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PLAINTIFF'S EXHIBIT
CAM-351

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TECHNICAL REPORT

Project No. **A09560**
Date: **25-Feb-10**

To: **J. Poston**
From: **C. Fleming**
Analyst(s): **C. Fleming, J. Sulik, A. Zamurs**
Copy: **A. Russell, S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES November 2009**

Request: Three samples, representing products of Guangxi ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	November 2009	*A09560-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	November 2009	*A09560-3*	0.2441	0.2	10	47.0	0.020	0.13	0.013	0.09

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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TECHNICAL REPORT

Project No. **A10016**
Date: **25-Feb-10**

To: **J. Poston**
From: **Andrew Zamurs**
Analyst(s): **C. Fleming, J. Sulik, A. Zamurs**
Copy: **A. Russell, S. Sharma**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES DECEMBER 2009**

Request: Three samples, representing products of Guangxi ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	December 2009	*A10016-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	December 2009	*A10016-3*	0.2503	0.2	10	48.2	0.019	0.13	0.013	0.09

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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ORE ANALYSIS REPORT

Date: February 4, 2010

To: [redacted]

Reported by: Julie Pier

Copy: J. Poston, E. Ronald, S. Wulf

Results:

The following composite ore sample, representing the MV Blunenau Gaungxi #2 shipment to Houston was analyzed by X-ray diffraction (XRD) for the presence of amphibole minerals and quartz. The sample was also analyzed by transmission electron microscopy (TEM) for the presence of asbestiform minerals. The requested tests are in partial fulfillment of specifications required by [redacted].

Analytical Lab Code:	**Guangxi #2 Composite MV Blunenau** A10044-1
[redacted] **Specification:**	
Initial Ore Results – After Grinding (1B)	
3.14 Percent Fibrous Amphibole (CTFA J4-1)	
Part A (X-ray Diffraction):	**None detected**
Part B (Optical Microscopy):	**Not required**
3.15 Percent Free Crystalline Silica Quartz (CTFA Method J6-1) (X-Ray Diffraction)	**None detected**
TEM Results – After Grinding (1C)	
3.16 Asbestos by Transmission Electron Microscope (TM 7024)	**None detected**

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TECHNICAL REPORT

Project No. **A10077**
Date: **27-Apr-10**

To: **J. Poston**
From: **C. Slowik**

Analyst(s): **C. Slowik, J. Sulik, A. Zamurs**
Copy: **A. Russell, S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES JANUARY 2010**

Request: Three samples, representing products of Guangxi ore milled at Houston, were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	January 2010	*A10077-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	January 2010	*A10077-3*	0.2617	0.2	10	50.4	0.019	0.12	0.012	0.08

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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TECHNICAL REPORT

Project No. **A10123**
Date: **30-Apr-10**

To: **J. Poston**
From: **J. Sulik**
Analyst(s): **C. Fleming, J. Sulik, A. Zamurs**
Copy: **A. Russell, S. Sharma**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES FEBRUARY 2010**

Request: Three samples, representing products of Guangxi ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	February 2010	*A10123-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	February 2010	*A10123-3*	0.2536	0.2	10	48.8	0.019	0.13	0.013	0.08

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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TECHNICAL REPORT

Project No. **A10178**
Date: **13-May-09**

To: **J. Poston**
From: **Andrew Zamurs**
Analyst(s): **C. Fleming, A. Zamurs**
Copy: **A. Russell, S. Sharma**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES MARCH 2010**

Request: Three samples, representing products of ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	March 2010	*A10178-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	March 2010	*A10178-3*	0.2367	0.2	10	45.6	0.021	0.14	0.014	0.09

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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ORE ANALYSIS REPORT

Date: May 14, 2010

To: [redacted]

Reported by: Andrew Zamurs

Copy: J. Poston, E. Ronald, S. Wulf

Results:

The following composite ore sample, representing the MV Beilun Dolphin Gaungxi #2 shipment to Houston was analyzed by X-ray diffraction (XRD) for the presence of amphibole minerals and quartz. The sample was also analyzed by transmission electron microscopy (TEM) for the presence of asbestiform minerals. The requested tests are in partial fulfillment of specifications required by [redacted].

