COVRAD HEAT TRANSFER LTD

Report on Air Emission Monitoring at Covrad Heat Transfer Ltd Canley, Coventry December 2006

Stack Emission Monitoring Report – Executive Summary Ref. FTA 5889





1709

1709

Report for Periodic Monitoring of Emissions to Atmosphere

Part 1:

Executive Summary

Operator:

Covrad Heat Transfer Ltd

Installation:

Canley, Coventry

Emission Points:

Red Oxide Booth

Industrial Spray Booth 1 Industrial Spray Booth 2 Assembly Shop Spray Booth

Monitoring Dates:

5th - 7th December 2006



1709



1709

Contract Reference:

FTA 5889

Operator:

Covrad Heat Transfer Ltd

Address:

Sir Henry Parkes Road

Canley Coventry CV5 6BN

Monitoring Organisation:

RPS Health, Safety & Environment

Address:

Steadings Barn, Pury Hill Business Park, nr Alderton,

Towcester, Northamptonshire, NN12 7LS

Report Date:

15th January 2007

Report Approved By:

Brett Durden

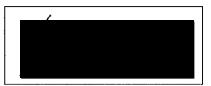
Position:

Technical Director

MCERTS Registration No.:

MM 03 167

Signature:



RPS Health, Safety and Environment has produced this report within the term of the contract with the client and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

CONTENTS

Part 1: Executive Summary

Monitoring Objectives	3
Monitoring Results	4
Operating Information	8
Monitoring Deviations	9

Monitoring Objectives

At the request of Mr R. Holmes of Covrad Heat Transfer Ltd., RPS Health, Safety and Environment conducted air emission monitoring at the Canley site, Coventry in December 2006.

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

		80/2017/01/03/19		Emissio	n Points			
Parameters Requested to be Monitored	Red Oxide			Industri Boo	al Spray th 2	Assem	bly Shop Booth	Spray
	Booth	Left Exhaust	Right Exhaust				Exhaust #2	Exhaust #3
Total Particulate Matter	4	4	4	4	4	4	4	4
Specific Requirements		,	Norm	nal Operat	ing Cond	itions		

Notes:

- 4 Represents the actual parameters monitored
- 8 Represent parameters requested but not actually monitored

Reference No.: FTA 5889 Report Issue No.: 1 - Page 3 of 9
Visit No.: Annual (2006) January 2007

Monitoring Results

Table 2 - Monitoring Results from the Red Oxide Booth Exhaust at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

n Operating Status	Normal
Accreditation Status	MCERTS
Monitoring Reference Method	10:19 – BS-EN 13284-1 11:20 2002
Sampling Times	10:19 – 11:20
Sampling Sampling Date Times	5-Dec-06
Uncertainty Conditions 273K, (mg/m³) # 101.3kPa	wet gas, without correction for oxygen
Uncertainty (mg/m³)#	± 0.88
Unit	mg/m³
Emission Periodic Monitoring Value*	8.1
Emission Pe Limit Mon Value* R	50
Substance Monitored	Total Particulate Matter

Notes:

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

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Table 3 - Monitoring Results from the Industrial Spray Booth 1 - Left Exhaust at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

Substance Monitored	Emission Limit Value ^V	Emission Periodic Limit Monitoring Uni Value Result	Units	Uncertainty (mg/m³)#	Incertainty Conditions 273K, (mg/m³) # 101.3kPa	Sampling Sampling Date Times	Sampling Times	Monitoring Reference Method	Accreditation Operating Status	Operating Status
Total Particulate Matter	50	1.7	mg/m³	± 0.19	wet gas, without correction for oxygen	90-c-06	10:52 – 11:54	BS-EN 13284-1 2002	MCERTS	Normal

Notes:

The uncertainty associated with the quoted result is at the 95% confidence interval # "

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Report Issue No.: 1 - Page 4 of 9 January 2007

Table 4 - Monitoring Results from the Industrial Spray Booth 1 - Right Exhaust at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

Digital manufacture (1)	
n Operating Status	Normal
Accreditation Status	MCERTS
Monitoring Reference Method	BS-EN 13284-1 2002
Sampling Times	12:03 – 13:05
Sampling Sampling Date Times	6-Dec-06
Uncertainty Conditions 273K, (mg/m³) # 101.3kPa	wet gas, without correction for oxygen
Uncertainty (mg/m³)#	± 0.20
Units	mg/m³
Emission Periodic Limit Monitoring Value*	1.8
Emission Per Limit Moni Value [¥] Re	50
Substance Monitored	Total Particulate Matter

The uncertainty associated with the quoted result is at the 95% confidence interval

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Table 5 - Monitoring Results from the Industrial Spray Booth 2 - Left Exhaust at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

1	
Accreditation Operating Status	
ati	Vorma
per Sta	Zoz
O	~
я	
tio	γ
ita	ACERTS
ed	CE
- 55	Ž
Monitoring Reference Method	-1
ing ice d	284
frer for	:N 132 2002
oni efe Aei	Z 2
N. R. R.	S-E
	Ä
Si Si	1
Sampling Sampling Date Times	10:22 – BS-EN 13284-1 11:22 2002
	0:2
Sz	
50	_
ling	7-Dec-06
np]	၁ခင
l Sar	1-/
Reference Conditions 273K, 101.3kPa	<u> </u>
3.K	r E
Reference ditions 273 01.3kPa	wet gas, without correction for oxygen
ns en Pa	gas, witl rection oxygen
.3 ti	as, ect
2 g 5	# P P P
	§ 5
Incertainty (mg/m³)#	
## ##	
25_m	,
ce)	
55	
	40
its	/m/
D	mg/1
	, <u></u>
o ng	
ig is i	<u> </u>
nit Res	7.7
Periodic Monitoring Result	
- A	
Emission Periodic Limit Monitoring Value Result	
Emissior Limit Value ³	50
	4,
ᄪ	
7	je L
016	1ati
l iit	2
40i	latí
9	icu
ı <u>u</u> 1	
5 1	্ব
stan	I Pa
ubstan	otal Pa
Substance Monitored	Total Particulate Matter
Substan	Total Pa

Notes:

The uncertainty associated with the quoted result is at the 95% confidence interval

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Table 6 - Monitoring Results from the Industrial Spray Booth 2 - Right Exhaust at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

Normal	MCERTS	14:50 – BS-EN 13284-1 15:50 2002	14:50 – 15:50	90-29C-9	wet gas, without correction for oxygen	h.	mg/m³	3.6	50	otal Particulate Matter
ion Operating Status	Accreditation Status	Monitoring Reference Method	Sampling Sampling Date Times	Sampling Date	Uncertainty Conditions 273K, (mg/m³) # 101.3kPa	Uncertainty (mg/m³)#	Units	Emission Periodic Limit Monitoring Value Result	Emission Limit Value [¥]	Substance Monitored

The uncertainty associated with the quoted result is at the 95% confidence interval

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Table 7 - Monitoring Results from the Assembly Shop Spray Booth Exhaust #1 at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

nal
Norma
MCERTS
BS-EN 13284-1 2002
14:54 – 15:55
5-Dec-06
wet gas, without correction for oxygen
wet g
-:-
mg/m³
P.6
50
latter
iculate M
Total Particulate Matter

Notes:

The uncertainty associated with the quoted result is at the 95% confidence interval

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Table 8 - Monitoring Results from the Assembly Shop Spray Booth Exhaust #2 at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

Substance Monitored	Emission Limit Value*	Periodic Monitoring Result	Units	Uncertainty (mg/m³) #	Reference Conditions 273K, 101.3kPa	Sampling Sampling Date Times	Sampling Times	Monitoring Reference Method	Accreditation Operating Status	Operating Status
otal Particulate Matter	50	1.3	mg/m³	± 0.14	wet gas, without correction for oxygen	7-Dec-06	14:16 – B	BS-EN 13284-1 2002	MCERTS	Normal

The uncertainty associated with the quoted result is at the 95% confidence interval

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Table 9 - Monitoring Results from the Assembly Shop Spray Booth Exhaust #3 at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

0.89 mg/m³

Notes:

The uncertainty associated with the quoted result is at the 95% confidence interval

Emission Limit Value taken from Secretary of State Process Guidance Note 6/23(04) - Guidance for Coating of Metal and Plastic Processes

Report Issue No.: 1 - Page 7 of 9 January 2007

Operating Information

Table 10 - Operating Information During Monitoring of the Specified Spray Booth Exhausts at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

Parameter	Red Oxide	Industrial Sp	Spray Booth 1	Industrial Sp	Industrial Spray Booth 2	Asseml	Assembly Shop Spray Booth	Booth
j	Booth	Left Exhaust	Left Exhaust Right Exhaust Left Exhaust Right Exhaust	Left Exhaust	Right Exhaust	Exhaust #1	Exhaust #2	Exhaust #3
Sample Date	5-Dec-06	6-Dec-06	90-Dec-06	7-Dec-06	90-29C-9	5-Dec-06	7-Dec-06	5-Dec-06
Process Type	Manual spraying of red oxide based primer onto radiator parts	Manual spraying of solvent free paint onto radiator parts	Manual spraying of solvent free paint onto radiator parts and completed units	Manual spraying Manual spraying Manual spraying of solvent free of solvent free paint onto paint onto paint onto radiator parts and radiator parts and radiator parts and completed units completed units	Manual spraying of solvent free paint onto radiator parts and completed units			
Process Duration	Variable depending on size of part	Variable depending on size of part	Variable depending on size of part	Variable depending on size of part	Variable depending on size of part	Variable depending on size of part	Variable depending on size of part	Variable depending on size of part
If 'Batch', was monitoring carried out over the whole batch?	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period	Yes – several parts sprayed during monitoring period
If 'No', give details	1	1	1	,		1	ļ	
Abatement/Operational?	Filters - Yes	Filters - Yes	Filters - Yes	Filters - Yes	Filters - Yes	Filters - Yes	Filters - Yes	Filters - Yes
Feedstock	Radiator Radiator Components and Components an parts parts	ים	Radiator Components and parts	Radiator Components and parts	Radiator Components and parts	Radiator Components and parts	Radiator Components and parts	Radiator Components and parts
Throughput	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies

Report Issue No.: 1 - Page 8 of 9 January 2007

Monitoring Deviations

Table 11 – Monitoring Deviations During Monitoring of the Specified Spray Booth Exhausts at Covrad Heat Transfer Ltd., Canley, Coventry in December 2006

Substance Deviations	Monitoring Deviations	Other Relevant Issues
None	Industrial Spray Booth 2	
	Exhausts 1 & 2 – Only one	
	sample line was available for	
	monitoring due to platform and	
	exhaust constraints. BS EN	
	13284 requires two sample lines	
	be monitored and if not possible	
	then uncertainty cannot be	
	quoted. Time at available sample	
	points was increased accordingly.	

