

MEMORANDUM

To: Shannon Harbour (NDEP)

From: Ranajit Sahu (BEC)

cc: Brian Rakvica (NDEP)
Jim Najima (NDEP)
Teri Copeland
Paul Black (Neptune and Co.)

Date: January 9, 2008

Subject: Asbestos Data Review for 2007 Tronox Parcels A/B Investigation, BMI Industrial Complex, Clark County, Nevada

Results of the initial Phase 2 soil investigation performed for the Tronox Parcels “A” and “B” (portions of APN Nos. 178-01-401-001, 178-12-101-002, 178-12-201-006, and 178-12-601-005) indicated the presence of both chrysotile and amphibole long (protocol) asbestos fibers. The asbestos analytical results from the initial round of sampling at the Site are presented below.

Sample ID	Long Protocol Asbestos Fibers	Mean Concentration	95% UCL Concentration	Analytical Sensitivity	Excavated?
Initial Sampling Event (Pre-Remediation)					
<u>Amphibole</u>					
TSB-AJ-01	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	
TSB-AJ-01-FD	0	< 2.961 E+6	< 1.093 E+7	2.961 E+6	
TSB-AJ-02	0	< 2.901 E+6	< 1.071 E+7	2.901 E+6	
TSB-AJ-03	1	2.957 E+6	1.647 E+7	2.901 E+6	Yes
TSB-AR-01	0	< 2.991 E+6	< 1.104 E+7	2.991 E+6	
TSB-AR-02	0	< 2.976 E+6	< 1.098 E+7	2.976 E+6	
TSB-AR-03	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	
TSB-AR-04	0	< 2.985 E+6	< 1.101 E+7	2.985 E+6	
TSB-AR-05	0	< 2.976 E+6	< 1.098 E+7	2.976 E+6	
TSB-AR-06	1	2.992 E+6	1.667 E+7	2.992 E+6	Yes
TSB-AR-07	0	< 2.976 E+6	< 1.098 E+7	2.976 E+6	
TSB-AR-08	4	1.188 E+7	1.655 E+7	2.976 E+6	Yes
TSB-AR-09	1	2.991 E+6	1.666 E+7	2.991 E+6	Yes
TSB-AR-10	1	2.975 E+6	1.657 E+7	2.991 E+6	Yes
TSB-AR-11	0	< 2.975 E+6	< 1.098 E+7	2.975 E+6	Yes
TSB-AR-12	1	2.998 E+6	1.670 E+7	2.998 E+6	Yes
TSB-AR-13	1	2.986 E+6	1.663 E+7	2.998 E+6	Yes
TSB-AR-14	2	5.920 E+6	2.137 E+7	2.986 E+6	Yes
TSB-BJ-01	0	< 3.205 E+6	< 1.183 E+7	2.960 E+6	Yes
TSB-BJ-02	0	< 2.959 E+6	< 1.092 E+7	3.205 E+6	Yes

Sample ID	Long Protocol Asbestos Fibers	Mean Concentration	95% UCL Concentration	Analytical Sensitivity	Excavated?
Initial Sampling Event (Pre-Remediation)					
TSB-BJ-02 FD	1	2.988 E+6	1.664 E+7	2.959 E+6	Yes
TSB-BJ-03	0	< 2.963 E+6	< 1.093 E+7	2.988 E+6	
TSB-BJ-04	0	< 2.986 E+6	< 1.102 E+7	2.963 E+6	
TSB-BJ-05	0	< 2.745 E+6	< 1.013 E+7	2.986 E+6	
TSB-BJ-06	0	< 2.978 E+6	< 1.099 E+7	2.745 E+6	
TSB-BR-01	0	< 2.762 E+6	< 1.019 E+7	2.978 E+6	
TSB-BR-02	0	< 2.991 E+6	< 1.104 E+7	2.762 E+6	
TSB-BR-03	0	< 2.988 E+6	< 1.103 E+7	2.991 E+6	
TSB-BR-04	0	< 2.958 E+6	< 1.092 E+7	2.988 E+6	
TSB-BR-05	1	2.991 E+6	1.666 E+7	2.958 E+6	Yes
TSB-BR-06	0	< 2.987 E+6	< 1.102 E+7	2.958 E+6	
<u>Chrysotile</u>					
TSB-AJ-01	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	
TSB-AJ-01-FD	0	< 2.961 E+6	< 1.093 E+7	2.961 E+6	
TSB-AJ-02	0	< 2.901 E+6	< 1.071 E+7	2.901 E+6	
TSB-AJ-03	2	5.913 E+6	2.135 E+7	2.901 E+6	Yes
TSB-AR-01	0	< 2.991 E+6	< 1.104 E+7	2.991 E+6	
TSB-AR-02	1	2.976 E+6	1.658 E+7	2.976 E+6	
TSB-AR-03	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	
TSB-AR-04	0	< 2.985 E+6	< 1.101 E+7	2.985 E+6	
TSB-AR-05	3	8.929 E+6	2.607 E+7	2.976 E+6	
TSB-AR-06	0	< 2.992 E+6	< 1.104 E+7	2.992 E+6	Yes
TSB-AR-07	0	< 2.976 E+6	< 1.098 E+7	2.976 E+6	
TSB-AR-08	6	1.783 E+7	2.145 E+7	2.976 E+6	Yes
TSB-AR-09	0	< 2.991 E+6	< 1.104 E+7	2.991 E+6	Yes
TSB-AR-10	0	< 2.975 E+6	< 1.098 E+7	2.975 E+6	Yes
TSB-AR-11	8	2.380 E+7	4.688 E+7	2.975 E+6	Yes
TSB-AR-12	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	Yes
TSB-AR-13	1	2.986 E+6	1.663 E+7	2.998 E+6	Yes
TSB-AR-14	2	5.920 E+6	2.137 E+7	2.960 E+6	Yes
TSB-BJ-01	19	6.090 E+7	9.512 E+7	2.960 E+6	Yes
TSB-BJ-02	5	1.480 E+7	3.447 E+7	2.959 E+6	Yes
TSB-BJ-02 FD	9	2.689 E+7	5.104 E+7	2.959 E+6	Yes
TSB-BJ-03	0	< 2.963 E+6	< 1.093 E+7	2.988 E+6	
TSB-BJ-04	0	< 2.986 E+6	< 1.102 E+7	2.963 E+6	
TSB-BJ-05	3	8.236 E+6	2.405 E+7	2.745 E+6	
TSB-BJ-06	0	< 2.978 E+6	< 1.099 E+7	2.745 E+6	
TSB-BR-01	0	< 2.762 E+6	< 1.019 E+7	2.978 E+6	
TSB-BR-02	0	< 2.991 E+6	< 1.104 E+7	2.762 E+6	
TSB-BR-03	0	< 2.988 E+6	< 1.103 E+7	2.991 E+6	
TSB-BR-04	2	5.917 E+6	2.136 E+7	2.988 E+6	
TSB-BR-05	3	8.974 E+6	2.621 E+7	2.958 E+6	Yes
TSB-BR-06	0	< 2.987 E+6	< 1.102 E+7	2.958 E+6	

Following this initial round of sampling, surface soil (4 to 6 inches) from several areas of the property, around sample locations TSB-AJ-03, TSB-AR-06, TSB-AR-08, TSB-AR-09, TSB-AR-10, TSB-AR-12, TSB-AR-13, TSB-AR-14, TSB-BJ-02, TSB-BR-05 was scraped and removed (see Figure 1). Post-scrape samples were collected and analyzed for asbestos from 10 locations within these areas. Based on this, the original surface sample data for asbestos from these locations were removed from further evaluation and the re-sampled asbestos results were used instead. The asbestos analytical results from this second round of sampling at the Site are presented below.

