

<b>Report for Periodic Monitoring of Emissions to Atmosphere</b>	
Part :	Executive Summary
Permit Number:	PPC/093, variation 002
Operator:	Coventry Castings
Installation:	Barlow Road, Coventry
Emission Point:	Furnace Extraction Stack - H
Monitoring Date:	10 <sup>th</sup> July 2008



Contract Reference: FTA 7212

Operator: Coventry Castings Ltd

Address: Barlow Road  
Aldermans Green Industrial Estate  
Aldermans Green  
Coventry  
CV2 2LD

Monitoring Organisation: RPS Health, Safety & Environment

Address: Steadings Barn, Pury Hill Business Park, nr Alderton,  
Towcester, Northamptonshire, NN12 7LS

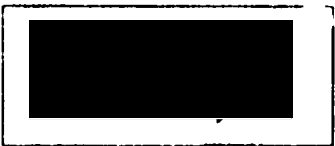
Report Date: 1<sup>st</sup> August 2008

Report prepared By: E. Powell

Position: Consultant

MCERTS Registration No.: MM 05 621

Signature:



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### Monitoring Objectives

At the request of Mr Ian Reid of Coventry Castings, RPS Health, Safety and Environment conducted air emission monitoring at the Coventry site, Warwickshire in July 2008

The monitoring programme at this installation was carried out to provide data on the emissions to atmosphere from the Furnace Extraction Stack - H.

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

Table 1

Parameters Requested to be Monitored	Emission Point Furnace Extraction Stack - H
Total Particulate Matter	✓
Specific Requirements	See table 3

Notes:

✓ Represents the actual parameters monitored

**Monitoring Results**

**Table 2 - Monitoring Results from the Furnace Extraction Stack - H at Coventry Castings, Coventry in July 2008**

Parameter	Value	Unit	Wet Gas Correction	Sampling Date	Sampling Time	Method	Accreditation	Operator	
Total Particulate Matter	20	53	mg/m <sup>3</sup>	-	wet gas, without correction for oxygen	16-July-08 09:45 - 12:00	BS-EN 13284-1 2002	MCERTS	See table 3

Notes:  
 Cannot quote uncertainties for reasons explained in table 4.

**Operating Information**

**Table 3 – Operating Information During Monitoring of the Furnace Extraction Stack - H at Coventry Castings, Coventry in July 2008**

Parameter	Result
Sample Date	16 <sup>th</sup> July 2008
Process Type	Scrap steel was melted in the electric induction furnace to >1420°C. After drossing, the melt was transferred to a 600kg ladle. This was covered with an exothermic flux. The remaining melt was transferred to a large sand cast.
Process Duration	First batch 09:25 - 12:00
If 'Batch', was monitoring carried out over the whole batch?	Yes – covered melting (from cold), drossing and transfer stages
If 'No', give details	N/A
Abatement/Operational?	None
Fuel Type	N/A (electric coreless induction furnace)
Feedstock	Scrap Steel
Load	Approx. 1 tonne loads
Throughput	N/A
Continuous Rating	N/A

**Monitoring Deviations**


**Table 4 – Monitoring Deviations During Monitoring of the Furnace Extraction Stack - H at Coventry Castings, Coventry in July 2008**

Substance Deviations	Monitoring Deviations	Other Relevant Issues
No monitoring of Hydrogen Disulphide at request of client.	Unable to sample from both access ports. As stated in BS EN 13284:1 and EA TGN M2 uncertainties cannot be quoted	

**Report for Periodic Monitoring of Emissions to Atmosphere**

**Part 2:** Supporting Information  
**Permit Number:** PPC/093, variation 002  
**Operator:** Coventry Castings  
**Installation:** Barlow Road, Coventry  
**Emission Point:** Furnace Extraction Stack - H  
**Monitoring Date:** 16<sup>th</sup> July 2008



**Contract Reference:** FTBS 7212  
**Operator:** Coventry Castings Ltd  
**Address:** Barlow Road  
Aldermans Green Industrial Estate  
Aldermans Green  
Coventry  
CV2 2LD  
**Monitoring Organisation:** RPS Health, Safety & Environment  
**Address:** Steadings Barn, Pury Hill Business Park, nr Alderton, Towcester,  
Northamptonshire, NN12 7LS  
**Report Date:** 1<sup>st</sup> August 2008  
**Report Approved By:** E. Powell  
**Position:** Consultant  
**MCERTS Registration No.:** MM 05 021  
**Signature:** 

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**APPENDIX 1: General Information**

**Monitoring Organisation Staff Details**

**Table 5**

Site Team	Position	MCERTS Level	Technical Endorsements	MCERTS Registration Number
Ed Powell	Consultant	2	1, 2, 3 & 4	MM 05 621
Bradley Atkins	Consultant	1	2	MM 06 780

Report Author	Position	MCERTS Level	Technical Endorsements	MCERTS Registration Number
Bradley Atkins	Consultant	2	1, 2, 3 & 4	MM 06 780