Reference No.: FTA 5889 Visit No.: Annual (2006)

REPORT FOR PERIODIC MONITORING OF THE INDUSTRIAL, NEW, RED OXIDE BOOTHS AND TRIKE BATH.

 ${\bf COVRDAD\ HEAT\ TRANSFER\ LTD,\ COVENTRY}.$

FEBRUARY 2006

Report for Periodic Monitoring of Emissions to Atmosphere

Part 1:

Executive Summary

Operator:

Covrad Heat Transfer Ltd

Installation:

Covrad Heat Transfer Ltd, Coventry,

Warwickshire.

Emission Point:

Industrial, New, Redox Booth and Trike

bath

Monitoring Date(s):

9th - 11th January 2006

Contract Reference:

FYS3926

Operator:

Covrad Heat Transfer

Address:

Sir Henry Parks Road

Canley Coventry CV5 6BN

Monitoring Organisation:

RPS Health, Safety & Environment

Address:

Unit 1, Lowfields Business Park, Old Power

Way, Elland, HX5 9DE

Report Date:

February 2006

Report Approved By:

Antony Sumner

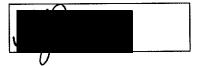
Position:

Quality Manager-Stack Emissions

MCERTS Registration Number:

MM 03 233

Signature:



RPS Health, Safety and Environment has produced this report within the term of the contract with the client and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

CONTENTS

Part 1: Executive Summary

Section 1 – Monitoring Objectives

Section 2 – Monitoring Results

Section 3 - Monitoring Deviations

Part 2: Supporting Information

Appendix 1 - General information

Appendix 2 – Raw Sampling Data, Analysis Data & Uncertainty.

Page 2 of 2

Monitoring Objectives

At the request of Mr Bob Holmes of Covrad Heat Transfer ltd, RPS Health, Safety and Environment conducted stack emission monitoring at the Coventry site, Warwickshire in January 2006.

The monitoring programme at this installation was carried out to provide data on emissions to atmosphere for comparison with the limits specified in the authorisation for this site, as issued by Warwickshire Council in accordance with process guidance note (PG 6/23) (04) "Coating of metals and plastics"

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

Table 1.1

	Emission Point
Parameters Requested to be Monitored	Stack 1
	Industrial Spray Booth 1
Total Particulate Matter	√
High Concentration VOC (as total organic carbon)	√
Specific Requirements	Normal Operating Conditions

Table 1.2

Parameters Requested to be Monitored	Emission Point Stack 2 Industrial Spray Booth 1
Total Particulate Matter	٧
High Concentration VOC (as total organic carbon)	٧
Specific Requirements	Normal Operating Conditions

Notes:

√ Represents the actual parameters monitored

X Required by authorisation but not monitored at this visit (See Section 4)

Table 1.6

Parameters Requested to be Monitored	Emission Point Stack 2 New Booth 1	
Total Particulate Matter	٧	
High Concentration VOC (as total organic carbon)	٧	
Specific Requirements	Normal Operating Conditions	
Table 1.7		ossenst Bret-
Parameters Requested to be Monitored	Emission Point / Stack 3	Oran

Table 1.7

	Emission Point
Parameters Requested to be Monitored	Stack 3
	New Booth 1
Total Particulate Matter	٧
High Concentration VOC (as total organic carbon)	V
Specific Requirements	Normal Operating Conditions

Table 1.8

	Emission Point
Parameters Requested to be Monitored	Red Oxide
Total Particulate Matter	1
High Concentration VOC (as total organic carbon)	1
Specific Requirements	Normal Operating Conditions

Notes: $\sqrt{}$

Represents the actual parameters monitored

Required by authorisation but not monitored at this visit (See Section 4) X

> Report Issue Number: 1 Date of Issue: February 2006

Page 3 of 4

Visit Number: 1

Table 1.9

Emission Point

Parameters Requested to be Monitored	Emission Point
	Large Degreaser (Trike)
Philiph I 'anapatrotion MIM' (as total argania aschan)	
High Concentration VOC (as total organic carbon) Specific Requirements	Normal Operating Condition

Notes:

 $\sqrt{}$ Represents the actual parameters monitored

X Required by authorisation but not monitored at this visit (See Section 4)

Monitoring Results

Table 2.1 – Monitoring Results from the (Stack 1 Industrial Spray Booth Left Internal)

total organic carbon) N/A	er cr		Substance Monitored Limit Valu					
800	51.97	39	4.5	6	0.7	Emission Periodic Limit Value Monitoring Result		
g/hr	mg/m³	g/hr	mg/m³	g/hr	mg/m³	Units		
	7	5/5	N/A		N/A		N/A	Uncertainty (%)#
O ₂ .	Dry, 273K, 101.3 no	Dry, 273K, 101.3 no correction required for 10/0		O_2 .	Dry, 273K, 101.3 no correction required for 10/0	Reference V Conditions 273K, 101.3kPa		
10/01/2000	10/01/2006	10/01/2000	or 10/01/2006		10/01/2006	Att, man for the agent of the control of the		
12:30	12:00-	15:32	6 14:30- 15:32		14:30- 15:32		13:40-	Sampling Sampling Date Times
13526:2002	BS EN	BS ISO 9096:2003		BS ISO 9096:2003		9096:2003	BS ISO	Monitoring Reference Method
MICLINIO	MCEDTS	MCENIO	MCEPTS	MACHALA	MCERTS	Accreditation Status		
TAOTITON	Normal	INOLLIA	Norma	Morning	Normal	Operating Status		

Notes: #

Table 2.2 - Monitoring Results from the (Stack 2 Industrial Spray Right Internal)

And the second s	A CONTRACTOR OF THE PROPERTY O	Y 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10.10		O_2 .		g/hr	260	N/A	total organic carbon)
Normal	MCERTS	BS EN	12:43-	10/01/2006	Dry, 273K, 101.3 no correction required for 10/01/2006	14.5	mg/m³	10.86	50*	High Concentration VOC (as
		9096:2003	12:30		O ₂ ,	± 1/ A *	g/hr	12	N/A	Run 2
Normal	MCERTS	BS ISO	12:00-	9/01/2006	Dry, 273K, 101.3 no correction required for 9/01/2006	N/A	mg/m³	0.8	50*	Total Particulate Matter
		5007:0606	14:0/		O ₂ .		g/hr	7	N/A	Run l
Normal	MCERTS	BS ISO	13:35-	9/01/2006	Dry, 273K, 101.3 no correction required for 9/01/2006	N/A	mg/m³	0.5	50*	Total Particulate Matter
Operating Status	Accreditation Operating Status Status	Monitoring Reference Method	Sampling Times	Sampling Date	Reference Conditions 273K, 101.3kPa	Uncertainty (%)#	Units	Periodic Monitoring Result	Emission Monitoring Limit Value Result	Substance Monitored

Table 2.3 - Monitoring Results from the (Stack 1 Industrial Spray Left External)

total organic carbon)	High Concentration VOC (as total organic carbon)		Total Particulate Matter	Run 1	Total Particulate Matter	Substance Monitored
N/A	50*	N/A	50*	N/A	50*	Emission Limit Value
1230	82.10	5	0.6	3.6	4.1	Periodic Monitoring Result
g/hr	mg/m³	g/hr	mg/m³	g/hr	mg/m³	Units
Annual management of the fact	<i>A</i>)	N/A)	N/A	Uncertainty (%)#
O ₂ .	O ₂ . Dry, 273K, 101.3 no correction required for 11/01/		Dry, 273K, 101.3 no	O ₂ .	Dry. 273K, 101.3 no correction required for 9/01/2006	Reference Y Conditions 273K, 101.3kPa
11/01/2000	. 11/01/2006), o 1, E000	Dry, 273K, 101.3 no correction required for 9/01/2006 O ₂ .		9/01/2006	Sampling Date
12:40	12:10-	14:07	13:35- 14:07		12:10-	Sampling Times
13526:2002	BS EN	BS ISO 9096:2003		9096:2003	BS ISO	Monitoring Reference Method
Little and the second of the s	MCERTS	174000000	MCERTS		MCERTS	Accreditation Operating Status Status
	Normal		Normal		Normal	Operating Status

* #

Table 2.4 - Monitoring Results from the (Stack 2 Industrial Spray Right External)

total organic carbon)	High Concentration VOC (as total organic carbon)		Total Particulate Matter	Run 1	Total Particulate Matter	Substance Monitored		
N/A	50*	N/A	50*	N/A	50*	Emission Limit Value		
3010	184.39	11	1.2	22	2.3	Periodic Monitoring Result		
g/hr	mg/m³	g/hr	mg/m³	g/hr	mg/m³	Units		
A LA	0 1	147.4.8	N/A		N/A	Uncertainty (%)#		
for O ₂ .	Dry, 273K, 101.3kPa,	for O ₂ .	Dry, 273K, 101.3kPa, no correction required for O ₂ .		Dry, 273K, 101.3kPa,	Reference Conditions 273K, 101.3kPa		
	11/01/2006	1	10/9/2004		10/9/2004	Sampling Date		
12:40	12:10-	12:30	12:00- 12:30		13:35-	Sampling Times		
13526:2002	BS EN	9096:2003	BS ISO 9096:2003		BS ISO 9096:2003		BS ISO	Monitoring Reference Method
	MCERTS MCERTS			MCERTS	Accreditation Operating Status Status			
Total Control of the	Normal		Normal		Normal	Operating Status		

