ALcontrol Laboratories
Saxon House
Saxon Way
Fordbridge
Birmingham
B37 5AY

REPORT FOR THE PERIODIC MONITORING

OF

EMISSIONS TO AIR FROM

PART B PROCESSES

at

SANDVIK HARD MATERIALS LIMITED
PO BOX 89
TORRINGTON AVENUE
COVENTRY
WARWICKSHIRE
CV4 9XG

PART 1: EXECUTIVE SUMMARY

REPORT NO:	4742v1	**CLIENT REF:**	Purchase Order:8252
DATE OF VISIT:	11 – 12th September 2006	**CONTACT ON SITE:**	Mr Phil Moran
DATE OF REPORT:	08 November 2006		

Reported by:

Approved by:

for ALcontrol Laboratories

TABLE OF CONTENTS

1 MONITORING OBJECTIVES

The monitoring at this installation was carried out for the compliance check monitoring of emissions to air in accordance with the requirements of the PPC permit, reference number PPC 025.

The substances requested for monitoring at each emission point are listed in the table below.

Substances to be monitored	**Emission Point Identification**		
	LEV 11 – Vent 29	**LEV 12 – South Site**	**LEV 15 – Vent 33**
Particulates	√	√	√
Tungsten & Cobalt	√	√	√
Substances to be monitored	**Emission Point Identification**		
	LEV 18 – Vent 21	**LEV 22 – Vent 25**	**LEV 28 – Vent 28**
Particulates	√	√	√
Tungsten & Cobalt	√	√	√
VOC (Methanol)		√	
Substances to be monitored	**Emission Point Identification**		
	Vent 7 – North Site	**Large Filter – B4**	**Small Filter – B4**
Particulates	√	√	√
Tungsten & Cobalt	√	√	√
Substances to be monitored	**Emission Point Identification**		
	Filter - B6		
Particulates	√		
Tungsten & Cobalt	√		

1.1 Terms of Reference

Sandvik Hard Materials Limited, PO Box 89, Torrington Avenue, Coventry, Warwickshire, CV4 9XG, has commissioned ALcontrol Laboratories to carry out the work described in this report. Monitoring was carried out on 12th and 13th September 2006 by Paul Calland and Andy Barnes at the request of Mr Phil Moran.

The work was carried out in accordance with the site specific sampling protocols outlined in proposal reference 13753a2ju dated June 2006. The clients' instructions are detailed in Purchase Order: 8252

2 MONITORING RESULTS

2.1 Emission Point Reference: LEV 11 – Vent 29

Date of Monitoring	11th September 2006	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	1.1 $mg.m^{-3}$	BS EN 13284	12:20 – 12:50 & 12:55 – 13:25
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.2 Emission Point Reference: LEV 12 – South Site

Date of Monitoring	11th September 06	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.2 $mg.m^{-3}$	BS EN 13284	08:55 – 09:25 & 09:28 – 9:58
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.3 Emission Point Reference: LEV 15 – Vent 33

Date of Monitoring	11th September 2006	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.6 $mg.m^{-3}$	BS EN 13284	14:05 – 14:35 & 14:36 – 15:06
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.4 Emission Point Reference: LEV 21 – Vent 18

Date of Monitoring	11th September 2006	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.2 $mg.m^{-3}$	BS EN 13284	12:48 – 13:18 & 13:20 – 13:50
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.5 Emission Point Reference: LEV 22 – Vent 25

Date of Monitoring	11th September 2006	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.2 $mg.m^{-3}$	BS EN 13284	09:10 – 09:40 & 10:29 – 10:59
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.6 Emission Point Reference: LEV 28 – Vent 24

Date of Monitoring	11th September 2006	**Reference Conditions**	NTP
Process Status		**Processes Running Normally**	

Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.2 $mg.m^{-3}$	BS EN 13284	10:05 – 10:35 & 10:36 – 11:06
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.7 Emission Point Reference: Vent 7 – North Site

Date of Monitoring	12th September 2006	**Reference Conditions**	NTP
Process Status		**Processes Running Normally**	

Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.3 $mg.m^{-3}$	BS EN 13284	09:35 – 10:05 & 10:06 – 10:36
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.8 Emission Point Reference: Large Filter – B4