Sample ID	Long Protocol Asbestos Fibers	Mean Concentration	95% UCL Concentration	Analytical Sensitivity	Excavated?
First Post-Scrape Sampling Event					
Amphibole					
TSB-AJ-03-PS	0	< 1.797 E+6	< 6.632 E+6	1.797 E+6	
TSB-AR-06-PS	0	< 2.979 E+6	< 1.099 E+7	2.979 E+6	
TSB-AR-08-PS	0	< 2.493 E+6	< 1.106 E+7	2.493 E+6	
TSB-AR-09-PS	0	< 2.980 E+6	< 1.100 E+7	2.849 E+6	
TSB-AR-10-PS	0	< 2.849 E+6	< 1.051 E+7	2.849 E+6	
TSB-AR-12-PS	0	< 2.991 E+6	< 1.104 E+7	2.849 E+6	
TSB-AR-13-PS	0	< 2.993 E+6	< 1.105 E+7	2.993 E+6	
TSB-AR-14-PS	0	< 2.921 E+6	< 1.078 E+7	2.921 E+6	
TSB-BJ-02-PS	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	
TSB-BR-05-PS	1	2.998 E+6	< 1.670 E+7	2.998 E+6	Yes
Chrysotile					
TSB-AJ-03-PS	0	< 1.797 E+6	< 6.632 E+6	1.797 E+6	
TSB-AR-06-PS	0	< 2.979 E+6	< 1.099 E+7	2.979 E+6	
TSB-AR-08-PS	0	< 2.493 E+6	< 1.106 E+7	2.493 E+6	
TSB-AR-09-PS	0	< 2.980 E+6	< 1.100 E+7	2.849 E+6	
TSB-AR-10-PS	0	< 2.849 E+6	< 1.051 E+7	2.849 E+6	
TSB-AR-12-PS	0	< 2.991 E+6	< 1.104 E+7	2.849 E+6	
TSB-AR-13-PS	0	< 2.993 E+6	< 1.105 E+7	2.993 E+6	
TSB-AR-14-PS	0	< 2.921 E+6	< 1.078 E+7	2.921 E+6	
TSB-BJ-02-PS	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	
TSB-BR-05-PS	0	< 2.998 E+6	< 1.106 E+7	2.998 E+6	Yes

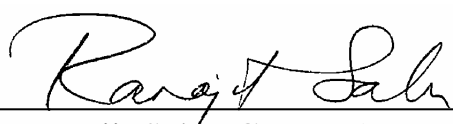
A single long amphibole asbestos fiber was detected in sample TSB-BR-05-PS during this second round of sampling. Therefore, further scraping around this location was performed. In addition, sample locations TSB-AR-11 and TSB-BJ-01 contained 8 and 19 long chrysotile asbestos fibers, respectively. Therefore, further scraping around these locations was also performed. Final samples were collected from locations TSB-BR-05, TSB-AR-11, and TSB-BJ-01 following the second and third scrapings. Figure 1 shows all areas of surface soil

that were scraped and removed. The asbestos analytical results from this final round of sampling at the Site are presented below.

Sample ID	Long Protocol Asbestos Fibers	Mean Concentration	95% UCL Concentration	Analytical Sensitivity	Excavated?
Second and Third Post-Scrape Sampling Event					
Amphibole					
TSB-BR-05-PS2	0	< 2.993 E+6	< 1.104 E+7	2.993 E+6	
TSB-AR-11-PS	0	< 2.991 E+6	< 1.104 E+7	2.991 E+6	
TSB-BJ-01-PS	0	< 2.243 E+6	< 8.277 E+6	2.243 E+6	
Chrysotile					
TSB-BR-05-PS2	0	< 2.993 E+6	< 1.104 E+7	2.993 E+6	
TSB-AR-11-PS	0	< 2.991 E+6	< 1.104 E+7	2.991 E+6	
TSB-BJ-01-PS	0	< 2.243 E+6	< 8.277 E+6	2.243 E+6	

All the asbestos laboratory reports, both pre- and post-scrape samples, are included in Attachment A. Asbestos risk calculations based on the final post-scrape asbestos analytical results are presented in Table 1. The results of the asbestos risk calculations indicate that exposures to asbestos in soil at the property should not result in adverse health effects to all future on-site receptors. Based on the results of these final sampling events, all asbestos impacted soil at the Site has been remediated.

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.


 _____ January 9, 2007
 Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2009) Date
 BRC Project Manager

FIGURES



- Asbestos Sample Location
- Remediated Areas*

February 2007 Aerial from AirPhotoUSA.

BEC / Tronox Parcels A/B Data Review
 BMI Common Areas, Henderson, Nevada

FIGURE 1

**ASBESTOS
 REMEDIATION AREAS**



*These areas have had a minimum of 4" of soil removed for remediation purposes.

Prepared by: MKJ Date: 01/07/08

JOB No. 0069073
 FILE: GIS/BEC/TRONOX/FIGURE_1.MXD

TABLES

TABLE 1
ASBESTOS SCREENING-LEVEL RISK ASSESSMENT RESULTS
TRONOX PARCELS A/B INVESTIGATION
CLARK COUNTY, NEVADA
 (Page 1 of 1)

Baseline Risk Estimates (Based on Measured Asbestos Fibers-Post-Scrape)