Table 2.5 - Monitoring Results from the (Stack 1 New Spray Booth)

total organic carbon)	Total Particulate Matter Run 2 High Concentration VOC (as		Run I	Total Particulate Matter	Substance Monitored	
N/A	50*	N/A	50*	N/A	50*	Emission Limit Value
170	12.30	6.4	4.7	273	19.1	Periodic Monitoring Result
g/hr	mg/m³	g/hr	mg/m³	g/hr	mg/m³	Units
12.70	12 96	UA	Ž!/^		Z/A	Uncertainty (%)#
for O_2 .	Dry, 273K, 101.3kPa	for O ₂	Dry, 273K, 101.3kPa, no correction required for O ₂		Dry, 273K, 101.3kPa,	Reference Conditions 273K, 101.3kPa
11/01/2000	11/01/2006	10/)/	d 10/9/2004		10/9/2004	Sampling Sampling Date Times
12:25	11:55-	12:00- 12:30		14:07	13:35-	Sampling Times
13526:2002	BS EN	BS ISO 9096:2003		9096:2003	BS ISO	Monitoring Reference Method
in Chicago	MCERTS	MCDICIO	MCERTS		MCERTS	Accreditation Status
TANTAL	Normal	LYCILIUX	Normal		Normal	Operating Status

* #

Table 2.6 - Monitoring Results from the (Stack 2 New Spray Booth)

total organic carbon)	High Concentration VOC (as	Run 2	Total Particulate Matter Run 2		Total Particulate Matter	Substance Monitored L
N/A	50*	N/A	50*	N/A	50*	Emission Limit Value
80	4.20	29	1.4	29	8.1	Periodic Monitoring Result
g/hr	mg/m³	g/hr	mg/m³	g/hr	mg/m³	Units
i,	y V	TA'N	Z/>	, , ,	Z/A	Uncertainty (%)#
for O ₂	Dry, 273K, 101.3kPa,	for O ₂	Dry, 273K, 101.3kPa, no correction required for O ₂		Dry, 273K, 101.3kPa,	Reference Conditions 273K, 101.3kPa
11/01/2000	11/01/2006		10/9/2004		10/9/2004	Sampling Date
10:52	10:22-	12:30	12:00-	14:07	13:35-	Sampling Times
13526:2002	BS EN	9096:2003	BS ISO	9096:2003	BS ISO	Monitoring Reference Method
	MCERTS		MCERTS	THE THE THE PARTY OF THE PARTY	MCERTS	Accreditation Operating Status Status
	Normal		Normal		Normal	Operating Status

The uncertainty associated with the quoted result is at the 95% confidence interval As 30 minute mean (Stated in PG 6/23(04)) "Coating of Metals and Plastics"

Visit Number: 1

Table 2.7 - Monitoring Results from the (Stack 3 New Spray Booth)

total organic carbon)	High Concentration VOC (as	Total Particulate Matter Run 2		Run I	Total Particulate Matter	Substance Monitored
N/A	50*	N/A	50*	N/A	50*	Emission Limit Value
280	16.91	p	0.7	<u> </u>	0.6	Emission Monitoring Result
g/hr	mg/m³	g/hr	mg/m³	g/br	mg/m³	Units
7.0	0 8	14/41	Z/A		Z/A	Uncertainty (%)#
for O ₂	Dry, 273K, 101.3kPa, no correction required 10/01/2006 for O ₂		Dry, 273K, 101.3kPa,	for O ₂	Dry, 273K, 101.3kPa,	Uncertainty Reference (%)# Conditions 273K.
10/01/2000	10/01/2006		10/9/2004		10/9/2004	Sampling Date
11:46	11:16-	13:35- 14:07 12:00- 12:30 11:16-		Sampling Times		
9096:2003 BS EN 13526:2002		BS ISO	9096:2003	BS ISO	Monitoring Reference Method	
	MCERTS MCERTS			MCERTS	Accreditation Operating Status	
Normal Normal			Normal	Operating Status		

Table 2.9 - Monitoring Results from the (Large degreaser (Trike))

	Hig	
High Concentration VOC (as total organic carbon)		Substance Monitored
N/A	50*	Emission Limit Value
80	123.10	Periodic Monitoring Result
g/hr	mg/m³	Units
, E	12 95	Uncertainty (%)#
for O ₂ .	Dry, 273K, 101.3kPa,	Reference Conditions 273K, 101.3kPa
	9/01/2006	Sampling Sampling Date Times
15:10	14:10-	Sampling Times
BS EN 13526:2002 MCERTS		Monitoring Reference Method
Propries and Control of Control o	MCERTS	Accreditation Operating Status Status
A LANGE TO THE PROPERTY OF THE	Normal	Operating Status

As 30 minute mean (Stated in PG 6/23(04)) "Coating of Metals and Plastics"

Visit Number: 1

Monitoring Deviations

Table 3.1 - Monitoring deviations during monitoring of the Stack 1 Industrial Spray Booth 1, January 2006

	- Koosse
N/A	Substance Deviations
N/A	Monitoring Deviations
Sampling location does not meet requirement as laid down in EA document M1.	Other Relevant Issues

Table 3.2 - Monitoring deviations during monitoring of the Stack 2 Industrial Spray Booth 1, January 2006

N/A	Substance Deviations
N/A	Monitoring Deviations
Sampling location does not meet requirement as laid down in EA document M1.	Other Relevant Issues

Table 3.3 - Monitoring deviations during monitoring of the Stack 1 Industrial Spray Booth 2, January 2006

The state of the s	
	S
	24 minutes
	ubstance Deviations
	نذ
Z	5.00.8
	Deviat
, D	0
	2
	tions
	0
	Control of
	Control of
	3
	Control of the second of the s
	100 August 100 August 170 August
1	
1	The Audit of Printing and Audit
1	
ŧ	51.5 (23.5) (20.7) (20.5) (20.7)
	10.000 (10.000
1	
J	
Í	The state of the s
	Monitoring Devi
1	The state of the s
	CANADA TANDA
	nitoring I
フ	
17	49
, D	Deviations
	9
	S. Eve
1	<u> </u>
	atio
1	
	2
	The common that common the common the common than the common
	March Control of Contr
	Continuo de Co
	The second secon
	and the second s
	1.00 (
	No. (Aug.) Comment Despite Comment
	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1
	200 C
	2011 (100 page 100 pa
	Constitution Control Statement
•	
	Carrier and Carrier
	2000
	Other
	Control Andrews
	2
	H
	Control of the Contro
Z	
N.	
	<u> </u>
	le E
N/A	Relevant Iss
	2
	6
	, in the second
	Endorseller (1995)
	The state of the s
	And Company of the Co
(1	Other Relevant Issues
į	
H	Other Relevant Issues

Table 3.4 - Monitoring deviations during monitoring of the Stack 2 Industrial Spray Booth 2, January 2006

N/A	Substance Deviations
N/A	Monitoring Deviations
N/A	Other Relevant Issues

Table 3.5 - Monitoring deviations during monitoring of the Stack 1, New Spray Booth, January 2006

N/A	Substance Deviations
N/A	Monitoring Deviations
Sampling location does not meet requirement as laid down in EA document M1.	Other Relevant Issues

Table 3.6 - Monitoring deviations during monitoring of the Stack 2, New Spray Booth , January 2006

N/A	Substance Deviations
N/A	Monitoring Deviations
Sampling location does not meet requirement as laid down in EA document M1.	Other Relevant Issues

Table 3.7 - Monitoring deviations during monitoring of the Stack 3, New Spray Booth, January 2006

1	
	Provide Control of Con
	Subst
	2
	5
N/A	8
>	Devi
	3
	1 2 2
	10. 19-90 (A. 19-90) 10. 19-90
	27 - 122 - 1
	The control of the co
	S and age of the
	10000
	∥≡ Ę .
7	
N/A	ad
	S.
	.
	ons
	to
	Proceedings of the Control of the Co
	CONTRACTOR
	TOTAL SERVICE CONTRACTOR
	The state of the s
	Section (Control of Control of Co
	The state of the s
i i	Est and District of State Co.
	Mineral Company of the Company of th
N/A	
	2000 000 000 000 000 000 000 000 000 00
	200 000 000 000 000 000 000 000 000 000
	1 9
Z	
/A	2000 X 1000 Miles
	2
	Other Relevant Issues
-	4
	To the Control of the
14	

Table 3.8 - Monitoring deviations during monitoring of the Red oxide, January 2006

N/A	Substance Deviations
N/A	Monitoring Deviations
Sampling location does not meet requirement as laid down in EA document M1.	Other Relevant Issues

Table 3.9 - Monitoring deviations during monitoring of the large degreaser (Trike), January 2006

N/A	Substance Deviations
N/A	Monitoring Deviations
N/A	Other Relevant Issues

Report for Periodic Monitoring of Emissions to Atmosphere

Part 2:

Supporting Information

Operator:

Covrad Heat Transfer Ltd

Installation:

Covrad Heat Transfer Ltd, Coventry,

Warwickshire.

Emission Point:

Industrial, New, Redox Booth and Trike

bath

Monitoring Date(s):

9th - 11th January 2006

Contract Reference:

FYS3926

Operator:

Covrad Heat Transfer

Address:

Sir Henry Parks Road

Canley Coventry CV5 6BN

Monitoring Organisation:

RPS Health, Safety & Environment

Address:

Unit 1, Lowfields Business Park, Old Power

Way, Elland, HX5 9DE

Report Date:

February 2006

Report Approved By:

Antony Sumner

Position:

Quality Manager-Stack Emissions

MCERTS Registration Number:

MM 03 233

Signature:

RPS Health, Safety and Environment has produced this report within the term of the contract with the client and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

CONTENTS

Part 1: Executive Summary

Section 1 – Monitoring Objectives

Section 2 - Monitoring Results

Section 3 – Monitoring Deviations

Part 2: Supporting Information

Appendix 1 - General Information

Appendix 2 - Raw Sampling Data, Analysis Data & Uncertainty.

