures>5um, ≤10um (Amph)	ADX	0	0	0	0	0	7.52E+06
Asbestos Structure >10um (Long)	ADX/CD	2	2	5.02	6.08E+05	0	1.81E+07
Asbestos Structure >10um (Chrys)	CD	2	2	5.02	6.08E+05	0	1.81E+07
Asbestos Structure >10um (Amph)	ADX	0	0	0	0	0	7.52E+06
Total Protocol Asbestos Structures	ADX/CD	2	2	5.02	6.08E+05	0	1.81E+07
Protocol Asbestos Structures (Chrys)	CD	2	2	5.02	6.08E+05	0	1.81E+07
Protocol Asbestos Structures (Amph)	ADX	0	0	0	0	0	7.52E+06
Total Protocol Non Asbestos Structures	NAM	3	3	2.66	7.53E+06	1.55E+06	2.20E+07

Approved by Technical Director

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626-568-4065

Client:	Derrick Willis, Tronox LLC-Henderson	**Filter Type:**	PC 385 mm^2
Report number :	141276	**Magnification:**	9200
Sample number:	SSAN4-01-0.00_01_BPC	**Grid Opening Dimension: mm^2**	0.0094
Project:	2027.001/Tronox LLC Henderson, 560 W. Lake Mead Dr.,	**Grid Loading:**	Moderate

Elutriation Date: 11/3/2010 by Joel Paruli
Preparation Date: 11/4/2010 by Joel Paruli
Analysis Date: 11/4/2010 by Radha Singh

Asbestos Structures>5um, ≤10um (Chrys)	0
Asbestos Structures>5um, ≤10um (Amph)	0
Asbestos Structure >10um (Chrys)	2
Asbestos Structure >10um (Amph)	0
Protocol Asbestos Structures (Chrys)	2
Protocol Asbestos Structures (Amph)	0

Grid Openings	120
Mass - ug	136
Anlytical sensitivity	[redacted]

Grid ID	Grid Opening	Structure Type	Structure Number Primary	Structure Number Total	Dimensions - mm Width	Dimensions - mm Length	Dimensions (µm) Width	Dimensions (µm) Length	Level of ID	Mineral Type	Image Number	Structure Comments
1A	C31	None Detected										
1A	C34	None Detected										
1A	E31	None Detected										
1A	E34	None Detected										
1A	F31	None Detected										
1A	F34	None Detected										
1A	G31	None Detected										
1A	C33	None Detected										
1A	C36	None Detected										
1A	E33	None Detected										
1A	E36	None Detected										
1A	C41	None Detected										
1A	C44	None Detected										
1A	E41	None Detected										
1A	E44	None Detected										
1A	F41	None Detected										
1A	F44	None Detected										
1A	G41	None Detected										
1A	H43	None Detected										
1A	H46	None Detected										
1A	E51	None Detected										
1A	E54	None Detected										
1A	G51	None Detected										
1B	E23	None Detected										
1B	E26	None Detected										
1B	F23	F			1	52	0.11	5.65				Non Asbestos
1B	G23	None Detected										
1B	G26	None Detected										
1B	C31	F			0.5	49	0.05	5.33				Non Asbestos
1B	C34	None Detected										
1B	E31	None Detected										
1B	E34	None Detected										
1B	F31	MD11	1		130	380	14.13	41.30				
		MB		1	2.5	300	0.27	32.61	CD	Chrysotile		
1B	F34	None Detected										
1B	G31	None Detected										
1B	G34	B			8	60	0.87	6.52				Non Asbestos
1B	H31	F	2	2	1	105	0.11	11.41	CD	Chrysotile		
1B	H34	F			4	50	0.43	5.43				Non Asbestos
1B	C33	None Detected										
1B	C36	None Detected										
1B	E33	None Detected										

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Report Number:	[redacted]
Sample number:	[redacted]

Analyzed by:	[redacted]
Date of Analysis:	[redacted]

