Report for Periodic Monitoring of Emissions to Atmosphere	
Part 1:	**Executive Summary**
Permit Number:	**PPC/028**
Operator:	**Atritor Limited**
Installation:	**Edgewick Park Industrial Estate, Coventry**
Emission Point:	**PMA 1 Main Scrubber Exhaust**
Monitoring Date:	**31st August 2010**

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Contract Reference:	FTBS 12390
Operator:	Atritor Limited
Address:	Edgewick Park Industrial Estate Canal Road Coventry CV6 5RD
Monitoring Organisation:	RPS Consultants Ltd
Address:	Grafton Building, Caswell Science and Business Park, Caswell, Towcester, NN12 8EQ
Report Date:	14th October 2010
Report Approved By:	Richard Carter
Position:	Consultant
MCERTS Registration No.:	MM07 861
Signature:	[redacted]

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Part 1: Executive Summary

Monitoring Objectives

At the request of Mr B. Percival of Atritor Ltd., RPS Health, Safety and Environment conducted air emission monitoring at the Edgewick Park Industrial Estate site, Coventry in August 2010

The monitoring programme at this installation was carried out to provide data on emissions to atmosphere for comparison with the limits specified in the air emission criteria for this site.

The parameters requested for monitoring at each emission point and the actual monitoring conducted are detailed below.

Table 1

Parameters Requested to be Monitored	**PMA 1 – Main Scrubber Exhaust**
Total Particulate Matter	✓
Specific Requirements	Normal Operating Conditions

Notes:
✓ *Represents the actual parameters monitored*
✖ *Represent parameters requested but not actually monitored*

Monitoring Results

Table 2 – Monitoring Results from the PMA 1 – Main Scrubber Exhaust at Atritor Ltd., Coventry in August 2010

Substance Monitored	Emission Limit Value	Periodic Monitoring Result	Units	Uncertainty (mg/m^3) #	Reference Conditions 273K, 101.3kPa...	Sampling Date	Sampling Times	Monitoring Reference Method	Accreditation Status	Operating Status
Total Particulate Matter	50	16	mg/m^3	± 1.8	wet gas, without correction for oxygen	31-Aug-10	11:50 – 14:51 β	BS-EN 13284-1 2001	MCERTS	See Table 3
Linear velocity within Scrubber unit	9 (maximum)	4.4*	m/sec	-	-	31-Aug-10	-	BS-EN 13284-1 2001	MCERTS	See Table 3
Efflux Velocity at Stack Exhaust Exit	15 (minimum)	15.1@	m/sec	-	-	31-Aug-10	-	BS-EN 13284-1 2001	MCERTS	See Table 3

Notes:

\# *The uncertainty associated with the quoted result is at the 95% confidence interval.*

* *Figure calculated from volumetric flow rate at sample plane and cross sectional area of scrubber unit.*

@ *Figure calculated from volumetric flow rate at sample plane and cross sectional area of duct at exit point.*

β *Actual sampling time was 60 minutes*

Operating Information

Table 3 – Operating Information During Monitoring of the PMA 1 – Main Scrubber Exhaust at Atritor Ltd., Coventry in August 2010

Parameter	Result
Sample Date	31st August 2010
Process Type	Batch process 11:50 – 12:20 - Knocking out 14:15 – 14:35 - Melting 14:35 – 14:51 - Pouring
Process Duration	~ 1.5 hours
If 'Batch', was monitoring carried out over the whole batch?	Yes
If 'No', give details	-
Abatement/Operational?	Wet Scrubber / Yes
Fuel Type	N/A
Feedstock	White Iron
Load	N/K
Throughput	N/K
Continuous Rating	N/A

Monitoring Deviations

Table 4 – Monitoring Deviations During Monitoring of the PMA 1 – Main Scrubber Exhaust at Atritor Ltd., Coventry in August 2010

Substance Deviations	Monitoring Deviations	Other Relevant Issues
	Due to the position of the current sample position (upstream of the fan) the pump of the sample train had to be started shortly before the probe was inserted into the duct. This is a deviation from the procedural requirements of BSEN 13284.	

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Part 2:	**Supporting Information**
Permit Number:	**PPC/028**
Operator:	**Atritor Limited**
Installation:	**Edgewick Park Industrial Estate, Coventry**
Emission Point:	**PMA 1 Main Scrubber Exhaust**
Monitoring Date:	**31st August 2010**

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Contract Reference:	FTBS 12390
Operator:	Atritor Limited
Address:	Edgewick Park Industrial Estate Canal Road Coventry CV6 5RD
Monitoring Organisation:	RPS Consultants
Address:	Grafton Building, Caswell Science and Business Park, Caswell, Towcester, NN12 8EQ
Report Date:	30th September 2010
Report Approved By:	Richard Harvey
Position:	Principle Consultant
MCERTS Registration No.:	MM02 020
Signature:	[redacted]

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Part 2: Supporting Information

APPENDIX 1: General Information

Monitoring Organisation Staff Details

Table 5

Site Team	Position	MCERTS Level	Technical Endorsements	TE Expiry Dates	MCERTS Registration Number
Richard Carter	Consultant	2	1 2 3 4	13/06/13 03/12/13 13/12/14 18/03/14	MM 07 861
Edwin Powell	Consultant	2	1 2 3 4	10/09/12 10/09/12 10/09/12 10/09/12	MM 05 621