Scenario	Estimated Airborne Chrysotile Concentrations ⁽¹⁾ (s/cm ³)	Estimated Airborne Amphibole Concentrations ⁽¹⁾ (s/cm ³)	Adjusted Chrysotile URF ⁽²⁾ (s/cm ³) ⁻¹	Adjusted Amphibole URF ⁽²⁾ (s/cm ³) ⁻¹	Estimated Chrysotile ⁽³⁾ Risk	Estimated Amphibole ⁽³⁾ Risk
LONG FIBERS						
Construction Worker-Best Estimate (No Dust Mit./1 Yr Exp.)	7.9 E-4	0.0 E+0	1.9 E-4	2.1 E-2	1 E-7	0 E+0
Construction Worker-Upper Bound (No Dust Mit./1 Yr Exp.)	1.4 E-3	2.6 E-4	1.9 E-4	2.1 E-2	3 E-7	5 E-6
Construction Worker-Best Estimate (with Dust Mit./0.5 Yr Exp.)	3.4 E-4	0.0 E+0	9.7 E-5	1.1 E-2	3 E-8	0 E+0
Construction Worker-Upper Bound (with Dust Mit./0.5 Yr Exp.)	6.0 E-4	1.1 E-4	9.7 E-5	1.1 E-2	6 E-8	1 E-6
Future Maintenance Worker-Best Estimate	6.3 E-7	0.0 E+0	4.2 E-3	4.6 E-1	3 E-9	0 E+0
Future Maintenance Worker-Upper Bound	1.1 E-6	2.1 E-7	4.2 E-3	4.6 E-1	5 E-9	1 E-7
Current/Future On-Site Trespasser-Best Estimate	6.3 E-7	0.0 E+0	1.1 E-4	1.2 E-2	7 E-11	0 E+0
Current/Future On-Site Trespasser-Upper Bound	1.1 E-6	2.1 E-7	1.1 E-4	1.2 E-2	1 E-10	3 E-9

Notes:

⁽¹⁾ Calculated based on estimated dust estimates and asbestos fiber concentrations.

⁽²⁾ Calculated using equation information from Table 8-2 of 2003 Methodology (Berman and Crump 2003).

⁽³⁾ Estimated airborne concentrations × URF.

Best Estimate - Based on the pooled analytical sensitivity multiplied by the number of asbestos fibers found.

Upper Bound - Based on the 95% UCL of the Poisson distribution.

ATTACHMENT A

EMSL Analytical Inc.
 107 Haddon Avenue
 Westmont, NJ 08108
 Contacts: Stephen Siegel, CIH
 Phone:856-858-4800 Fax:856-858-4960

Report Date 11/13/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/15/2007
 Date Completed 11/13/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0024
 Field Subsample# TSB-AJ-01
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 65
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 9.98
 <3/8" Not Used (g) 368.7
 <3/8" In Tumbler(g) 51.99
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000152

	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
Asbestos Analysis Results		
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Long Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Total Amphibole Protocol Structures	< 2.998E+06	< 1.106E+07
Long Amphibole Protocol Structures	< 2.998E+06	< 1.106E+07
Long Asbestos Protocol Structures	< 2.998E+06	< 1.106E+07
Total Asbestos Protocol Structures	< 2.998E+06	< 1.106E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.998E+06	1.106E+07

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 107 Haddon Avenue
 Westmont, NJ 08108
 Contacts: Stephen Siegel, CIH
 Phone:856-858-4800 Fax:856-858-4960

Report Date 11/14/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/16/2007
 Date Completed 11/13/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0025
 Field Subsample# TSB-AJ-01-FD
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 73
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 32.35
 <3/8" Not Used (g) 355.18
 <3/8" In Tumbler(g) 50.8
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000137

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.961E+06	< 1.093E+07
Long Chrysotile Protocol Structures	< 2.961E+06	< 1.093E+07
Total Amphibole Protocol Structures	< 2.961E+06	< 1.093E+07
Long Amphibole Protocol Structures	< 2.961E+06	< 1.093E+07
Long Asbestos Protocol Structures	< 2.961E+06	< 1.093E+07
Total Asbestos Protocol Structures	< 2.961E+06	< 1.093E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.961E+06	1.093E+07

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 EMSL Order ID 040721449

Date Started 10/17/2007
 Date Completed 11/14/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0026
 Field Subsample# TSB-AJ-02
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 88
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 32.35
 <3/8" Not Used (g) 355.18
 <3/8" In Tumbler(g) 50.8
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000116

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	2	0
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	2	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	5.802E+06	2.095E+07
Long Chrysotile Protocol Structures	< 2.901E+06	< 1.071E+07
Total Amphibole Protocol Structures	< 2.901E+06	< 1.071E+07
Long Amphibole Protocol Structures	< 2.901E+06	< 1.071E+07
Long Asbestos Protocol Structures	< 2.901E+06	< 1.071E+07
Total Asbestos Protocol Structures	5.802E+06	2.095E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.901E+06	1.071E+07

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 EMSL Order ID 040721449

Date Started
 Date Completed
 Analyst

9/29/2007
 11/1/2007
 Baojia Ke

Lab Sample#
 Field Subsample#
 Field Preparation Technique
 Sample Drying
 Sample Splitting
 Other

040721499-0014
 TSB-AJ-03
 N/A
 Yes
 No
 N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 63
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g)
 <3/8" Not Used (g)
 <3/8" In Tumbler(g)

16.86
 387.51
 48.37

Air Flow Rate Through ME opening of Dust Generator (ml/min)
 Air Flow Rate Through IST opening of Dust Generator (ml/min)
 Estimated Total Air Flow Rate Through Elutriator (ml/min)

1430
 72
 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g)

0.000159

Asbestos Analysis Results

No. of Chrysotile Asbestos Structures
 No. of Amphibole Asbestos Structures
 Amphibole Mineral Type(s)

	<u>Total</u>	<u>Protocol Structures</u>	<u>Long(>10um)</u>
No. of Chrysotile Asbestos Structures	3		2
No. of Amphibole Asbestos Structures	2		1
Amphibole Mineral Type(s)			
Total Asbestos Structures	5		3

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	8.870E+06	2.590E+07
Long Chrysotile Protocol Structures	5.913E+06	2.135E+07
Total Amphibole Protocol Structures	5.913E+06	2.135E+07
Long Amphibole Protocol Structures	2.957E+06	1.647E+07
Long Asbestos Protocol Structures	8.870E+06	3.444E+07
Total Asbestos Protocol Structures	1.478E+07	2.590E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.957E+06	1.091E+07

EMSL Analytical Inc.
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 Phone:856-858-4800 Fax:856-858-4960

Report Date 12/1/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/29/2007
 Date Completed 12/1/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0003
 Field Subsample# TSB-AJ-03-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 77
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 84.23
 <3/8" Not Used (g) 1379.84
 <3/8" In Tumbler(g) 49.6
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000214

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 1.797E+06	< 6.632E+06
Long Chrysotile Protocol Structures	< 1.797E+06	< 6.632E+06
Total Amphibole Protocol Structures	< 1.797E+06	< 6.632E+06
Long Amphibole Protocol Structures	< 1.797E+06	< 6.632E+06
Long Asbestos Protocol Structures	< 1.797E+06	< 6.632E+06
Total Asbestos Protocol Structures	< 1.797E+06	< 6.632E+06
Estimated Analytical Sensitivity: (s/gPM10)	1.797E+06	6.632E+06