Grid ID	Grid Opening	Structure Type	Structure Number Primary	Structure Number Total			Dimensions (µm) Width	Dimensions (µm) Length	Level of ID	Mineral Type	Image Number	Structure Comments
1B	E41	None Detected										
1B	E44	None Detected										
1B	F41	MD11			35	110	3.80	11.96				
		MF			8.5	80	0.92	8.70				Non Asbestos
1B	F44	None Detected										
1B	G41	None Detected										
1C	C26	None Detected										
1C	E23	None Detected										
1C	E26	F			1	55	0.11	5.98				Non Asbestos
1C	F23	None Detected										
1C	C31	None Detected										
1C	C34	None Detected										
1C	E31	None Detected										
1C	E34	None Detected										
1C	F31	None Detected										
1C	F34	None Detected										
1C	C41	MD11			52	55	5.65	5.98				
		MF			6.5	52	0.71	5.65				Non Asbestos
1C	C44	None Detected										
1C	E41	None Detected										
1C	E44	None Detected										
1C	C51	None Detected										
1C	C54	None Detected										
1C	E51	None Detected										
1C	E54	None Detected										
1C	F51	MD11			50	105	5.43	11.41				
		MF			8	72	0.87	7.83				Non Asbestos
1C	G51											
1C	G54	None Detected										
1C	H53	None Detected										
1C	H56	None Detected										
1D	C26	None Detected										
1D	E23	None Detected										
1D	E26	None Detected										
1D	F23	None Detected										
1D	F26	None Detected										
1D	C31	None Detected										
1D	C34	None Detected										
1D	E31	None Detected										
1D	E34	None Detected										
1D	F31	F			12	65	1.30	7.07				Non Asbestos
1D	F34	None Detected										
1D	G31	None Detected										
1D	G34	None Detected										
1D	H31	None Detected										
1D	E41	None Detected										
1D	E46	None Detected										
1D	F41	None Detected										
1D	F46	None Detected										
1D	G41	None Detected										
1D	G44	None Detected										
1D	C51	None Detected										
1D	C54	None Detected										
1D	E53	None Detected										
1E	E23	None Detected										
1E	E26	None Detected										
1E	F23	None Detected										

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Report Number:	
Sample number:	

Analyzed by:	
Date of Analysis:	

Grid ID	Grid Opening	Structure Type	Structure Number				Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total			Width	Length				
1E	F26	None Detected										
1E	G23	None Detected										
1E	G26	None Detected										
1E	C31	None Detected										
1E	C34	None Detected										
1E	E31	None Detected										
1E	E34	None Detected										
1E	F31	None Detected										
1E	F34	None Detected										
1E	G31	None Detected										
1E	G34	None Detected										
1E	H33	None Detected										
1E	H36	None Detected										
1E	E41	None Detected										
1E	E44	None Detected										
1E	F41	None Detected										
1E	F44	None Detected										
1E	B54	None Detected										
1E	C51	None Detected										
1E	C54	None Detected										
1E	E51	None Detected										
1E	F53	None Detected										
1E	F56	None Detected										
1E	G53	None Detected										
1E	G56	None Detected										

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Attn: Derrick Wills
Tronox-LLC-Henderson
PO Box 55
Henderson, NV 89009

Phone: (947) 375-7004

Customer ID: TRNX26
Customer PO: 2027.001
Received: 9/22/2010 9:36 AM
EMS LAB No: 141276
Date Prepared: 11/2/2010 10:32 AM
Analysis Date: 11/3/2010 10:00 AM

Project: Tronox LLX Henderson, 560 W. Lake Mead Dr., Henderson, NV/2027.001

Report Date: November 8, 2010

Date Sampled: 10/28/2010 15:45

NIOSH 7402/ISO

DRAFT, MODIFIED ELUTRIATOR METHOD FOR THE DETERMINATION OF ASBESTOS IN SOILS AND BULK MATERIAL METHOD

EMS Laboratory Number:	141276		Mass of Respirable Dust on Filter:	152	µg
Customer Sample Number:	SSAN5-05-0.00_01_BPC		Area of collection filter:	385	mm^2
Minimum Level of Analysis (chrysotile):	CD		Grid openings area:	0.0094	mm^2
Minimum Level of Analysis (amphibole):	ADX		Grid Openings Analyzed:	107	
Magnification used for fiber counting:	9,200	x	Min. Str. Length/Max Str. Diameter:	>5/<0.4	microns
Aspect ratio for fiber definition:	3:1				
			Analyst(s):	Radha Singh	

Dust Generator - Total Dried Sample Weight-72.7g

Soil % Moisture 8.8 %

Not Used
Used in Tumbler

Air Flow Rate Through ME Opening of Dust Generator:	1370
Air Flow Rate Through IST Opening of Dust Generator:	100
Estimate Total Air Flow Through Elutriator:	1470