Date of Monitoring	12th September 2006	**Reference Conditions**	NTP
Process Status		**Processes Running Normally**	

Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.3 $mg.m^{-3}$	BS EN 13284	10:48 – 11:18 & 11:20 – 11:50
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.9 Emission Point Reference: Small Filter – B4

Date of Monitoring	12th September 2006	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.3 $mg.m^{-3}$	BS EN 13284	10:51 – 11:21 & 11:23 – 11:53
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

2.10 Emission Point Reference: Filter – B6

Date of Monitoring	12th September 2006	**Reference Conditions**	NTP	
Process Status		**Processes Running Normally**		
Substances To Be Monitored	**Emission Limit Value**	**Average Emission Concentration**	**Sampling Method Reference**	**Sampling Times**
Total Particulate Matter	20 $mg.m^{-3}$	0.1 $mg.m^{-3}$	BS EN 13284	12:27 – 13:39 & 13:41 – 14:53
Tungsten	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	
Cobalt	n/a	<0.1 $mg.m^{-3}$	BS EN 14385	

3 PLANT AND OPERATING INFORMATION

Plant and operating conditions prevailing on the date of the survey were described as normal in all cases.

4 MONITORING DEVIATIONS

Emission Point Reference	Substance Deviations	Monitoring Deviations	Other Relevant Issues
LEV 12 – South Site Small Filter – B4 Small Filter – B6	None	Non Isokinetic Sampling, Sampled from grill.	No Outlet Stack
Various	Some stacks thought the dimensions of the duct work was not ideal, flow profiles complied with the relevant standards.		
Other Stacks	None	None	None

ALcontrol Laboratories
Saxon House
Saxon Way
Fordbridge
Birmingham
B37 5AY

REPORT FOR THE PERIODIC MONITORING

OF

EMISSIONS TO AIR FROM

PART B PROCESSES

at

SANDVIK HARD MATERIALS LIMITED
PO BOX 89
TORRINGTON AVENUE
COVENTRY
WARWICKSHIRE
CV4 9XG

PART 2: SUPPORTING INFORMATION

REPORT NO:	4742v1	**CLIENT REF:**	Purchase Order:8252
DATE OF VISIT:	12 – 13 September 2006	**CONTACT ON SITE:**	Mr Phil Moran
DATE OF REPORT:	08 November 2006		

Reported by:

Approved by:

for Alcontrol Laboratories

TABLE OF CONTENTS

5 APPENDIX I

5.1 Field Staff Used

Name	MCERTS Registration No:	MCERTS Qualifications	Function
Andy Barnes	MM 03 235	Level 2, TE1, TE3 &TE4	Team Leader
Paul Calland	MM 03 212	Level 2, TE1 &TE4	Assistant

5.2 Field Monitoring Methods Used

5.2.1 Stack Velocity & Temperature Measurements

Stack velocity was measured using a pitot tube, conforming to the design specifications of ISO 3966-1977, coupled to an electronic manometer. Both are calibrated annually by a UKAS accredited supplier. Temperature measurements were taken using a K-type thermocouple connected to an electronic thermometer. Both are calibrated annually by a UKAS accredited supplier. Measurements fulfil the requirements of ISO10780:1994.

5.2.2 Particulate Matter

Periodic extractive sampling for particulate matter was conducted isokinetically using two Stackmite sampling trains, with the in stack filter configuration. The sampling systems are calibrated annually and are UKAS traceable.

Measurements fulfil the requirements of BS EN 13284-1:2002 & Environment Agency MID1.

5.2.3 Tungsten & Cobalt

Periodic extractive sampling for tungsten and cobalt was conducted isokinetically using an impinger train built into the Stackmite sampling trains above.

Measurements fulfil the requirements of BS EN 14385.

5.3 Analysis Methods

5.3.1 Techniques & Detection Limits

Analyte	Analysis Technique	Detection Limit	UKAS Accredited	Laboratory Method Reference
Total Particulate	Gravimetric	100 μg	Yes	In House
Tungsten	ICP	0.5 μg	Yes	R8b
Cobalt	ICP	5 μg	Yes	R8b

6 APPENDIX II

6.1 Particulate & Flowrate Calculation Spreadsheets

This Appendix contains 10 pages.