APPENDIX 1: General Information

Report Issue Number; 1 Date of Issue: February 2006 Page 1 of 2

Monitoring Organisation Method Details

Table 5

		-			3
Analysis Accreditaton	N/A	N/A	N/A	N/A	UKAS
Analytical Laboratory	N/A	N/A	N/A	N/A	RPS Laboratories, Manchester
Analysis Procedure No.	N/A	N/A	N/A	N/A	D9
Analysis	N/A	N/A	N/A	FID	Gravimetric
Monitoring Procedure No.	RPSCE/1/1	RPSCE/1/2	RPSCE/1/2	RPSCE/1/4c	RPSCE/1/7d
Standard Method	N/A	BS-EN 13284- 7 1:2001	BS-EN 13284- 1:2001	BS EN 13526:2002	BS ISO 9096:2003
Emission Parameter	Practical Considerations Prior to Monitoring	Gas Flows	Gas Temperatures	High Concentration TOC (as total organic carbon)	High Concentration Total Particulate Matter

Table 6 - Checklist Used

File Location Address	FYS3926 Electronic and Work folder	
Equipment Checklist Used	FYS3926	

APPENDIX 2: Appendix 2 - Raw Sampling Data, Analysis Data & Uncertainty.

Company Name: Covrad Heat Transfer Ltd

Site Name: Coventry

Sampling Point Ref: Industrial booth left Ext

Job / Report Reference: FYS3926

Date:09/1/06

Run: 1

JOD WEDOIL L	vetetetice. I i oo	020											
				Stack Diameter (m) (0.6									
Stack Static p	oress.mm H ₂ O:	0.2		0.282744									
Traverse		Port A											
Point No.	Δр,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp							
	mm H ₂ O		°C	mm H₂O		°C							
1	8.4	2.898	19.5	8	2.828	19.5							
2	8	2.828	19.5	7.6	2.757	19.5							
3	7.8	2.793	19.5	7.5	2.739	19.5							
4	7.4	2.720	19.5	6.6	2.569	19.5							
5	6.6	2.569	19.5	6.6	2.569	19.5							
6	6.4	2.530	19.5	6.6	2.569	19.5							
7	7.6	2.757	19.5	7.9	2.811	19.5							
8	7.9	2.811	19.5	8	2.828	19.5							
9	8	2.828	19.5	8.4	2.898	19.5							
10	8.6	2.933	19.5	8.4	2.898	19.5							
Minimum	6.4	2.530	19.5	6.6	2.569	19.5							
Maximum	8.6	2.933	19.5	8.4	2.898	19.5							
Mean	7.7	2.767	19.5	7.6	2.747	19.5							
Sum	76.7	27.667	195	75.6	27.467	195							
Total Sum	200		1 2 2 2	152.3	55.134	390							

Max. pitot press. =	8.6
Min. pitot press. =	6.4
Ratio Max:Min =	1.3 :1

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Oxygen Correction

Oxygen conceden	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

	Endpoint.								Þ		Sample Point					•		Probe Washings	Filter			Job / Report Reference: FYS3926	Run: 1	Sampling Form Ref. Industrial coots left E. Odtstack Filter/ Date:09/1/06	Site Name: Coventry	Company Name: Covrad Heat Transfer Lt. in-stack Filter?	Appendix 1: General Information
32,00	32	28	24	20	16	12	89	4	0		Clock Time min							394599	394106	Safaranca	Sample Filter Welchts	ce: FYS3926		Inquetinal poots less		rrad Heat Transfer L	
8,000		8.4	8,4	8.4	8.4	7.6	7,6	7.6	7.6		Pitot Δ p,							RPS	RPS	1 ahorator	ohts		Operators	- Outstack Filtery		t in-stack Filter?	
20.0	20	20	20	20	20	20	20	20	20		Stack Temp, °C							2.48	1.34	The second		1	GH/SP	Tes		No	
24.2		25.368	25,368	25.368	25.368	22,952	22,952	22.952	22.952	Desired	Orific												Bws%	Ę.	•	Bar. Press,mm Hg	
24.0		25	25	25	25	23	23	23	23	Actual	Orifice m/s-1							Probe Wash	Filter	***			2	0.82		751.53	
1.0	362811								361808	m ³	Gas Meter Reading							394600 RPS	394109 RPS		Sample Filter Blank Weighings		Nozzie No.	Dn used		K Factor	
20.0	20	20	20	20	20	20	20	20	20	గ	Temp at Gas Meter Outlet							0.5	0.04				8	α		3.02	
NIA	N/A	N/A	N/A	N/A	N/A	NA	× ×	NA	N/A	റീ	Condenser Temp,		F														
NIA	N/A	NIA	N/A	N/A	N/A	N/A	N/A	NA	N/A	റീ	Filter Box			Silica Gel	Impinger 5	Impinger 4	Impinger 3	Impinger 2	Impinger 1	Maint		•	Stop Time	Start I ime		Ambient Temp.	
N/A	N/A	N/A	N/A	NA	N/A	N/A	N/A	Z A	N/A	റ്	Probe								nas		Impinger Weig		12:32	12:30		12	
-10.4		-12	-	ㅎ	10	ş	÷	-10	-10	Inches Hg	Pump	o la local	1						- 	- 1	7			•	•	J	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	NIA	NIA	N/A	ငိ	Impinger Stem Temp.	0.0	3	0,0	0,0	0,0	0.0	0.0	0.0								
2.828		2.898	2.898	2.896	2.898	2,757	2.757	2.757	2.757		Root A p.	L					-	•				,	Box/Probe setting	Leak Rate (start / %)		Loak Rate (fin / %)	
										*			-					•					160 +/- 5 °C	8		۵	Report Issue Number: 1 Date of Issue: February 2006 Page 3 of 59

Site Name: Coventry

Date:09/1/06 Run: 1 Job / Report Reference: FYS3926

Sampling Point Ref: Industrial booth left Ext	Run: 1
Meter Volume Sampled, acm	1.003
Sample Run Start Time	12:30
Sample Run End Time	12:32
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	20.0
Meter Volume at STP, scm	0.926
Meter Volume at Wet STP, scm	0.926
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	9.423
Stack Flow Rate, acms	2.664
Stack Flow Rate, scms dry,STP	2.453
Nozzle Diameter, mm	8.00
% Isokinetic Variation	110.3
Total Mass of Particulate, mg	3.8
Percentage of Total Particulate Collected on Filter	35.1
Stack Particulate Concentration, mg/m ³	4.1
Particulate Mass rate, kg/hour	0.036
Emission Limit value	50.000

Sample Train Blank Resu	ilts.
Sample Blank Particulate Concentration, mg/m³	0.58
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: Industrial booth left Ext

Job / Report Reference: FYS3926

Date:09/1/06 Run: 2

				0.6			
Stack Static p	oress.mm H₂O:	0.2		12):	0.282744		
Traverse		Port A			Port B		
Point No.	Δр,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp	
	mm H₂O		့	mm H₂O		°C	
1	10.1	3.178	20	9.8	3.130	20	
2	9.9	3.146	20	8.9	2.983	20	
3	9.8	3.130	20	8.8	2.966	20	
4	9.6	3.098	20	7.5	2.739	20	
5	8.8	2.966	20	5.8	2.408	20	
6	8.7	2.950	20	6.5	2.550	20	
7	8.5	2.915	20	7.4	2.720	20	
8	7.2	2.683	20	8	2.828	20	
9	6.8	2.608	20	7	2.646	20	
10	5.5	2.345	20	6.4	2.530	20	
Minimum	5.5	2.345	20	5.8	2.408	20	
Maximum	10.1	3.178	20	9.8	3.130	20	
Mean	8.5	2.902	20.0	7.6	2.750	20.0	
Sum	84.9	29.021	200	76.1	27.501	200	
Total Sum			A subsetted	161	56.522	400	

Max. pitot press. =	10.1
Min. pitot press. =	5.5
Ratio Max:Min =	1.8 :1

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m²?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

RPS Health, Safety & Environment
MCERTS Report (v7) – Part 2 – Summary Information
Appendix 1: General Information

										_								1			87		App	HIIO	11X	I; Q	sener	ai in	юш	atio	
		Endpoint,		-1-2)	^		Sample Point					Probe Washings			Run: 2 Job / Report Reference: FYS3926	Sampling Point Kett in Date:09/1/06	Site Name: Coventy	Company Name: Covi								
	32.00	32	28	24	20	16	12	o			1311	Clock Time					394098	Reference	Samplo Filter Weights	e: FYS3926	Sousting booth left c	50 100 100 100 100 100 100 100 100 100 1	ad Heat Transfer Lt								
	7.950		7	7	7	7	8.9	8,8	60 G	»	Ę.	Pitot a p,					RPS		hts.	Operators	Outstack rater r		In-stack Filter?								
	20.0	20	20	26	20	20	20	20	28 (30	,	Stack Temp,					0.5	Increase, mg 0.04		GH/SP B	160		No.								
	24.0		21.14	21.14	21.14	21.14	26.878	26.878	26.878	26.87A	Desired	Orifice m/s-1								Bws%	ì	· ·	Bar. Press.mm Ho								
	24.0		21	21	21	21	27	27	27	27	Actual	m/s-1					Probe Wash	Щ.,		2	0.02		751.53								
	0.1	361599								360627	т,	Gas Meter Reading					394500 XTV	394109 RPS	Sample Filter Blank Weighings	Nozzie No.	53 4944	70000	ХFactor								
	20.0	20	20	20	20	20	20	20	20	20	റ്	Temp at Gas Meter Outlet					0.3	Increase, mg		œ		8	3.02								
	N/A	N/A	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Condenser Temp,		F		, 	-			(0)		70	*								
	0,091	160	160	160	160	160	160	160	160	160	റീ	Filter Box		Office Cel	Impinger 5	Impinger 4	impinger 3	Weights Impinger 1		Stop Time		Start Time	Ambient Tomp.								
	0.001	160	190	160	160	160	150	160	160	160	റ്	Probe	and the state of t					initiationia	Impinger Weights	14:12		13:40	12								
	-10.4		-12	: ±	÷	70	-10	10	-10	-10		Pump		1				Final													
	X	N/A	WA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റീ	Impinger Stern Temp.		00	0.0	0.0	0,0	increase, g 0.0		·		-	_								
	2.010	3046	2.540	2.646	2.646	2.646	2.983	2,983	2.983	2.983		Root Δ p,								Box/Probe setting	i -	Leak Rate (start / %)	Loak Rate (fin / %)								
Number: 1	-	•	-										=9							180 +/- b C		۵	<2	Da	ate (Repo	ort Is	Febi Pa	Num ruary nge 6	200)6