Analytical Sensitivity: 2.52E+06 Structure /g PM 10 Limit of Detection: 7.54E+06 Structure /g PM 10

Test For Uniformity (Chi-Square results)

Structure Class	Min ID Level Required	Counts Primary Str.	Counts Total Str.	Density St/mm²	Conc. Str/g PM10	Poisson 95% Confidence Interval Lower Limit Str/g PM10	Poisson 95% Confidence Interval Upper Limit Str/g PM10
Asbestos Structures>5um, ≤10um	ADX/CD	5	5	4.97	1.26E+07	4.09E+06	2.94E+07
Asbestos Structures>5um, ≤10um (Chrys)	CD	3	3	2.98	7.55E+06	1.56E+06	2.21E+07
Asbestos Structures>5um, ≤10um (Amph)	ADX	2	2	1.99	5.04E+06	6.10E+05	1.82E+07
Asbestos Structure >10um (Long)	ADX/CD	10	10	9.94	2.52E+07	1.21E+07	4.63E+07
Asbestos Structure >10um (Chrys)	CD	6	6	5.97	1.51E+07	5.55E+06	3.29E+07
Asbestos Structure >10um (Amph)	ADX	4	4	3.98	1.01E+07	2.74E+06	2.58E+07
Total Protocol Asbestos Structures	ADX/CD	15	15	14.91	3.78E+07	2.11E+07	6.23E+07
Protocol Asbestos Structures (Chrys)	CD	9	9	8.95	2.27E+07	1.04E+07	4.30E+07
Protocol Asbestos Structures (Amph)	ADX	6	6	5.97	1.51E+07	5.55E+06	3.29E+07
Total Protocol Non Asbestos Structures	NAM	2	2	1.99	5.04E+06	6.10E+05	1.82E+07

Approved by Technical Director

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Client:	Derrick Willis, Tronox LLC-Henderson	**Filter Type:**	PC 385 mm^2
Report number :	141276	**Magnification:**	9200
Sample number:	SSAN5-05-0.00 01 BPC	**Grid Opening Dimension: mm^2**	0.0094
Project:	2027.001/Tronox LLC Henderson, 560 W. Lake Mead Dr.,	**Grid Loading:**	Moderate

Elutriation Date: 11/2/2010 by Joel Paruli
Preparation Date: 11/2/2010 by Joel Paruli
Analysis Date: 11/3/2010 by Radha Singh

Asbestos Structures>5um, ≤10um (Chrys)	3
Asbestos Structures>5um, ≤10um (Amph)	2
Asbestos Structure >10um (Chrys)	6
Asbestos Structure >10um (Amph)	4
Protocol Asbestos Structures (Chrys)	9
Protocol Asbestos Structures (Amph)	6

Grid Openings	107
Mass - ug	152
Analytical sensitivity	

Grid ID	Grid Opening	Structure Type	Structure Number Primary	Structure Number Total	Dimensions - mm Width	Dimensions - mm Length	Dimensions (µm) Width	Dimensions (µm) Length	Level of ID	Mineral Type	Image Number	Structure Comments
1A	C31	MD11	1		110	145	11.96	15.76				
		MF		1	3	110	0.33	11.96		Amosite		
1A	C34	None Detected										
1A	E31	None Detected										
1A	E34	None Detected										
1A	F31	None Detected										
1A	F34	None Detected										
1A	G33	None Detected										
1A	G36	None Detected										
1A	H33	F			8	100	0.87	10.87				Non Asbestos
1A	H36	None Detected										
1A	K33	None Detected										
1A	C41	None Detected										
1A	C44	None Detected										
1A	E41	None Detected										
1A	E44	None Detected										
1A	F43	None Detected										
1A	F46	None Detected										
1A	G43	MD11	2		62	115	6.74	12.50				
		MF		2	2	62	0.22	6.74		Amosite		
		F			14.5	120	1.58	13.04				Non Asbestos
		MD11	3		50	140	5.43	15.22				
		MF		3	1	100	0.11	10.87		Amosite		
1A	E51	None Detected										
1A	F56	None Detected										
1B	C31	None Detected										
1B	C34	None Detected										
1B	E31	None Detected										
1B	E34	None Detected										
1B	F31	MD21	4		90	160	9.78	17.39				
		MF		4	2.5	80	0.27	8.70		Amosite		
1B	F34	None Detected										
1B	G31	None Detected										
1B	G34	None Detected										
1B	C41	None Detected										
1B	C44	None Detected										
1B	E41	None Detected										
1B	E44	None Detected										
1B	F41	None Detected										
1B	G43	None Detected										
1B	G46	None Detected										
1B	F51	None Detected										
1B	F54	F			0.5	60	0.05	6.52				Non Asbestos

