Michelle White and associates

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May 17, 2010 Project No. 5211

University of Windsor
401 Sunset Avenue
Windsor, Ontario N9B 3P4

ATTN: Mr. Danny A. Castellan, P. Eng.

RE: Clearance air monitoring at fourth floor Mechanical Room M-400, Biology Building, University of Windsor

Dear Mr. Castellan:

This letter presents the results of clearance air monitoring conducted in the fourth floor Mechanical Room M-400 of the Biology Building at the University of Windsor.

INTRODUCTION

Work was conducted in the fourth floor mechanical room (M-400) of the Biology Building. During this work, sprayed-on asbestos-containing fireproofing was disturbed which caused fireproofing debris to fall onto lower surfaces. The asbestos regulation, O. Reg. 278/05, stipulates that fallen asbestos-containing material (ACM) must be abated as soon as possible after discovery. The University retained Lewis Insul-Metal Systems Inc. of Windsor, Ontario to conduct the clean-up of fireproofing debris from surfaces in the specified work area.

Michelle White and Associates (Michelle White) was then retained to conduct clearance air monitoring for this clean-up project. By regulation, only Type 3 asbestos removals require clearance air monitoring. The University requested clearance air monitoring for this clean-up project. There is no clearance criterion for clean-up procedures; therefore, air monitoring results were compared to the Type 3 clearance criterion of 0.01 fibres per cubic centimetre of air (f/cc).

Michelle White conducted the clearance air monitoring on May 11, 2010.

METHODS AND MATERIALS

The air sampling pumps were calibrated against a primary standard before and after the sampling period. The air samples were collected in the clean-up work area, by drawing air at a rate of approximately 16 litres per minute through open faced carbon filled polypropylene cassettes assembled with cowl, containing 25-millimeter diameter mixed cellulose ester (MCE) membrane filters. The air volume collected for clearance was approximately 2,400 litres per air sample. The samples were analyzed by phase contrast microscopy in accordance with NIOSH 7400, A rules. A quality control blank was also analyzed to make sure that there was no background contamination on the sample media.

Michelle White scanned the air samples after completion of the sampling period, provided a verbal clearance confirmation and a faxed clearance confirmation letter to the University. Michelle White holds a NIOSH 582 Asbestos Fibre Counting Certificate and sends 10% or more of Type 3 clearance (only) samples to Bureau Veritas North America, Inc. for quality control purposes. Bureau Veritas is an American Industrial Hygiene Association (AIHA)-accredited laboratory in asbestos analysis.

INSPECTION OF WORK AND CLEAN-UP AREA

A visual inspection of the work area was conducted after completion of the clean-up procedures. The results of the visual inspection indicated that the surfaces in the work area were clean and free of visible debris and residue. The work area passed inspection. Clearance air monitoring was then conducted.

CLEARANCE RESULTS

Clearance air sampling results are provided in Table 1. As previously indicated, the results were compared to the Type 3 clearance criterion of 0.01 fibres per cubic centimetre of air (f/cc).

Two air samples for the determination of total airborne fibres were collected in the work/clean-up area as identified by Lewis. Results indicated that the total airborne fibre concentration measured in the work/clean-up area ranged from 0.0015 to 0.0022 f/cc. The fibre levels were below the selected clearance criterion of 0.01 f/cc.

CONCLUSION

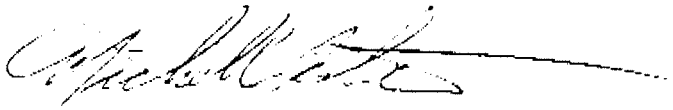
Based on the visual inspection and air monitoring results, the work area would be suitable for occupancy.

CLOSURE

I trust that this letter meets your present requirements. If you have any questions, please contact me at 519-738-0447 or 519-965-2996.

Yours truly,

MICHELLE WHITE AND ASSOCIATES



Michelle White, B.Sc., IHT, BESC
Senior Industrial Hygienist

Table 1

Results of Clearance Air Monitoring
for
Total Airborne Fibres After Clean-up Procedures
at
University of Windsor
Fourth Floor Mechanical Room M-400
Biology Building
Windsor, Ontario

Assessment Date: May 11, 2010
Project No. 5211

Sample Number	Sample Location	Time Start	Total Minutes	Sample Air Volume (Litres)	Fibres Per Filter	Fibre Concentration (f/cc)
MCE.8 198266	Under structural beam at AHU 1B in front of control panel.	09:22	150	2,400	5,400	0.0022
MCE.8 198294	Under structural beam near entrance door and fan belt of AHU 1B.	09:22	150	2,400	3,700	0.0015
Blank	Quality control	–	--	--	<2,000	--
Ontario Ministry of Labour clearance criterion for Type 3 abatements for comparison:						0.01

f/cc: Fibres per cubic centimetre of air
<: Less than
--: Not applicable
Analysis: NIOSH 7400, A rules

FIELD WORKSHEET FOR FIBRE COUNT RESULTS

CLIENT: U of Windsor
PROJECT: 5211
PAGE NO.: 1
ANALYST: M. White
MICROSCOPE: Olympus PCM
FIELD AREA (mm²/field): 0.00785

DATE SCAN: May 11/10
DATE ANALYZED: May 12/10
METHOD: NIOSH 7400 RULES: A or B
FILTER SIZE: 25-mm[a] or 37-mm[b]
FILTER LOT: 195000
FILTER SUPPLIER: Bureau Veritas
EFFECTIVE FILTER AREA: 385mm² or 855mm²

Sample No.	Air Volume (Litres)	Fibres Counted	Fields Counted	Blank corrected	Fibre Density (Fibres/mm²)	Fibres/filter	Fibre Concentration (f/cc)
198266	2400	11	100	0.11	14.00520	5392.136	0.00224
198294	2400	7½	100	0.075	9.54927	3676.4765	0.00153
Blank Average	--	<1	100	–	–		–
Detection Limits	--	--	–	0.04	5	2,000[a]/4,000[b]	–

FIBRE COUNT SHEET

Date: Scanned May 11/10 Analyzed May 17/10

Project No.: 5211

Client: University of Windsor

Abatement Type: (1) 2 3 GB

Sample No. 198294

Site: Biology M-400

Debris Clean-up?

Field#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Fibres/			1																		
Field#	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Fibres/		1								1									1		
Field#	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
Fibres/																					
Field#	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
Fibres/					1		1														
Field#	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
Fibres/									1								1/2				
Total	0	1	1	0	1	0	1	0	1	1	0	0	0	0	0	0	1/2	0	1	0	=7 1/2

Analyst

CK 1 CK 2

Comments:

fairly clean

mostly dust particles

Michelle White and Associates

FIBRE COUNT SHEET

Date: Scanned May 4/10
Analyzed May 17/10

Project No.: 5211

Client: University of Windsor

Abatement Type: 1 2 3 GB

Sample No. 48266

Site: Biology M-400
Debris Clean-up

Field#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Fibres/					1							1				1	1			
Field#	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Fibres/															1					
Field#	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Fibres/		2										1/2								
Field#	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Fibres/														1						
Field#	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Fibres/												1/2				1		1		
Total	0	2	0	0	1	0	0	0	0	0	0	2	0	1	1	2	1	1	0	0

= 11

Analyst [signature]

CK 1 [signature] **CK 2** [signature]

Comments:

fairly clean
mostly dust particles

Michelle White and Associates