Site Name: Coventry

Job / Report Reference: FYS3926

Date:09/1/06 Run: 2

Sampling Point Ref: Industrial booth left Ext	Run: 2
Meter Volume Sampled, acm	0.972
Sample Run Start Time	13:40
Sample Run End Time	14:12
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, ⁰C	20,0
Meter Volume at STP, scm	0.897
Meter Volume at Wet STP, scm	0.897
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	9.380
Stack Flow Rate, acms	2.652
Stack Flow Rate, scms dry,STP	2.442
Nozzle Diameter, mm	8.00
% Isokinetic Variation	107.4
Total Mass of Particulate, mg	0.5
Percentage of Total Particulate Collected on Filter	7.4
Stack Particulate Concentration, mg/m ³	0.6
Particulate Mass rate, kg/hour	0.005
Emission Limit value	50.000

Sample Train Blank Res	sults
Sample Blank Particulate Concentration, mg/m ³	0.60
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Company Name: Covrad Heat Transfer Date: 09/01/2006

Site Ref: Coventry Stack Ref: Industrial Left EXT Run: 1

	VOC as C	VOC as C VOC as Toluene				
	mg/m³	kg/hr	mg/m³	kg/hr		
Average	82.10	1.23	89.92	1.35		
Max	262.39	3.95	287.38	4.32		
Min	9.84	0.15	10.78	0.16		
Moisture, %						

Time min	VOC, ppm	VOC as C, mg/m³	VOC as Toluene,mg/m³	O2 FACTOR
12:10	6	9.84	10.78	1.00
12:11	6	9.84	10.78	1.00
12:12	6	9.84	10.78	1.00
12:13	6	9.84	10.78	1.00
12:14	6	9.84	10.78	1.00
12:15	6	9.84	10.78	1.00
12:16	7	11.48	12.57	1.00
12:17	6	9.84	10.78	1.00
12:18	6	9.84	10.78	1.00
12:19	6	9.84	10.78	1.00
12:20	90	147.59	161.65	1.00
12:21	120	196.79	215.54	1.00
12:22	100	163.99	179.61	1.00
12:23	150	245.99	269.42	1.00
12:24	120	196.79	215.54	1.00
12:25	160	262.39	287.38	1.00
12:26	130	213.19	233.50	1.00
12:27	120	196.79	215.54	1.00
12:28	160	262.39	287.38	1.00
12:29	130	213.19	233.50	1.00
12:30	120	196.79	215.54	1.00
12:31	100	163.99	179.61	1.00
12:32	60	98.40	107.77	1.00
12:33	40	65.60	71.85	1.00
12:34	30	49.20	53.88	1.00
12:35	10	16.40	17.96	1.00
12:36	6	9.84	10.78	1.00
12:37	6	9.84	10.78	1.00
12:38	10	16.40	17.96	1.00
12:39	10	16.40	17.96	1.00
12:40	10	16.40	17.96	1.00

Operator: Covrad Heat Transfer Ltd Site: Coventry

Company Name: Covrad Heat Transfer Ltd

Site Name: Coventry

Sampling Point Ref: Industrial booth Left INT

Job / Report Reference: FYS3926

Date:09/1/06

Run: 1

ood, mopore,	(010101100:11100			0.6		
Stack Static p	oress.mm H₂O:	0.2		Stack Area (m	0.282744	
Traverse		Port A			Port B	
Point No.	Δp,	Root ∆ p	Stack Temp	Δр,	Root ∆ p	Stack Temp
	mm H ₂ O		°C	mm H ₂ O		°C
1	10.1	3.178	20	9.8	3.130	20
2	9.9	3.146	20	8.9	2.983	20
3	9.8	3.130	20	8.8	2.966	20
4	9.6	3.098	20	7.5	2.739	20
5	8.8	2.966	20	5.8	2.408	20
6	8.7	2.950	20	6.5	2.550	20
7	8.5	2.915	20	7.4	2.720	20
8	7.2	2.683	20	8	2.828	20
9	6.8	2.608	20	7	2.646	20
10	5.5	2.345	20	6.4	2.530	20
Minimum	5.5	2.345	20	5.8	2.408	20
Maximum	10.1	3.178	20	9.8	3.130	20
Mean	8.5	2.902	20.0	7.6	2.750	20.0
Sum	84.9	29.021	200	76.1	27.501	200
Total Sum				161	56.522	400

Max. pitot press. =	10.1
Min. pitot press. =	5.5
Ratio Max:Min =	1.8 :1

Gas Data

Oxygen %	21.0
CO₂ %	0.04
CO %	

Oxygen Concouch	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

Bile. Covering		_												THE C		ro u		Appendix 1: General Information
		Endpoint.								۸			Sample Point	Job / Report Reference: FYS3928 Sample Fill Filler 38405 Probe Washings 39405	Date:09/1/05	sampling Point Ref; Industrial booth Left I Outstack Filter?	ompany Name: Cov	
22,000	32.00	32	28	24	20	16	12	œ	4	0		min	Clock Time	Sample Filter Weights Reference 394098		ndustria! booth Left	rad Heat Transfer L	
	8,350		6.8	6.8	6.8	6.8	9.9	9,9	9,9	9,9		m/s-1	Pitot Δp.	RPS RPS	Operators	Outstack Filter?	In-stack Filter?	
	20.0	20	20	20	20	20	20	20	20	20		റീ	Stack Temp,		GH/SP	Yes	No	
	25.2		20.536	20.536	20,536	20.536	29,898	29.898	29.898	29.898	Desired		Orlfic		Bws%	Ą]Bar. Press.mm Hg	
	25.2		20.5	20.5	20.5	20,5	29.9	29.9	29.9	29.9	Actual		Orlfice m/s-1	ash .	2	0.82	751.53	
	1.0	360623								359655	m ³		Gas Meter Reading	Sample Filter Blank Weighings Self-Reference Self Self-Laboratoy il- 394109 RPS 394600 RPS 394600 RPS	Nozzie No.	Dn used	K Factor	
	20.0	20	20	20	20	20	20	20	20	20	ď	Meter Outlet	Temp at Gas	i ii i	8	8	3.02	
CONOM	N/A	ΝΆ	N/A	റ്	Š	Condenser												
	160.0	160	160	160	160	160	160	160	160	160	റ്	Temp	Filter Box	Weights Impinger 1 Impinger 2 Impinger 3 Impinger 4 Impinger 4 Impinger 5 Silica Gel	Stop Time	Start Time	Ambient Temp.	
	160.0	160	160	160	160	160	160	160	160	160	റ്	Temp	Probe	impingor Weights	14:12	13:40	12	
	-10,4		-12	=	- 6	-10	10	-10	i	-10	inches Hg	Vacuum	Pump			ليا	L	
	N/A	N/A	N/A	N/A	N.	N.	N.	N/A	N/A	N A	റ്	Stom Temp.	mpinger	Increase 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0				
	2.877		2,608	2,608	2.608	2.608	3.146	3.146	3.146	3.146			Root 4 p,		Box/Probe setting	Leak Rate (start / %)	Leak Rate (fin / %)	
Visit Number: 1									•						160 +/- 5 °C	<2	2	Report Issue Number: 1 Date of Issue: February 2006 Page 10 of 59

Date:09/1/06

Run: 1

Company Name: Covrad Heat Transfer Ltd

Site Name: Coventry

Job / Report Reference: FYS3926

Sampling Point Ref: Industrial booth Left INT	Run: 1
Meter Volume Sampled, acm	0.968
Sample Run Start Time	13:40
Sample Run End Time	14:12
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	20.0
Meter Volume at STP, scm	0.894
Meter Volume at Wet STP, scm	0.894
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	9.588
Stack Flow Rate, acms	2.711
Stack Flow Rate, scms dry,STP	2.496
Nozzle Diameter, mm	8.00
% Isokinetic Variation	104.6
Total Mass of Particulate, mg	0.6
Percentage of Total Particulate Collected on Filter	19.4
Stack Particulate Concentration, mg/m ³	0.7
Particulate Mass rate, kg/hour	0.006
Emission Limit value	50.000

Sample Train Blank Results	
Sample Blank Particulate Concentration, mg/m³	0.60
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: Industrial booth Left INT