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Report Date 11/16/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/25/2007
 Date Completed 11/15/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0030
 Field Subsample# TSB-AR-01
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 60
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 17.9
 <3/8" Not Used (g) 361.31
 <3/8" In Tumbler(g) 43.76
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000165

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	1	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	1	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.991E+06	1.666E+07
Long Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Total Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Total Asbestos Protocol Structures	2.991E+06	1.666E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.991E+06	1.104E+07

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Report Date 11/15/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/19/2007
 Date Completed 11/14/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0028
 Field Subsample# TSB-AR-02
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 107
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 35.41
 <3/8" Not Used (g) 360.7
 <3/8" In Tumbler(g) 46.79
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000093

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	1	1
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	1	1

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.976E+06	1.658E+07
Long Chrysotile Protocol Structures	2.976E+06	1.658E+07
Total Amphibole Protocol Structures	< 2.976E+06	< 1.098E+07
Long Amphibole Protocol Structures	< 2.976E+06	< 1.098E+07
Long Asbestos Protocol Structures	2.976E+06	1.658E+07
Total Asbestos Protocol Structures	2.976E+06	1.658E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.976E+06	1.098E+07

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Report Date 11/15/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/18/2007
 Date Completed 11/14/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0027
 Field Subsample# TSB-AR-03
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 76
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 24.76
 <3/8" Not Used (g) 384.44
 <3/8" In Tumbler(g) 54.99
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000130

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Long Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Total Amphibole Protocol Structures	< 2.998E+06	< 1.106E+07
Long Amphibole Protocol Structures	< 2.998E+06	< 1.106E+07
Long Asbestos Protocol Structures	< 2.998E+06	< 1.106E+07
Total Asbestos Protocol Structures	< 2.998E+06	< 1.106E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.998E+06	1.106E+07

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Report Date 11/16/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/22/2007
 Date Completed 11/15/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0029
 Field Subsample# TSB-AR-04
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 82
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 77.98
 <3/8" Not Used (g) 306.24
 <3/8" In Tumbler(g) 43.65
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000121

Asbestos Analysis Results	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.985E+06	< 1.101E+07
Long Chrysotile Protocol Structures	< 2.985E+06	< 1.101E+07
Total Amphibole Protocol Structures	< 2.985E+06	< 1.101E+07
Long Amphibole Protocol Structures	< 2.985E+06	< 1.101E+07
Long Asbestos Protocol Structures	< 2.985E+06	< 1.101E+07
Total Asbestos Protocol Structures	< 2.985E+06	< 1.101E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.985E+06	1.101E+07

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Report Date 11/16/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/25/2007
 Date Completed 11/16/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0031
 Field Subsample# TSB-AR-05
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 50
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 17.9
 <3/8" Not Used (g) 361.31
 <3/8" In Tumbler(g) 43.76
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000199

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	4	3
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	4	3

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	1.191E+07	3.048E+07
Long Chrysotile Protocol Structures	8.929E+06	2.607E+07
Total Amphibole Protocol Structures	< 2.976E+06	< 1.098E+07
Long Amphibole Protocol Structures	< 2.976E+06	< 1.098E+07
Long Asbestos Protocol Structures	8.929E+06	2.607E+07
Total Asbestos Protocol Structures	1.191E+07	3.048E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.976E+06	1.098E+07

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Report Date 11/13/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/11/2007
 Date Completed 11/12/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0022
 Field Subsample# TSB-AR-06
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 101
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g) 17.12
 <3/8" Not Used (g) 374.04
 <3/8" In Tumbler(g) 49.04
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000098

Asbestos Analysis Results

	<u>Total</u>	<u>Protocol Structures</u>	<u>Long(>10um)</u>
No. of Chrysotile Asbestos Structures	0		0
No. of Amphibole Asbestos Structures	2		1
Amphibole Mineral Type(s)			
Total Asbestos Structures	2		1

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.992E+06	< 1.104E+07
Long Chrysotile Protocol Structures	< 2.992E+06	< 1.104E+07
Total Amphibole Protocol Structures	5.984E+06	2.160E+07
Long Amphibole Protocol Structures	2.992E+06	1.667E+07
Long Asbestos Protocol Structures	2.992E+06	1.667E+07
Total Asbestos Protocol Structures	5.984E+06	2.160E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.992E+06	1.104E+07

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Report Date 12/5/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 12/3/2007
 Date Completed 12/4/2007
 Analyst Debbie Little

Lab Sample# 040729231-0010
 Field Subsample# TSB-AR-06-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.012
 Number of Grid Openings Scanned 89
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 103.16
 <3/8" Not Used (g) 1109.47
 <3/8" In Tumbler(g) 60.2
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000121

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.979E+06	< 1.099E+07
Long Chrysotile Protocol Structures	< 2.979E+06	< 1.099E+07
Total Amphibole Protocol Structures	< 2.979E+06	< 1.099E+07
Long Amphibole Protocol Structures	< 2.979E+06	< 1.099E+07
Long Asbestos Protocol Structures	< 2.979E+06	< 1.099E+07
Total Asbestos Protocol Structures	< 2.979E+06	< 1.099E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.979E+06	1.099E+07

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Report Date 11/13/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/12/2007
 Date Completed 11/12/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0023
 Field Subsample# TSB-AR-07
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 93
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 35.14
 <3/8" Not Used (g) 364.26
 <3/8" In Tumbler(g) 59.9
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000107

Asbestos Analysis Results	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
No.of Chrysotile Asbestos Structures	1	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	1	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	2.976E+06	1.658E+07
Long Chrysotile Protocol Structures	< 2.976E+06	< 1.098E+07
Total Amphibole Protocol Structures	< 2.976E+06	< 1.098E+07
Long Amphibole Protocol Structures	< 2.976E+06	< 1.098E+07
Long Asbestos Protocol Structures	< 2.976E+06	< 1.098E+07
Total Asbestos Protocol Structures	2.976E+06	1.658E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.976E+06	1.098E+07

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Report Date 11/7/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/27/2007
 Date Completed 11/6/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0015
 Field Subsample# TSB-AR-08
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis
 Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 89
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights
 >3/8" (g) 22.83
 <3/8" Not Used (g) 387.24
 <3/8" In Tumbler(g) 43.46
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator
 Mass of Respirable Dust on Filter(g) 0.000112

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	11	6
No. of Amphibole Asbestos Structures	4	4
Amphibole Mineral Type(s)	Amosite/Actinolite	
Total Asbestos Structures	15	10

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	3.268E+07	2.603E+07
Long Chrysotile Protocol Structures	1.783E+07	2.145E+07
Total Amphibole Protocol Structures	1.188E+07	2.145E+07
Long Amphibole Protocol Structures	1.188E+07	1.655E+07
Long Asbestos Protocol Structures	2.971E+07	3.461E+07
Total Asbestos Protocol Structures	4.457E+07	2.603E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.971E+06	1.096E+07