Analytical Lab Code:	**Guangxi #2 Composite MV Beilun Dolphin** A10201-1
[redacted] **Specification:**	
Initial Ore Results – After Grinding (1B)	
3.14 Percent Fibrous Amphibole (CTFA J4-1)	
Part A (X-ray Diffraction):	**None detected**
Part B (Optical Microscopy):	**Not required**
3.15 Percent Free Crystalline Silica Quartz (CTFA Method J6-1) (X-Ray Diffraction)	**0.1% (Passes Test)**
TEM Results – After Grinding (1C)	
3.16 Asbestos by Transmission Electron Microscope (TM 7024)	**None detected**

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TECHNICAL REPORT

Project No. **A10227**
Date: **25-Aug-10**

To: **J. Poston**
From: **Andrew Zamurs**
Analyst(s): **K. Dorsey, J. Sulik, A. Zamurs**
Copy: **A. Russell, S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES APRIL 2010**

Request: Three samples, representing products milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	April 2010	*A10227-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	April 2010	*A10227-3*	0.2505	0.4	10	96.5	0.010	0.06	0.006	0.04

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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TECHNICAL REPORT

Project No. **A10268**
Date: **13-Oct-10**

To: **J. Poston**
From: **J. Sulik**
Analyst(s): **K. Dorsey, J. Sulik, A. Zamurs**
Copy: **S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES May-10**

Request: Three samples, representing products of Chinese ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	May 2010	*A10268-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	May 2010	*A10268-3*	0.2443	0.4	10	94.1	0.010	0.07	0.007	0.04

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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TECHNICAL REPORT

Project No. **A10341**
Date: **13-Oct-10**

To: **J. Poston**
From: **J. Sulik**
Analyst(s): **K. Dorsey, J. Sulik, A. Zamurs**
Copy: **S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES Jun-10**

Request: Three samples, representing products of Chinese ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	June 2010	*A10341-3*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	June 2010	*A10341-3*	0.2790	0.4	10	107.4	0.009	0.06	0.006	0.04

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

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TECHNICAL REPORT

Project No. **A10391**
Date: **27-Oct-10**

To: **John Poston**
From: **Jennie Sulik**
Analyst(s): **C. Slowik, J. Sulik, A. Zamurs**
Copy: **S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES Jul-10**

Request:

Two samples, representing products of Yellowstone and Chinese #2 ore milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	July 2010	*A10391-2*	0	0	**BDL**	0	0	**BDL**

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	July 2010	*A10391-2*	0.2530	0.4	10	97.4	0.010	0.06	0.006	0.04

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.

Rio Tinto Minerals • 8051 E. Maplewood Ave • Greenwood Village, CO 80111 • (303) 713-5000 • Fax: (303) 713-5788

TECHNICAL REPORT

Project No. **A10430**
Date: **2-Dec-10**

To: **John Poston**
From: **Andrew Zamurs**
Analyst(s): **C. Slowik, A. Zamurs**
Copy: **S. Sharma, J. Pier**

Title: **TEM ASBESTOS ANALYSIS OF HOUSTON PRODUCT SAMPLES AUGUST 2010**

Request: Three samples, representing products milled at Houston were submitted to the Technical Center for asbestos analysis by transmission electron microscopy (TEM). This analysis is in partial fulfillment of RTM's Fiber Management Framework Program.

Results: The attached TEM results were obtained using the current ASTM draft method "Standard test method for indirect analysis of talc by transmission electron microscopy for asbestos mass concentration." This method is currently being developed by ASTM committee D22.07 (Sampling and Analysis of Asbestos) and is a modification of ASTM method D 5756 "Standard test method for microvacuum sampling and indirect analysis of dust by transmission electron microscopy for asbestos mass surface loading." The modification is to adapt existing methodology to the specific analysis of talc products and/or ore samples.

A program of laboratory "blank" analysis is in place and has been used to determine the detection limit for this analysis according to ASTM method D 6620, "Standard practice for asbestos detection limit based on counts."

Table 1. Result Summary

Sample Description		Sample No.	AMPHIBOLE			CHRYSOTILE		
			Number of Structures		Fiber Concentration	Number of Structures		Asbestos Concentration
			≥5 µm	<5 µm	ppm	≥5 µm	<5 µm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	August 2010	*A10430-2*	0	0	**BDL**	0	0	**BDL**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

BDL = Below detection limit, as defined by ASTM D 6620

Table 2. Analysis parameters

Sample Description		Sample No.	Starting Weight	Aliquot Filtered	Grid Spaces Analyzed	Total Sample Analyzed	AMPHIBOLE		CHRYSOTILE	
							Analytical Sensitivity*	Detection Limit	Analytical Sensitivity*	Detection Limit
			g	mL	#	ng	ppm	ppm	ppm	ppm
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grade 25 USP Composite	August 2010	*A10430-2*	0.2228	0.4	10	85.8	0.011	0.07	0.007	0.05
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

*Analytical Sensitivity is defined by ASTM D 5756 as the detection of one structure with minimum dimensions.