Job / Report Reference: FYS3926

Date:09/1/06 Run: 2

OOD / INCPOSES	(CICICI);;CC, I I CC	020					
·				er (m)	0.6		
Stack Static p	oress.mm H ₂ O:	0.2		0.282744			
Traverse		Port A					
Point No.	Δр,	Root ∆ p	Stack Temp	Stack Temp			
	mm H ₂ O		°C	mm H₂O		°C	
1	8.4	2.898	19.5	8	2.828	19.5	
2	8	2.828	19.5	7.6	2.757	19.5	
3	7.8	2.793	19.5	7.5	2.739	19.5	
4	7.4	2.720	19.5	6.6	2.569	19.5	
5	6.6	2.569	19.5	6.6	2.569	19.5	
6	6.4	2.530	19.5	6.6	2.569	19.5	
7	7.6	2.757	19.5	7.9	2.811	19.5	
8	7.9	2.811	19.5	8	2.828	19.5	
9	8	2.828	19.5	8.4	2.898	19.5	
10	8.6	2.933	19.5	8.4	2.898	19.5	
Minimum	6.4	2.530	19.5	6.6	2.569	19.5	
Maximum	8.6	2.933	19.5	8.4	2.898	19.5	
Mean	7.7	2.767	19.5	7.6	2.747	19.5	
Sum	76.7	27.667	195	75.6	27.467	195	
Total Sum			- Harting	152.3	55.134	390	

Max. pitot press. =	8.6	
Min. pitot press. =	6.4	
Ratio Max:Min =	1.3 :1	

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Oxygen Correction	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

	_		_	_			_			_		•		_	_			Appendix 1: General Information
	Endpoint.							,	×		Sample Point		Probe Washings	Filter		Run: 2 Job / Report Reference: FYS3926	Company Name: Covrad Heat Transfer Lt In-stack Filter? Site Name: Coventry Sampling Point Ref. Industrial booth Left Outstack Filter? Date:09/1/08	Topolisis Conoun monausi
32,00	32	28	24	20	16	12	65	4	0		Clock Time min	met-amout	394599	394105	Sample Filter Weights Reference	ce; FYS3926	vrad Heat Transfer Li Industrial booth Left	
8.000		8	œ	æ	æ	œ.	œ	co	۵		Pitot ∆ p, m/s-1		RPS	RPS	thts Laboratory	Operators	t In-stack Filter? Outstack Filter?	
20.0	20	20	20	26	20	20	20	20	20		Stack Temp,		2.48	1.07	increase; mg	GH/SP	Yes	
24.2		24.16	24.16	24.16	24,16	24.16	24.16	24.16	24.16	Desired	Orifice m/s-1					Bws%	Bar. Press.mm Hg	
24.1		24.1	24.1	24.1	24.1	24.1	24,1	24.1	24.1	Actual	m/s-1		Probe Wash	Filter	2000	2	751.53 0.82	
0.9	361864								361000	m ³	Gas Meter Reading				Sample Filter Blank Weighings Reference Laboratory	Nozzie No.	K Factor Dn usød	
20.0	20	20	20	20	20	20	20	20	20	ć	Temp at Gas Meter Outlet		0.5	0.04		8	3.02 8	
N/A	N/A	N/A	N/A	NA	N A	N/A	N/A	N/A	N/A	റ്	Condenser Temp,						<u> </u>	
N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	N/A	Z X	റ്	Filter Box Temp	Impinger 4 Impinger 5 Impinger 5 Silica Gel	Impinger 2	Impinger 1	Weights	Stop Time	Amblent Temp. Start Time	
N/A	N/A	₩A	N/A	NIN	N/A	N/A	N/A	N/A	N/A	റ്	Probe				Impinger Weights	12:32	12:30	
-10.4		-12	4	10	-10	-10	,	-10	-10		Pump	Tola			ts Final			
N/A	NIA	N/A	Š	ΝΆ	N/A	N/A	N/A	N/A	NA	റ്	Impinger Stem Temp.	0.0	0.0	0.0	Increase. g			
2.828		2.828	2.828	2.828	2.828	2.828	2,828	2.828	2.828		Root A p,					Box/Probe setting	Leak Rate (fin / %) Leak Rate (start / %)	
			10.400												••••	160 +/- 5 °C		Report Issue Number: 1 Date of Issue: February 2006 Page 13 of 59

Visit Number: 1

Page 13 of 59

Site Name: Coventry

Job / Report Reference: FYS3926

Date:09/1/06 Run: 2

Sampling Point Ref: Industrial booth Left INT	Run: 2
Meter Volume Sampled, acm	0.864
Sample Run Start Time	12:30
Sample Run End Time	12:32
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	20.0
Meter Volume at STP, scm	0.797
Meter Volume at Wet STP, scm	0.797
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	9.426
Stack Flow Rate, acms	2.665
Stack Flow Rate, scms dry,STP	2,454
Nozzle Diameter, mm	8.00
% Isokinetic Variation	95.0
Total Mass of Particulate, mg	3.6
Percentage of Total Particulate Collected on Filter	30.1
Stack Particulate Concentration, mg/m ³	4.5
Particulate Mass rate, kg/hour	0.039
Emission Limit value	50.000

Sample Train Blank Res	sults
Sample Blank Particulate Concentration, mg/m ³	0.68
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Company Name: Covrad Heat Transfer Date: 09/01/2006

Site Ref: Coventry

Run: 1

Stack Ref: Industrial Left INT

	VOC as C	VOC as C kg/hr	VOC as Toluene mg/m³	VOC as Toluene kg/hr
Average	51.97	0.80	56.91	0.87
Max	196.79	3.01	215.54	3.30
Min	8.20	0.13	8.98	0.14
Moisture, %				

Time min	VOC, ppm	VOC as C, mg/m³	VOC as Toluene,mg/m³	O2 FACTOR
14;06	6	9.84	10.78	1.00
14:07	90	147.59	161.65	1.00
14:08	100	163.99	179.61	1.00
14:09	120	196.79	215.54	1.00
14:10	30	49.20	53.88	1.00
14:11	25	41.00	44.90	1.00
14:12	30	49.20	53.88	1.00
14:13	20	32.80	35.92	1.00
14:14	20	32.80	35.92	1.00
14:15	10	16.40	17.96	1.00
14:16	10	16.40	17.96	1.00
14:17	15	24.60	26.94	1.00
14:18	10	16.40	17.96	1.00
14:19	10	16.40	17.96	1.00
14:20	5	8.20	8.98	1.00
14:21	6	9.84	10.78	1.00
14:22	6	9.84	10.78	1.00
14:23	90	147.59	161.65	1.00
14:24	80	131.20	143.69	1.00
14:25	120	196.79	215.54	1.00
14:26	130	213.19	233.50	1.00
14:27	90	147.59	161.65	1.00
14:28	60	98.40	107.77	1.00
14:29	30	49.20	53.88	1.00
14:30	20	32.80	35.92	1.00
14:31	30	49.20	53.88	1.00
14:32	5	8.20	8.98	1.00
14:33	6	9.84	10.78	1.00
14:34	6	9.84	10.78	1.00
14:35	6	9.84	10.78	1.00
14:36	6	9.84	10.78	1.00

Site Name: Coventry

Sampling Point Ref: Industrial booth Right EXT

Job / Report Reference: FYS3926

Date:10/1/06 Run: 1

OOD I I ODOLLI		· · · · · · · · · · · · · · · · · · ·						
•				Stack Diamet	er (m)	0.6		
Stack Static p	oress.mm H ₂ O:	0.2		Stack Area (n	n2):	0.282744		
Traverse		Port A		Port B				
Point No.	Δp,	Root ∆ p	Stack Temp	Δр,	Root ∆ p	Stack Temp		
	mm H ₂ O		°C	mm H ₂ O		°C		
1	11.4	3.376	19.5	11.5	3.391	19.5		
2	11.2	3.347	19.5	11.31	3.363	19.5		
3	10.9	3.302	19.5	11.1	3.332	19.5		
4	10.5	3.240	19.5	10.8	3.286	19.5		
5	9.6	3.098	19.5	10.2	3.194	19.5		
6	9.4	3.066	19.5	9.9	3.146	19.5		
7	8.8	2.966	19.5	9.6	3.098	19.5		
8	8.2	2.864	19.5	9.2	3.033	19.5		
9	7.8	2.793	19.5	8.8	2.966	19.5		
10	7.8	2.793	19.5	8.6	2.933	19.5		
Minimum	7.8	2.793	19.5	8.6	2.933	19.5		
Maximum	11.4	3.376	19.5	11.5	3.391	19.5		
Mean	9.6	3.084	19.5	10.1	3.174	19.5		
Sum	95.6	30.845	195	101.01	31.743	195		
Total Sum				196.61	62.588	390		

Max. pitot press. =	11.5	
Min. pitot press. =	7.8	
Ratio Max:Min =	1.5 :1	

Gas Data

Oxygen %	21.0
CO₂ %	0.04
CO %	

Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

RPS Health, Safety & Environment
MCERTS Report (v7) – Part 2 – Summary Information
Appendix 1: General Information

	Endpoint.								≻		Sample Point	Filter Probe Washings	Company Name: Covrad Heat Tra Site Name: Coventry Sampling Point Reft: Industrial boo Date: 10/1/05 Run: 1
32.00	32	28	24	20	5	な	æ	4	o		Clock Time min	Sample Filter Wolghts	Company Name: Covrad Heat Transfer Lt In-stack Filler? Site Name: Coventry Sampling Point Ref. Industrial booth Right Outstack Filler? Date: 10/1/06 Rm: 1
9,500		7.8	7.8	7.8	7.8	11.2	11.2	11.2	11.2		Pitot Δp , m/s-1		in-stack Filler/ n Outstack Filler/ Operators
20.0	20	20	20	20	20	20	20	20	20		Stack Temp, °C	3.63 0.53	No Yes GH/SP
16.1		13,182	13,182	13,182	13,182	18.926	18.928	18.928	18.926	Desired	Orlfic		Bar Press.mm Hg
16.0		13.1	13.1	13.1	13.1	18.9	18.9	18.9	18.9	Actual	Orlíce m/s-1	Filter Probe Wash	751.53 0.82
5.0	363038	THE THE THE TAXABLE PROPERTY OF TAXABLE PROPERTY O							362510	m ³	Gas Meter Reading	Sample Filter Blank Welghings Reference Service Laboratory 394109 RPS 394600 RPS	K Factor On used
20.0	20	20	20	20	20	20	20	20	20	(Temp at Gas Meter Outlet	increase, mg 0.04 0.5	6 6
N/A	N/A	N/A	N/A	N/A	N/A	Z/A	N A	N/A	N/A	റ്	Condenser Temp,	Construent linear	
NVA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	O	Filter Box Temp	Weights Impinger 1 Impinger 2 Impinger 2 Impinger 4 Impinger 4 Impinger 5 Silica Gel	Ambient Temp. Start Time Stop Time
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Probe	Impinger Wolghts	14:15
-10.4		-12	±	-10	-10	-10	-10	-10	-10	Inches Hg	Pump Vacuum	its Final (%)	Lond Load
NJA	N/A	N/A	N/A	NIA	N/A	N/A	N/A	N/A	NIA	റ്	Impinger Stem Temp.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
3.070		2.783	2,793	2.793	2.793	3.347	3.347	3.347	3.347		Root A P.		Leak Rate (lin / %) Loak Rate (start / %) Box/Probe setting