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Report Date 12/1/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/30/2007
 Date Completed 12/1/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0004
 Field Subsample# TSB-AR-08-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 99
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 160.59
 <3/8" Not Used (g) 1257.68
 <3/8" In Tumbler(g) 55.2
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000120

	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
Asbestos Analysis Results		
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.493E+06	< 9.199E+06
Long Chrysotile Protocol Structures	< 2.493E+06	< 9.199E+06
Total Amphibole Protocol Structures	< 2.493E+06	< 9.199E+06
Long Amphibole Protocol Structures	< 2.493E+06	< 9.199E+06
Long Asbestos Protocol Structures	< 2.493E+06	< 9.199E+06
Total Asbestos Protocol Structures	< 2.493E+06	< 9.199E+06
Estimated Analytical Sensitivity: (s/gPM10)	2.493E+06	9.199E+06

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Report Date 11/12/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/10/2007
 Date Completed 11/11/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0021
 Field Subsample# TSB-AR-09
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 75
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 12.55
 <3/8" Not Used (g) 358.15
 <3/8" In Tumbler(g) 50.48
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000132

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	1	1
Amphibole Mineral Type(s)	Actinolite	
Total Asbestos Structures	1	1

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Long Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Total Amphibole Protocol Structures	2.991E+06	1.666E+07
Long Amphibole Protocol Structures	2.991E+06	1.666E+07
Long Asbestos Protocol Structures	2.991E+06	1.666E+07
Total Asbestos Protocol Structures	2.991E+06	1.666E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.991E+06	1.104E+07

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Report Date 12/5/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 12/2/2007
 Date Completed 12/3/2007
 Analyst Debbie Little

Lab Sample# 040729231-0009
 Field Subsample# TSB-AR-09-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.012
 Number of Grid Openings Scanned 97
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 115.66
 <3/8" Not Used (g) 1120.46
 <3/8" In Tumbler(g) 57.48
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000111

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.980E+06	< 1.100E+07
Long Chrysotile Protocol Structures	< 2.980E+06	< 1.100E+07
Total Amphibole Protocol Structures	< 2.980E+06	< 1.100E+07
Long Amphibole Protocol Structures	< 2.980E+06	< 1.100E+07
Long Asbestos Protocol Structures	< 2.980E+06	< 1.100E+07
Total Asbestos Protocol Structures	< 2.980E+06	< 1.100E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.980E+06	1.100E+07

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Report Date 11/9/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/5/2007
 Date Completed 11/8/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0019
 Field Subsample# TSB-AR-10
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 76
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 35.39
 <3/8" Not Used (g) 360
 <3/8" In Tumbler(g) 51.71
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000131

Asbestos Analysis Results

	<u>Total</u>	<u>Protocol Structures</u>
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	1	1
Amphibole Mineral Type(s)	Amosite	
Total Asbestos Structures	1	1

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.975E+06	< 1.098E+07
Long Chrysotile Protocol Structures	< 2.975E+06	< 1.098E+07
Total Amphibole Protocol Structures	2.975E+06	1.657E+07
Long Amphibole Protocol Structures	2.975E+06	1.657E+07
Long Asbestos Protocol Structures	2.975E+06	1.657E+07
Total Asbestos Protocol Structures	2.975E+06	1.657E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.975E+06	1.098E+07

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Report Date 12/5/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/30/2007
 Date Completed 12/4/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0005
 Field Subsample# TSB-AR-10-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 105
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 142.9
 <3/8" Not Used (g) 1129.19
 <3/8" In Tumbler(g) 54.99
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000099

	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
Asbestos Analysis Results		
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.849E+06	< 1.051E+07
Long Chrysotile Protocol Structures	< 2.849E+06	< 1.051E+07
Total Amphibole Protocol Structures	< 2.849E+06	< 1.051E+07
Long Amphibole Protocol Structures	< 2.849E+06	< 1.051E+07
Long Asbestos Protocol Structures	< 2.849E+06	< 1.051E+07
Total Asbestos Protocol Structures	< 2.849E+06	< 1.051E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.849E+06	1.051E+07

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Report Date 10/17/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/1/2007
 Date Completed 10/16/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0016
 Field Subsample# TSB-AR-11
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 76
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 26.95
 <3/8" Not Used (g) 371.2
 <3/8" In Tumbler(g) 48.52
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000131

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	13	8
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	13	8

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	3.867E+07	6.613E+07
Long Chrysotile Protocol Structures	2.380E+07	4.688E+07
Total Amphibole Protocol Structures	< 2.975E+06	< 1.098E+07
Long Amphibole Protocol Structures	< 2.975E+06	< 1.098E+07
Long Asbestos Protocol Structures	2.380E+07	4.688E+07
Total Asbestos Protocol Structures	3.867E+07	6.613E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.975E+06	1.098E+07

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Report Date 1/9/2008
 Project Name BEC PARCELS A and B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040800079

Date Started 1/5/2008
 Date Completed 1/8/2008
 Analyst Baojia Ke

Lab Sample# 040800079-0002
 Field Subsample# TSB-AR-11-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 100
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 52.74
 <3/8" Not Used (g) 745.31
 <3/8" In Tumbler(g) 60.15
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000099

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Long Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Total Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Total Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.991E+06	1.104E+07

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Report Date 11/12/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/9/2007
 Date Completed 11/9/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0020
 Field Subsample# TSB-AR-12
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 95
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g) 18.25
 <3/8" Not Used (g) 366.3
 <3/8" In Tumbler(g) 48.9
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000104

Asbestos Analysis Results

	<u>Total</u>	<u>Protocol Structures</u>	<u>Long(>10um)</u>
No. of Chrysotile Asbestos Structures	0		0
No. of Amphibole Asbestos Structures	2		1
Amphibole Mineral Type(s)			
	Actinolite		
Total Asbestos Structures	2		1

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Long Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Total Amphibole Protocol Structures	5.995E+06	2.158E+07
Long Amphibole Protocol Structures	2.998E+06	1.670E+07
Long Asbestos Protocol Structures	2.998E+06	1.670E+07
Total Asbestos Protocol Structures	5.995E+06	2.164E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.998E+06	1.106E+07

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Report Date 12/5/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 12/1/2007
 Date Completed 12/4/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0008
 Field Subsample# TSB-AR-12-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 90
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 109.34
 <3/8" Not Used (g) 1373.23
 <3/8" In Tumbler(g) 54.52
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000110

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Long Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Total Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Total Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.991E+06	1.104E+07

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Report Date 11/9/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/4/2007
 Date Completed 11/8/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0018
 Field Subsample# TSB-AR-13
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 87
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights
 >3/8" (g) 14.07
 <3/8" Not Used (g) 372.61
 <3/8" In Tumbler(g) 42.1
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator
 Mass of Respirable Dust on Filter(g) 0.000114