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Report Number:	
Sample number:	

Analyzed by:	
Date of Analysis:	

Grid ID	Grid Opening	Structure Type	Structure Number Primary	Structure Number Total			Dimensions (µm) Width	Dimensions (µm) Length	Level of ID	Mineral Type	Image Number	Structure Comments
1B	G51	None Detected										
1B	H53	None Detected										
1B	H56	None Detected										
1C	C23	None Detected										
1C	C26	None Detected										
1C	E34	None Detected										
1C	F31	None Detected										
1C	F34	F			8	70	0.87	7.61				Non Asbestos
1C	G31	None Detected										
1C	G34	None Detected										
1C	H31	F	5	5	3.5	122	0.38	13.26		Amosite		Double
		F	6	6	2.5	112	0.27	12.17	CD	Chrysotile		
		F			15	70	1.63	7.61				Non Asbestos
1C	C33	F	7	7	1.5	108	0.16	11.74	CD	Chrysotile		
1C	C36	F	8	8	1.5	280	0.16	30.43	CD	Chrysotile		
		MD11			30	100	3.26	10.87				
		MF			8	90	0.87	9.78				Non Asbestos
1C	E33	None Detected										
1C	E36	None Detected										
1C	F33	None Detected										
1C	F36	MD11			38	80	4.13	8.70				
		MB			3.8	80	0.41	8.70	CD	Chrysotile		
1C	G33	None Detected										
1C	G36	None Detected										
1C	F41	None Detected										
1C	F44	None Detected										
1C	G41	None Detected										
1C	G44	None Detected										
1C	E51	None Detected										
1C	E54	None Detected										
1C	F51	None Detected										
1D	C23	None Detected										
1D	C26	None Detected										
1D	E34	None Detected										
1D	F31	None Detected										
1D	F34	F			10	50	1.09	5.43				Non Asbestos
1D	G31	None Detected										
1D	G34	None Detected										
1D	H33	None Detected										
1D	H36	MD11	9		40	150	4.35	16.30				
		MF		9	0.5	60	0.05	6.52	CD	Chrysotile		
1D	C41	None Detected										
1D	C44	F	10	10	0.5	60	0.05	6.52	CD	Chrysotile		
1D	E41	F	11	11	2.5	95	0.27	10.33	CD	Chrysotile		
1D	E44	None Detected										
1D	F41	None Detected										
1D	F44	None Detected										
1D	C51	None Detected										
1D	C54	None Detected										
1D	E51	None Detected										
1D	E54	None Detected										
1D	E36	None Detected										
1D	F53	None Detected										
1D	F56	None Detected										
1D	G53	None Detected										

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Report Number:	
Sample number:	

Analyzed by:	
Date of Analysis:	

Grid ID	Grid Opening	Structure Type	Structure Number				Dimensions (µm)		Level of ID	Mineral Type	Image Number	Structure Comments
			Primary	Total			Width	Length				
1E	F31	MD21	12		40	360	4.35	39.13				
		MB		12	2.5	360	0.27	39.13	CD	Chrysotile		
		MD11	13		45	105	4.89	11.41				
		MF		13	1.5	105	0.16	11.41		Amosite		Double
1E	F34	None Detected										
1E	E31	None Detected										
1E	F34	None Detected										
1E	G31	None Detected										
1E	G34	MD11	14		55	138	5.98	15.00				
		MB		14	2	138	0.22	15.00	CD	Chrysotile		
1E	H31	None Detected										
1E	H34	MD11			90	190	9.78	20.65				
		MF			4.5	190	0.49	20.65		Amosite		
		MD11			40	140	4.35	15.22				
		MF			1	110	0.11	11.96				Non Asbestos
1E	E33	None Detected										
1E	E36	None Detected										
1E	F33	MD11	15		30	70	3.26	7.61				
		MF		15	1	70	0.11	7.61	CD	Chrysotile		
1E	F36	None Detected										
1E	G33	None Detected										
1E	G36	None Detected										
1E	H33	None Detected										
1E	E41	None Detected										
1E	E44	None Detected										
1E	F43	None Detected										
1E	F46	None Detected										
1E	G43	None Detected										
1E	G46	None Detected										