Visit Number: 1

Date of Issue: February 2006 Page 17 of 59

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06

Run: 1

Sampling Point Ref: Industrial booth Right EXT	Run: 1		
Meter Volume Sampled, acm	0.528		
Sample Run Start Time	14:15		
Sample Run End Time	14:47		
Total Actual Sampling Time, min	32.0		
Barometric Pressure, mm Hg	751.53		
Stack Pressure, mm Hg	751.54		
Average Stack Temp, °C	20.0		
Meter Volume at STP, scm	0.487		
Meter Volume at Wet STP, scm	0.487		
Stack Moisture Content, %	0.0		
Average Stack Velocity, m/sec	10.231		
Stack Flow Rate, acms	2.893		
Stack Flow Rate, scms dry,STP	2.664		
Nozzle Diameter, mm	6.00		
% Isokinetic Variation	95.0		
Total Mass of Particulate, mg	1.1		
Percentage of Total Particulate Collected on Filter	55.8		
Stack Particulate Concentration, mg/m ³	2.3		
Particulate Mass rate, kg/hour	0.022		
Emission Limit value	50.000		

Sample Train Blank Res	ults
Sample Blank Particulate Concentration, mg/m³	1.11
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: Industrial booth Right EXT

Job / Report Reference: FYS3926

Date:10/1/06 Run: 2

OOD I KEDOILIN	eletelice. L LOS		r				
•			Stack Diameter (m) 0.6				
Stack Static p	ress.mm H ₂ O:	0.2		0.282744			
Traverse	10	Port A		1,771	Port B		
Point No.	Δp,	Root ∆ p	Stack Temp	Δр,	Root ∆ p	Stack Temp	
	mm H₂O		°C	mm H ₂ O		°C	
1	11.4	3.376	19.5	11.5	3.391	19.5	
2	11.2	3.347	19.5	11.31	3.363	19.5	
3	10.9	3.302	19.5	11.1	3.332	19.5	
4	10.5	3.240	19.5	10.8	3.286	19.5	
5	9.6	3.098	19.5	10.2	3.194	19.5	
6	9.4	3.066	19.5	9.9	3.146	19.5	
7	8.8	2.966	19.5	9.6	3.098	19.5	
8	8.2	2.864	19.5	9.2	3.033	19.5	
9	7.8	2.793	19.5	8.8	2.966	19.5	
10	7.8	2.793	19.5	8.6	2.933	19.5	
Minimum	7.8	2.793	19.5	8.6	2.933	19.5	
Maximum	11.4	3.376	19.5	11.5	3.391	19.5	
Mean	9.6	3.084	19.5	10.1	3.174	19.5	
Sum	95.6	30.845	195	101.01	31.743	195	
Total Sum		30.0		196.61	62.588	390	

Max. pitot press. =	11.5	
Min. pitot press. =	7.8	
Ratio Max:Min =	1.5 :1	

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Oxygen correction	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

	Endpoint.								>		Sample Point	Probe Washings	Dompany Name: Covrad Heat Tra Site Name: Coventry Sampling Point Ref: Industrial boo Date:10/1/06 Jun: 2 Job / Report Reference: FYS3928	Appendix 1: General Information
32.00	32		7 4		3 5	, i	; «	4 0	. 0	,	Clock Time min	Sample Filter Weights MReference 15 1394599	Company Name: Covrad Heat Transfer Lt In-stack Filler? Stro Name: Coventry Sampling Pedia Ref: Industrial booth Right Outstack Filler? Date:10/1/06 Date:10/1/06 Operators Jun: 2 Operators	
9.500		7.0	7.0	, ,	7 is	; ; ;	: :	1 1	11.2		Pitot A p, m/s-1	ghts Laboratory RPS RPS	t In-stack Filter? th Outstack Filter? Operators	
20.0	20	20	3 8	: <u>}</u>	20	1 20	, N	20	20		Stack Temp, °C		Yes GH/SP	
16.1		13.182	13.182	13.182	13,182	18,928	18,928	18.928	18,928	Desired	Orific		Bar. Press.mm Hg	
16.0		13.1		63	13,1	18.9	0.9	18.9	18.9	Actual	Orifice m/s-1	Filter Probe Wash	19 751.53 0.82 2	
0.5	363572								363036	m³	Gas Meter Reading	Sample Filter Blank Weighings Federance Selection Laboratory	K Factor Dn used Nozzie No.	
20.0	20	20	20	20	20	20	20	20	20	ć	Temp at Gas Meter Outlet	0.04 0.5	1.69	
N/A	N/A	N/A	NA	N/A	N/A	N/A	WA	N/A	NIA	°င	Condenser Temp,			
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NIA	N/A	°C	Filter Box Temp	Weights Impinger 1 Impinger 2 Impinger 3 Impinger 3 Impinger 6 Impinger 5 Silica Gel	Ambient Temp. Start Time Stop Time	
Α/W	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	റ്	Probe	impinger Weights	13 14:15 14:47	
-10,4	W. C.	-12	7	-10	-10	-10	-10	10	-10	inches Hg	Pump	ghts		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/Α	ငိ	Impinger Stem Temp	(hncrease): 9		
3.070		2.793	2.793	2.793	2,793	3,347	3,347	3.347	3.347		Root Ap,		Leak Rate (fin / %) Loak Rate (start / %) Box/Probe setting	

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06

Run: 2

Sampling Point Ref: Industrial booth Right EXT Run: 2 0.536 Meter Volume Sampled, acm 14:15 Sample Run Start Time Sample Run End Time 14:47 32.0 Total Actual Sampling Time, min Barometric Pressure, mm Hg 751.53 751.54 Stack Pressure, mm Hg Average Stack Temp, °C 20.0 Meter Volume at STP, scm 0.494 0.494 Meter Volume at Wet STP, scm Stack Moisture Content, % 0.0 10.231 Average Stack Velocity, m/sec Stack Flow Rate, acms 2.893 2.664 Stack Flow Rate, scms dry,STP Nozzle Diameter, mm 6.00 96.5 % Isokinetic Variation 0.6 Total Mass of Particulate, mg Percentage of Total Particulate Collected on Filter 15.3 Stack Particulate Concentration, mg/m³ 1.2 0.011 Particulate Mass rate, kg/hour 50.000 Emission Limit value

Sample Train Blank Results							
Sample Blank Particulate Concentration, mg/m³	1.09						
Total Weight Gain, mg (Sample Train Blank)	0.54						
Blank Result Less than 10% of Limit Value	Yes						

Company Name: Covrad Heat Transfer Date: 10/01/2006

Site Ref: Coventry

Run: 1

Stack Ref: Industrial right EXT

	VOC as C			VOC as Toluene
	mg/m	kg/hr	mg/m³	kg/hr
Average	184.39	3.01	201.95	3.30
Max	409.99	6.69	449.03	7.33
Min	9.84	0.16	10.78	0.18
Moisture, %				

Time min	VOC, ppm	VOC as C, mg/m³	VOC as Toluene,mg/m³	O2 FACTOR
14:38	6	9.84	10.78	1.00
14:39	6	9.84	10.78	1.00
14:40	7	11.48	12.57	1.00
14:41	60	98.40	107.77	1.00
14:42	100	163.99	179.61	1.00
14:43	150	245.99	269.42	1.00
14:44	250	409.99	449.03	1.00
14:45	250	409.99	449.03	1.00
14:46	250	409.99	449.03	1.00
14:47	200	327.99	359.23	1.00
14:48	100	163.99	179.61	1.00
14:49	100	163.99	179.61	1.00
14:50	80	131.20	143.69	1.00
14:51	100	163.99	179.61	1.00
14:52	60	98.40	107.77	1.00
14:53	80	131.20	143.69	1.00
14:54	20	32.80 16.40 16.40	35.92 17.96	1.00 1.00
14:55	10			
14:56	10		17.96	1.00
14:57	10	16.40	17.96	1.00
14:58	10	16.40	17.96	1.00
14:59	10	16.40	17.96	1.00
15:00	10	16.40	17.96	1.00
15:01	8	13.12	14.37	1.00
15:02	8	13.12	14.37	1.00
15:03	8	13.12	14.37	1.00
15:04	8	13.12	14.37	1.00
15:05	8	13.12	14.37	1.00
15:06	8	13.12	14.37	1.00
15:07	8	13.12	14.37	1.00
15:08	8	13.12	14.37	1.00