Report Reviewer	Position	MCERTS Level	Technical Endorsements	MCERTS Registration Number
Edwin Powell	Senior Consultant	2	1, 2, 3 & 4	MM 05 621

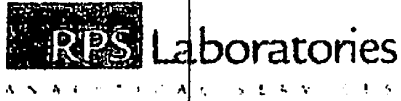
**Monitoring Organisation Method Details**

**Table 6**

Monitoring Parameter	Method	Frequency	Location	Method	Method	Method	Method	Method	Method
Practical Considerations Prior to Monitoring	N/A	RPSCE/1/1	MCERTS	N/A	N/A	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	N/A	N/A
Gas Temperatures	BS-EN 13284-1:2001	RPSCE/1/2	MCERTS	N/A	N/A	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(s) Furnace Extraction Stack - H**

Certificate(s) of Analyses



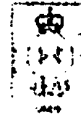
Test Certificate

Date 21/07/2008

<b>Client</b>	RPS Test Station Stearings Barn Ply 148 Business Park 7th Acoanton Towcester NN12 7LS	<b>Order No.</b>	FTBS7212
		<b>Certificate No.</b>	WK08-8170
		<b>Issue No.</b>	1
<b>Contact</b>	Edwin Rowe	<b>Date Received</b>	16/07/2008
<b>Description</b>	2 No 4 and 1 washer for 19M	<b>Technique</b>	Gravimetry
<b>Sample No</b>	60512	649004	Method
<b>Total particulate matter</b>	14.52 mg		DNUT
<b>Sample No</b>	60513	1112181	Method
<b>Total particulate matter</b>	2.63 mg		DNUT
<b>Sample No</b>	60514	645363	Method
<b>Total particulate matter</b>	0.04 mg		DNUT
<b>Sample No</b>	60515	1112182	Method
<b>Total particulate matter</b>	0.55 mg		DNUT

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RPS Laboratories Ltd Unit 12, Waters Edge Business Park, Madwell Road, Gifford MS 3E2  
Tel: 01611 872243 Fax: 01611 877399



Unit 11/12/2008

Test Certificate

Client	RFS Worcester	Certificate No.	WPC080170
		Issue No.	

Tested By: Catherine Weatherall Date: 31/07/2008

Approved By: [Signature] Date: 31/07/2008

Andrew G. [Signature]  
General Manager

The signatures and stamp of HPS Laboratories Ltd  
denotes that the information on this certificate is a true and correct copy of the report

- Mobile phones:
- A. Andrew G. JBA A. tested
  - B. Andrew G. JBA Approved
  - C. Andrew G. Stamp tested

Comments: values reported are the average of three measurements taken by the sample of 1000 castings

Method used: [unclear]

For details of the test procedure refer to the MCERTS certificate or the relevant laboratory

**Reportable Blank Results**

**Table 9 - Results of the Reportable Blank Concentrations for Total Particulate Matter taken for the Furnace Extraction Stack - H at Coventry Castings Ltd, Coventry on the 16<sup>th</sup> July 2008**

Emission Parameter	Sample Date	Units*	Blank Concentration
Total Particulate Matter	10-July-08	mg/m <sup>3</sup>	0.27

**Notes:**

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

**Table 8 - Gas Measurements (continued)**

**Results of Total Particulate Matter and General Emission Parameters Measured from the Furnace Extraction Stack - H at Coventry Castings Ltd, Coventry on the 16<sup>th</sup> July 2008**

Measurement Parameter	Units	Mean Result
Sample Date	-	16 July -08
Sample Period	-	9.45 - 12:00
Barometric Pressure	kPa	101.1
Internal Area Of Duct	m <sup>2</sup>	0.34
Isokinetic Ratio	%	102
Stack Moisture Content	%	0.5
Stack Temperature	°C	30
Gas Velocity (as measured at sampling plane)	m/sec	2.7
Volumetric Flowrate (as measured)	m <sup>3</sup> /sec	1.3
Volumetric Flowrate (at reference conditions)	m <sup>3</sup> /sec*	1.1
<b>Total Particulate Matter Mass Emission</b>		
	kg/hr	0.021
<b>Total Particulate Matter Concentration</b>		
	mg/m <sup>3</sup> *	5.3

**Notes:**

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



**Stack Gas Measurements**

**Table 7 - Temperature and Velocity Profile**

**Results of Gas Flows and Gas Temperatures Measured from the Furnace Extraction Stack - H at Coventry Castings Ltd, Coventry on the 16<sup>th</sup> July 2008**

Distance from Stack (m)	Sample Line A				Sample Line B			
	T (°C)	ΔP (mm H <sub>2</sub> O)	Neg. Flow?	Spilt <15°	T (°C)	ΔP (mm H <sub>2</sub> O)	Neg. Flow?	Spilt <15°
0.05	22	1.4	No	Yes	Unable to access port			
0.17	22	1.4	No	Yes				
0.49	22	1.0	No	Yes				
0.61	22	1.0	No	Yes				

Stack Temperature (°C)	101.1
Stack Pressure (mm H <sub>2</sub> O)	-vc 3.0
Stack Diameter (m)	0.66