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	1	1
No. of Amphibole Asbestos Structures	1	1
Amphibole Mineral Type(s)	Amosite	
Total Asbestos Structures	2	2

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.986E+06	1.663E+07
Long Chrysotile Protocol Structures	2.986E+06	1.663E+07
Total Amphibole Protocol Structures	2.986E+06	1.663E+07
Long Amphibole Protocol Structures	2.986E+06	1.663E+07
Long Asbestos Protocol Structures	5.972E+06	2.156E+07
Total Asbestos Protocol Structures	5.972E+06	2.156E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.986E+06	1.102E+07

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Report Date 11/30/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/28/2007
 Date Completed 11/29/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0007
 Field Subsample# TSB-AR-13-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 102
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 95.3
 <3/8" Not Used (g) 1203.01
 <3/8" In Tumbler(g) 60.93
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000097

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.993E+06	< 1.105E+07
Long Chrysotile Protocol Structures	< 2.993E+06	< 1.105E+07
Total Amphibole Protocol Structures	< 2.993E+06	< 1.105E+07
Long Amphibole Protocol Structures	< 2.993E+06	< 1.105E+07
Long Asbestos Protocol Structures	< 2.993E+06	< 1.105E+07
Total Asbestos Protocol Structures	< 2.993E+06	< 1.105E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.993E+06	1.105E+07

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Report Date 11/8/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 10/3/2007
 Date Completed 11/7/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0017
 Field Subsample# TSB-AR-14
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 69
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g) 24.27
 <3/8" Not Used (g) 344.33
 <3/8" In Tumbler(g) 41.39
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000145

Asbestos Analysis Results	Total	Protocol Structures	
			Long(>10um)
No. of Chrysotile Asbestos Structures	7		2
No. of Amphibole Asbestos Structures	2		2
Amphibole Mineral Type(s)		Amosite	
Total Asbestos Structures	9		4

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.072E+07	4.268E+07
Long Chrysotile Protocol Structures	5.920E+06	2.137E+07
Total Amphibole Protocol Structures	5.920E+06	2.137E+07
Long Amphibole Protocol Structures	5.920E+06	2.137E+07
Long Asbestos Protocol Structures	1.184E+07	3.031E+07
Total Asbestos Protocol Structures	2.664E+07	5.056E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.960E+06	1.092E+07

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Report Date 11/30/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/27/2007
 Date Completed 11/29/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0006
 Field Subsample# TSB-AR-14-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 78
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 86.95
 <3/8" Not Used (g) 1208.19
 <3/8" In Tumbler(g) 56.63
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000130

	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
Asbestos Analysis Results		
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.921E+06	< 1.078E+07
Long Chrysotile Protocol Structures	< 2.921E+06	< 1.078E+07
Total Amphibole Protocol Structures	< 2.921E+06	< 1.078E+07
Long Amphibole Protocol Structures	< 2.921E+06	< 1.078E+07
Long Asbestos Protocol Structures	< 2.921E+06	< 1.078E+07
Total Asbestos Protocol Structures	< 2.921E+06	< 1.078E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.921E+06	1.078E+07

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Report Date 11/6/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/21/2007
 Date Completed 11/5/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0012
 Field Subsample# TSB-BJ-01
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 84
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g) 37.95
 <3/8" Not Used (g) 356.43
 <3/8" In Tumbler(g) 46.79
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000110

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	31	19
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	31	19

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	9.936E+07	1.410E+08
Long Chrysotile Protocol Structures	6.090E+07	9.512E+07
Total Amphibole Protocol Structures	< 3.205E+06	< 1.183E+07
Long Amphibole Protocol Structures	< 3.205E+06	< 1.183E+07
Long Asbestos Protocol Structures	6.090E+07	9.512E+07
Total Asbestos Protocol Structures	9.936E+07	1.410E+08
Estimated Analytical Sensitivity: (s/gPM10)	3.205E+06	1.183E+07

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Report Date 1/7/2008
 Project Name BEC PARCELS A and B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040800079

Date Started 1/3/2008
 Date Completed 1/7/2008
 Analyst Baojia Ke

Lab Sample# 040800079-0001
 Field Subsample# TSB-BJ-01-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 81
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 24.37
 <3/8" Not Used (g) 647.47
 <3/8" In Tumbler(g) 54.59
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000163

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.243E+06	< 8.277E+06
Long Chrysotile Protocol Structures	< 2.243E+06	< 8.277E+06
Total Amphibole Protocol Structures	< 2.243E+06	< 8.277E+06
Long Amphibole Protocol Structures	< 2.243E+06	< 8.277E+06
Long Asbestos Protocol Structures	< 2.243E+06	< 8.277E+06
Total Asbestos Protocol Structures	< 2.243E+06	< 8.277E+06
Estimated Analytical Sensitivity: (s/gPM10)	2.243E+06	8.277E+06

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Report Date 11/6/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/18/2007
 Date Completed 10/26/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0010
 Field Subsample# TSB-BJ-02
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 72
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g) 17.82
 <3/8" Not Used (g) 346.66
 <3/8" In Tumbler(g) 47.17
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000139

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	7	5
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	7	5

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.071E+07	4.267E+07
Long Chrysotile Protocol Structures	1.480E+07	3.447E+07
Total Amphibole Protocol Structures	< 2.959E+06	< 1.092E+07
Long Amphibole Protocol Structures	< 2.959E+06	< 1.092E+07
Long Asbestos Protocol Structures	1.480E+07	3.447E+07
Total Asbestos Protocol Structures	2.071E+07	4.267E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.959E+06	1.092E+07

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Report Date 11/6/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started
 Date Completed
 Analyst

9/19/2007
 11/1/2007
 Baojia Ke

Lab Sample#
 Field Subsample#
 Field Preparation Technique
 Sample Drying
 Sample Splitting
 Other

040721499-0011
 TSB-BJ-02 FD
 N/A
 Yes
 No
 N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm)
 Magnification
 Grid Opening Area (sq mm)
 Number of Grid Openings Scanned
 Asbestos Structure Size and Type Categories of Interest

385 (IST)
 19,000 X
 0.013
 84
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 >5um Length
 <0.5um Diameter

Minimum Acceptable Structure Identification Category

Dust Generator-Total Dried Sample Weights

>3/8" (g)
 <3/8" Not Used (g)
 <3/8" In Tumbler(g)

49.12
 308.28
 47.62

Air Flow Rate Through ME opening of Dust Generator (ml/min)
 Air Flow Rate Through IST opening of Dust Generator (ml/min)
 Estimated Total Air Flow Rate Through Elutriator (ml/min)

1430
 72
 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g)

0.000118

Asbestos Analysis Results

No. of Chrysotile Asbestos Structures
 No. of Amphibole Asbestos Structures
 Amphibole Mineral Type(s)