Report Author	Position	MCERTS Level	Technical Endorsements	TE Expiry Dates	MCERTS Registration Number
Edwin Powell	Consultant	2	1 2 3 4	10/09/12 10/09/12 10/09/12 10/09/12	MM 05 621

Report Reviewer	Position	MCERTS Level	Technical Endorsements	TE Expiry Dates	MCERTS Registration Number
Richard Harvey	Principal Consultant	2	1 2 3 4	20/11/12 09/03/15 20/03/11 07/12/10	MM 02 020

Monitoring Organisation Method Details

Table 6

Emission Parameter	Standard Method	Monitoring Procedure No.	Monitoring Accreditation Status	Analysis Technique	Analysis Procedure No.	Analytical Laboratory	Analysis Accreditation Status
Practical Considerations Prior to Monitoring	N/A	RPSCE/1/1	MCERTS	N/A	N/A	N/A	N/A
Gas Flows	BS-EN 13284-1:2001	RPSCE/1/2	MCERTS	N/A	N/A	N/A	N/A
Gas Temperatures	BS-EN 13284-1:2001	RPSCE/1/2	MCERTS	N/A	N/A	N/A	N/A
Total Particulate Matter	BS EN 13284-1:2001	RPSCE/1/7c	MCERTS	Gravimetric	D9	RPS Laboratories, Manchester	UKAS

APPENDIX 2: Emission Point PMA 1 Main Scrubber Exhaust

Stack Gas Measurements

Table 7 - Temperature and Velocity Profile

Results of Gas Flows and Gas Temperatures Measured from the PMA 1 – Main Scrubber Exhaust at Atritor Ltd., Coventry on the 31st August 2010

Traverse Point (m)	Sample Line A				Sample Line B			
	T (°C)	ΔP (mm H_2O)	Neg. Flow?	Spin <15°	T (°C)	ΔP (mm H_2O)	Neg. Flow?	Spin <15°
0.26	15	5.4	No	<15°	15	19	No	<15°
0.53	15	7.0	No	<15°	15	20	No	<15°

Barometric pressure (kPa)	100.9
Static Pressure (mm H_2O)	-ve 240
Stack Dimension Ø (m)	0.70 x 0.76

Table 8 - Gas Measurements (continued)

Results of Total Particulate Matter and General Emission Parameters Measured from the PMA 1 – Main Scrubber Exhaust at Atritor Ltd., Coventry on the 31st August 2010

Emission Parameter	Units	Mean Result
Sample Date	-	31st Aug 2010
Sample Period	-	11:50 – 14:51 β
Barometric Pressure	kPa	100.9
Internal Area Of Duct	m^2	0.53
Isokinetic Ratio	%	109
Stack Moisture Content	%	0.9
Stack Temperature	°C	17
Gas Velocity (as measured at sampling plane)	m/sec	12
Volumetric Flowrate (as measured)	m^3/sec	6.6
Volumetric Flowrate (at reference conditions)	m^3/sec*	6.1
Total Particulate Matter Mass Emission	kg/hr	0.35
Total Particulate Matter Concentration	mg/m^3*	16

Notes:

* *Reference conditions expressed as 273 K, 101.3 kPa, wet gas, without correction for oxygen*

β *Actual sampling time was 60 minutes*

Reportable Blank Results

Table 9 - Results of the Reportable Blank Concentrations for Total Particulate Matter taken for the PMA 1 – Main Scrubber Exhaust at Atritor Ltd., Coventry in August 2010

Emission Parameter	Sample Date	Units*	Blank Concentration
Total Particulate Matter	31st Aug 2010	mg/m^3	0.43

Notes:

* *Reference conditions expressed as 273 K, 101.3 kPa, wet gas, without correction for oxygen.*

Certificates of Analyses

RPS Laboratories

UKAS TESTING 0605

Test Certificate Date 13/09/2010

Client	RPS Towcester Grafton Building Caswell Science & Technology Park Caswell, Towcester Northants NN12 8EQ	Order No.	FTBS12390
		Certificate No.	WK10 4602
		Issue No.	1
Contact	Edwin Powell	Date Received	03/09/2010
Description	2 filters & 2 solutions for TPM	Technique	Gravimetric

Sample No.	614739	061497	Method
Total particulate matter		17.04 mg	D9(U)
Sample No.	614740	T119217	Method
Total particulate matter		3.5 mg	D9(U)
Sample No.	614741	064329	Method
Total particulate matter		<0.04 mg	D9(U)
Sample No.	614742	T119216	Method
Total particulate matter		0.5 mg	D9(U)

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Tel (0161) 872 2443 Fax (0161) 877 3359

Test Certificate

Date 13/09/2010

Client	RPS Towcester	Certificate No	WK10 4602
		Issue No	1

Tested By	Carl Hayes	Date	13/09/2010
Approved By	[redacted]	Date	13/09/2010

Adam Crowe
Operations Manager

For and on authority of RPS Laboratories Ltd
RPS Laboratories terms and conditions apply - a copy is available on request

Method Symbols (U) Analysis is UKAS Accredited
(N) Analysis is not UKAS Accredited

Concentration values (mg/m3 and ppm) are provided to assist with interpretation only - they are not covered by the scope of UKAS accreditation

Analysis carried out on samples as received

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