Total
 16
 3
 19

Amosite/Tremolite

Total Asbestos Structures

Protocol Structures

Long(>10um)

9
 1
 10

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

Total Chrysotile Protocol Structures
 Long Chrysotile Protocol Structures
 Total Amphibole Protocol Structures
 Long Amphibole Protocol Structures
 Long Asbestos Protocol Structures
 Total Asbestos Protocol Structures

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	4.781E+07	7.764E+07
Long Chrysotile Protocol Structures	2.689E+07	5.104E+07
Total Amphibole Protocol Structures	8.963E+06	2.617E+07
Long Amphibole Protocol Structures	2.988E+06	1.664E+07
Long Asbestos Protocol Structures	2.988E+07	5.495E+07
Total Asbestos Protocol Structures	5.677E+07	8.867E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.988E+06	1.103E+07

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Report Date 11/30/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/28/2007
 Date Completed 11/30/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0002
 Field Subsample# TSB-BJ-02-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 83
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 156.68
 <3/8" Not Used (g) 1098.11
 <3/8" In Tumbler(g) 47.82
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000119

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Long Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Total Amphibole Protocol Structures	< 2.998E+06	< 1.106E+07
Long Amphibole Protocol Structures	< 2.998E+06	< 1.106E+07
Long Asbestos Protocol Structures	< 2.998E+06	< 1.106E+07
Total Asbestos Protocol Structures	< 2.998E+06	< 1.106E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.998E+06	1.106E+07

EMSL Analytical Inc.
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Report Date 10/16/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/12/2007
 Date Completed 10/15/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0003
 Field Subsample# TSB-BJ-03
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 68
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 72.23
 <3/8" Not Used (g) 341.02
 <3/8" In Tumbler(g) 50.79
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000147

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No.of Chrysotile Asbestos Structures	1	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	1	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.963E+06	1.650E+07
Long Chrysotile Protocol Structures	< 2.963E+06	< 1.093E+07
Total Amphibole Protocol Structures	< 2.963E+06	< 1.093E+07
Long Amphibole Protocol Structures	< 2.963E+06	< 1.093E+07
Long Asbestos Protocol Structures	< 2.963E+06	< 1.093E+07
Total Asbestos Protocol Structures	2.963E+06	1.650E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.963E+06	1.093E+07

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Report Date 10/18/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/13/2007
 Date Completed 10/17/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0016
 Field Subsample# TSB-BJ-04
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 91
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 19.89
 <3/8" Not Used (g) 338.56
 <3/8" In Tumbler(g) 48.1
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000109

	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
Asbestos Analysis Results		
No.of Chrysotile Asbestos Structures	1	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	1	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	2.986E+06	1.663E+07
Long Chrysotile Protocol Structures	< 2.986E+06	< 1.102E+07
Total Amphibole Protocol Structures	< 2.986E+06	< 1.102E+07
Long Amphibole Protocol Structures	< 2.986E+06	< 1.102E+07
Long Asbestos Protocol Structures	< 2.986E+06	< 1.102E+07
Total Asbestos Protocol Structures	2.986E+06	1.663E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.986E+06	1.102E+07

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Report Date 10/3/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/5/2007
 Date Completed 10/2/2007
 Analyst Brad Ross

Lab Sample# 040721499-0001
 Field Subsample# TSB-BJ-05
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 87
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 15.32
 <3/8" Not Used (g) 344.18
 <3/8" In Tumbler(g) 68.86
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000124

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No.of Chrysotile Asbestos Structures	6	3
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	6	3

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	1.647E+07	3.591E+07
Long Chrysotile Protocol Structures	8.236E+06	2.405E+07
Total Amphibole Protocol Structures	< 2.745E+06	< 1.013E+07
Long Amphibole Protocol Structures	< 2.745E+06	< 1.013E+07
Long Asbestos Protocol Structures	8.236E+06	2.405E+07
Total Asbestos Protocol Structures	1.647E+07	3.591E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.745E+06	1.013E+07

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Report Date 11/6/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/24/2007
 Date Completed 11/5/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0013
 Field Subsample# TSB-BJ-06
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 65
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 23.77
 <3/8" Not Used (g) 349.48
 <3/8" In Tumbler(g) 46.63
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000153

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.978E+06	< 1.099E+07
Long Chrysotile Protocol Structures	< 2.978E+06	< 1.099E+07
Total Amphibole Protocol Structures	< 2.978E+06	< 1.099E+07
Long Amphibole Protocol Structures	< 2.978E+06	< 1.099E+07
Long Asbestos Protocol Structures	< 2.978E+06	< 1.099E+07
Total Asbestos Protocol Structures	< 2.978E+06	< 1.099E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.978E+06	1.099E+07

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Report Date 10/2/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/6/2007
 Date Completed 10/1/2007
 Analyst Brad Ross

Lab Sample# 040721499-0002
 Field Subsample# TSB-BR-01
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 71
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 35.19
 <3/8" Not Used (g) 364.51
 <3/8" In Tumbler(g) 53.8
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000151

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.762E+06	< 1.019E+07
Long Chrysotile Protocol Structures	< 2.762E+06	< 1.019E+07
Total Amphibole Protocol Structures	< 2.762E+06	< 1.019E+07
Long Amphibole Protocol Structures	< 2.762E+06	< 1.019E+07
Long Asbestos Protocol Structures	< 2.762E+06	< 1.019E+07
Total Asbestos Protocol Structures	< 2.762E+06	< 1.019E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.762E+06	1.019E+07

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Report Date 10/2/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/10/2007
 Date Completed 10/1/2007
 Analyst Brad Ross

Lab Sample# 040721499-0005
 Field Subsample# TSB-BR-02
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 66
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 9.07
 <3/8" Not Used (g) 355.25
 <3/8" In Tumbler(g) 48.93
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000150

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Long Chrysotile Protocol Structures	< 2.991E+06	< 1.104E+07
Total Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Amphibole Protocol Structures	< 2.991E+06	< 1.104E+07
Long Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Total Asbestos Protocol Structures	< 2.991E+06	< 1.104E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.991E+06	1.104E+07

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Report Date 10/4/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/7/2007
 Date Completed 10/3/2007
 Analyst Brad Ross

Lab Sample# 040721499-0006
 Field Subsample# TSB-BR-03
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 84
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 14.33
 <3/8" Not Used (g) 351.18
 <3/8" In Tumbler(g) 51.32
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000118

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.988E+06	< 1.103E+07
Long Chrysotile Protocol Structures	< 2.988E+06	< 1.103E+07
Total Amphibole Protocol Structures	< 2.988E+06	< 1.103E+07
Long Amphibole Protocol Structures	< 2.988E+06	< 1.103E+07
Long Asbestos Protocol Structures	< 2.988E+06	< 1.103E+07
Total Asbestos Protocol Structures	< 2.988E+06	< 1.103E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.988E+06	1.103E+07

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Report Date 10/17/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/11/2007
 Date Completed 10/16/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0007
 Field Subsample# TSB-BR-04
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 71
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 20.82
 <3/8" Not Used (g) 366.57
 <3/8" In Tumbler(g) 51.02
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000141

Asbestos Analysis Results	Total	Protocol Structures	
		Long(>10um)	
No. of Chrysotile Asbestos Structures	4	2	
No. of Amphibole Asbestos Structures	1	0	
Amphibole Mineral Type(s)			
Total Asbestos Structures	5	2	

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	1.183E+07	3.029E+07
Long Chrysotile Protocol Structures	5.917E+06	2.136E+07
Total Amphibole Protocol Structures	2.958E+06	1.648E+07
Long Amphibole Protocol Structures	< 2.958E+06	< 1.092E+07
Long Asbestos Protocol Structures	5.917E+06	2.136E+07
Total Asbestos Protocol Structures	1.479E+07	3.446E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.958E+06	1.092E+07

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Report Date 11/6/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/14/2007
 Date Completed 10/19/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0008
 Field Subsample# TSB-BR-05
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 99
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 18.6
 <3/8" Not Used (g) 349.97
 <3/8" In Tumbler(g) 48.09
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000100

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	7	3
No. of Amphibole Asbestos Structures	1	1
Amphibole Mineral Type(s)	Actinolite	
Total Asbestos Structures	8	4

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	2.094E+07	4.314E+07
Long Chrysotile Protocol Structures	8.974E+06	2.621E+07
Total Amphibole Protocol Structures	2.991E+06	1.666E+07
Long Amphibole Protocol Structures	2.991E+06	1.666E+07
Long Asbestos Protocol Structures	1.197E+07	3.063E+07
Total Asbestos Protocol Structures	2.393E+07	4.715E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.991E+06	1.104E+07

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Report Date 11/30/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040729231

Date Started 11/28/2007
 Date Completed 11/30/2007
 Analyst Baojia Ke

Lab Sample# 040729231-0001
 Field Subsample# TSB-BR-05-PS
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 95
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights
 >3/8" (g) 78.44
 <3/8" Not Used (g) 1183.23
 <3/8" In Tumbler(g) 51.96
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator
 Mass of Respirable Dust on Filter(g) 0.000104

Asbestos Analysis Results	Protocol Structures	
	Total	Long(>10um)
No. of Chrysotile Asbestos Structures	0	0
No. of Amphibole Asbestos Structures	1	1
Amphibole Mineral Type(s)	Tremolite	
Total Asbestos Structures	1	1

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Long Chrysotile Protocol Structures	< 2.998E+06	< 1.106E+07
Total Amphibole Protocol Structures	2.998E+06	1.670E+07
Long Amphibole Protocol Structures	2.998E+06	1.670E+07
Long Asbestos Protocol Structures	2.998E+06	1.670E+07
Total Asbestos Protocol Structures	2.998E+06	1.670E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.998E+06	1.106E+07

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Report Date 12/11/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT 006 90 73.00
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040730135

Date Started 12/7/2007
 Date Completed 12/10/2007
 Analyst Debbie Little

Lab Sample# 040730135-0001
 Field Subsample# TSB-BR-05-PS 2
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.012
 Number of Grid Openings Scanned 134
 Asbestos Structure Size and Type Categories of Interest Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 47.08
 <3/8" Not Used (g) 1064.31
 <3/8" In Tumbler(g) 54.07
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000080

	<u>Total</u>	<u>Protocol Structures</u>
		<u>Long(>10um)</u>
Asbestos Analysis Results		
No.of Chrysotile Asbestos Structures	0	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	0	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	<u>Concentrations</u>	
	<u>Mean</u>	<u>95% UCL</u>
Total Chrysotile Protocol Structures	< 2.993E+06	< 1.104E+07
Long Chrysotile Protocol Structures	< 2.993E+06	< 1.104E+07
Total Amphibole Protocol Structures	< 2.993E+06	< 1.104E+07
Long Amphibole Protocol Structures	< 2.993E+06	< 1.104E+07
Long Asbestos Protocol Structures	< 2.993E+06	< 1.104E+07
Total Asbestos Protocol Structures	< 2.993E+06	< 1.104E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.993E+06	1.104E+07

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Report Date 11/6/2007
 Project Name BEC PARCELS A AND B SAMPLING EVENT
 Methods Draft Modified Elutriator Method for the Determination of Asbestos in Soils and Bulk Material Method (dated May 23, 2000, Revision 1)
 EMSL Order ID 040721449

Date Started 9/17/2007
 Date Completed 10/25/2007
 Analyst Baojia Ke

Lab Sample# 040721499-0009
 Field Subsample# TSB-BR-06
 Field Preparation Technique N/A
 Sample Drying Yes
 Sample Splitting No
 Other N/A

TEM Analysis

Effective Area of Analytical Filter (sq mm) 385 (IST)
 Magnification 19,000 X
 Grid Opening Area (sq mm) 0.013
 Number of Grid Openings Scanned 67
 Asbestos Structure Size and Type Categories of Interest
 Protocol Fiber
 >5um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Long Fiber
 >10um Length
 <0.5um Diameter
 Amphiboles/Chrysotile
 Minimum Acceptable Structure Identification Category
 >5um Length
 <0.5um Diameter

Dust Generator-Total Dried Sample Weights

>3/8" (g) 9.72
 <3/8" Not Used (g) 362.72
 <3/8" In Tumbler(g) 59.88
 Air Flow Rate Through ME opening of Dust Generator (ml/min) 1430
 Air Flow Rate Through IST opening of Dust Generator (ml/min) 72
 Estimated Total Air Flow Rate Through Elutriator (ml/min) 1502

Filters from the IST opening of Dust Generator of the Elutriator

Mass of Respirable Dust on Filter(g) 0.000148

Asbestos Analysis Results	Total	Protocol Structures
		Long(>10um)
No.of Chrysotile Asbestos Structures	2	0
No.of Amphibole Asbestos Structures	0	0
Amphibole Mineral Type(s)		
Total Asbestos Structures	2	0

ESTIMATED ASBESTOS CONCENTRATIONS (s/gPM10)

	Concentrations	
	Mean	95% UCL
Total Chrysotile Protocol Structures	5.973E+06	2.156E+07
Long Chrysotile Protocol Structures	< 2.987E+06	< 1.102E+07
Total Amphibole Protocol Structures	< 2.987E+06	< 1.102E+07
Long Amphibole Protocol Structures	< 2.987E+06	< 1.102E+07
Long Asbestos Protocol Structures	< 2.987E+06	< 1.102E+07
Total Asbestos Protocol Structures	5.973E+06	2.156E+07
Estimated Analytical Sensitivity: (s/gPM10)	2.987E+06	1.102E+07