Site Name: Coventry

Sampling Point Ref: Industrial booth right INT

Job / Report Reference: FYS3926

Date:09/1/06 Run: 1

-			Stack Diameter (m) 0.6					
Stack Static p	oress.mm H ₂ O:	0.2		0.282744				
Traverse		Port A		Port B				
Point No.	Δ p,	Root ∆ p	Stack Temp	∆ p,	Root ∆ p	Stack Temp		
	mm H₂O		°C	mm H ₂ O		°C		
1	9.1	3.017	20	7.1	2.665	20		
2	8.8	2.966	20	9.8	3.130	20		
3	7.2	2.683	20	9.1	3.017	20		
4	5	2.236	20	8.5	2.915	20		
5	3.7	1.924	20	8.2	2.864	20		
6	4.6	2.145	20	7.1	2.665	20		
7	3.4	1.844	20	6.5	2.550	20		
8	5.2	2.280	20	6.6	2.569	20		
9	5.3	2.302	20	7.8	2.793	20		
10	8.6	2.933	20	8.4	2.898	20		
Minimum	3.4	1.844	20	6.5	2.550	20		
Maximum	9.1	3.017	20	9.8	3.130	20		
Mean	6.1	2.433	20.0	7.9	2.807	20.0		
Sum	60.9	24.330	200	79.1	28.065	200		
Total Sum				140	52.395	400		

F		_
Max. pitot press. =	9.8	
Min. pitot press. =	3.4	
Ratio Max:Min =	2.9 :1	

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

Operator: Covrad Heat Transfer Ltd Site: Coventry

RPS Health, Safety & Environment MCERTS Report (v7) – Part 2 – Summary Information Appendix 1: General Information

		Γ	-						-A-W-		/	Appendix 1: General Informa
	Endpoint.								>		Sample Point	Company Name: Covrad Heat Tra Site Name: Coventry Sampling Poin Ref: Industrial boo Date/09/1/06 Run: 1 Job / Report Reference: FYS3926 Run: 2 Job / Reference: FYS3926 Run: 39410 Filter 39410
32.00	32	28	24	20	ţ	12	ω	4	0		Clock Time min	Company Name: Covrad Heat Transfer Lt In-stack Filter? Site Name: Covrentry Site Name: Coventry Sampling Point Ret: Industrial booth right Outstack Filter? Date/09/1/06 Run: 1 Job / Report Reference: FYS3926 Run: 1 Job / Report Reference: FYS3926 Sample Filter Weights Filter 394103 RPS Probe Washings 394599 RPS
21,250		16	6	6	ð	26.5	26.5	26,5	26.5		Pitot ∆ p. m/s-1	outstack Filter? Outstack Filter? Operators Charactery © RPS RPS RPS
20.0	20	20	20	20	20	20	20	20	20		Stack Temp,	No E Wes O GH/SP E 0.75
64,2		48.32	48.32	48,32	48.32	80,03	80.03	80,03	80.03	Desired	Orifice m/s-1	Bar. Pross.mm Hg
64.0		48	48	48	48	80	80	80	80	Actual	m/s-1	751.53 0.82 Filler Probe Wash
1.4	358255	ownskiewości interpreter kradkowanie worose obsorowym se po odcielowy lateratyczne							356822	manner management of the contract of the contr	Gas Meter Reading	K Factor Dn used Nozzle No. Sample Filter Blank Weightings 394108 RPS 394500 RPS RPS
20.0	20	20	20	20	20	20	20	20	20	ď	Temp at Gas Meter Outlet	3.02 3.02 8 8 8 9 0.04 0.04
A/N	N/A	N/A	N/A	N/A	N/A	NIA	NA	NA	N/A	റ്	Condenser Temp,	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Filter Box Tomp	Ambient Temp. Start Time Stop Time Impinger 1 Impinger 2 Impinger 4 Impinger 4 Impinger 5 Silica Gel
ΝA	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	N/A	°C	Probe	12 13:35 Impinger Weights
-10,4		-12	<u>:</u>	70	늄	ㅎ	-10	10	-;	Inches Hg	Pump	Final
N/A	NA	N/A	N/A	N/A	N/A	N/A	NA	N/A	NIA	റീ	impinger Stem Temp.	Increase: 9
4.574		4.000	4.000	4,000	4,000	5,148	5,148	5.148	5.148	to management of	Root Δ p,	Leak Rato (fin / %) Leak Rato (start / %) Box/Probe setting
_		ŧ								9		Report Issue Number Date of Issue: February 2 Page 24 o

Site Name: Coventry

Job / Report Reference: FYS3926

Date:09/1/06 Run: 1

Sampling Point Ref: Industrial booth right INT	Run: 1
Meter Volume Sampled, acm	1.433
Sample Run Start Time	13:35
Sample Run End Time	14:07
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	20.0
Meter Volume at STP, scm	1.328
Meter Volume at Wet STP, scm	1.328
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	15.243
Stack Flow Rate, acms	4.310
Stack Flow Rate, scms dry,STP	3.969
Nozzle Diameter, mm	8.00
% Isokinetic Variation	97.8
Total Mass of Particulate, mg	0.7
Percentage of Total Particulate Collected on Filter	23.1
Stack Particulate Concentration, mg/m ³	0,5
Particulate Mass rate, kg/hour	0.007
Emission Limit value	50.000

Sample Train Blank Results	2. "在其上的表现是一种一种主义。" 2. "在其上的表现是一种一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种主义,是一种
Sample Blank Particulate Concentration, mg/m³	0.41
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Operator: Covrad Heat Transfer Ltd Site: Coventry

Company Name: Covrad Heat Transfer Ltd

Site Name: Coventry

Sampling Point Ref: Industrial booth right INT

Job / Report Reference: FYS3926

Date:09/1/06 Run: 2

OOD I NOPOLLI	(010101100.1 100	020		Stack Diameter	er (m)	0.6
Ctack Ciation	rana mm U O:	00	1 ` ′ }			
Stack Static p	oress.mm H ₂ O:	0.2	Stack Area (m2):			0.282744
Traverse		Port A			Port B	
Point No.	Δp,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp
	mm H ₂ O		°C	mm H ₂ O		°C
1	9.1	3.017	20	7.1	2.665	20
2	8.8	2.966	20	9.8	3.130	20
3	7.2	2.683	20	9.1	3.017	20
4	5	2.236	20	8.5	2.915	20
5	3.7	1.924	20	8.2	2.864	20
6	4.6	2.145	20	7.1	2.665	20
7	3.4	1.844	20	6.5	2.550	20
8	5.2	2.280	20	6.6	2.569	20
9	5.3	2.302	20	7.8	2.793	20
10	8.6	2.933	20	8.4	2.898	20
Minimum	3.4	1.844	20	6.5	2.550	20
Maximum	9.1	3.017	20	9.8	3.130	20
Mean	6.1	2.433	20.0	7.9	2.807	20.0
Sum	60.9	24.330	200	79.1	28.065	200
Total Sum				140	52.395	400

,		
Max. pitot press. =	9.8	
Min. pitot press. =	3.4	
Ratio Max:Min =	2.9 :1	

Gas Data

Oxygen %	21.0
CO₂ %	0.04
CO %	

Oxygen concedion	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

RPS Health, Safety & Environment
MCERTS Report (v7) - Part 2 - Summary Information
Appendix 1: General Information

	Endpoint.				- 111				>		Sample Point	Appendidix Appendidix Company Name: Covrad Heat Transfer Lt in-stack Filter? Site Name: Coventry Sampling Point Ref: Industrial booth right Outstack Filter? Date:08/1/08 Run: 2 Job / Report Reference: FYS3928 Sample Filter Weights Sample Filter Weights Filter Refs 394104 RPS RPS
32.00	32	28	24	20	ń	12	œ	4	0		Clock Time min	rad Heat Transfer Lt in-andustrial booth right. Ou op. co: FYS3828 Sample Filter Weights. 394104 394194 394599
21.250		16	16	16	16	26.5	26,5	28.5	26.5		Pitot A p, m/s-1	in-stack Filter? Outstack Filter? Operators RPS RPS RPS
20.0	20	20	20	20	20	8	20	20	20		Stack Temp, °C	Yes GHSP E
64,2		48.32	48.32	48.32	48,32	80.03	80.03	80.03	80.03	Desired	Orific	Bar. Press.mm Hg
64.0		48	48	48	48	80	80	80	80	Actual	Orifice m/s-1	751.53 0,82 Probe Wash
1.4	359655								358255	m ³	Gas Metor Roading	K Factor Dn used Nozzie No. Sample Filter Blank Weighings 384108 RPS 394600 RPS
20.0	20	20	20	20	20	20	20	20	20	ď	Temp at Gas Meter Outlet	3,02 8 8 8 0.04
AIN	N/A	N/A	N/A	NA	NA	N/A	N/A	NA	N/A	റ്	Condenser Temp,	
N/A	N/A	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Filter Box Temp	Ambient Temp. Start Time Stop Time Stop Time Meights Impinger 1 Impinger 3 Impinger 4 Silica Get Silica Get
N/A	N/A	N/A	N/A	Z	N/A	N/A	N/A	N/A	N/A	ငိ	Probe	12 13.35 14.07 14.07
-10.4		-12	<u>;</u>	-10	-10	-10	-10	-10	-10	Inches Hg	Pump	Its 原序Final 设施
NIA	N/A	NA	N/A	N/A	Z/A	Z	N/A	Š	N/A	ć	Impinger Stem Temp.	Increase G
4.574		4.000	4.000	4.000	4.000	5,148	5.148	5.148	5.148		Root & p.	Leak Rate (fin / %) Leak Rate (start / %) Box/Probe setting
					- 1					8	-	Report Issue Number: 1 Date of Issue: February 2006 Page 27 of 59

Site Name: Coventry

Job / Report Reference: FYS3926

Date:09/1/06

Run: 2

Sampling Point Ref: Industrial booth right INT	Run: 2
Meter Volume Sampled, acm	1.400
Sample Run Start Time	13:35
Sample Run End Time	14:07
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	20.0
Meter Volume at STP, scm	1.297
Meter Volume at Wet STP, scm	1.297
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	15.243
Stack Flow Rate, acms	4.310
Stack Flow Rate, scms dry STP	3.969
Nozzle Diameter, mm	8.00
% Isokinetic Variation	95.6
Total Mass of Particulate, mg	1.1
Percentage of Total Particulate Collected on Filter	54.5
Stack Particulate Concentration, mg/m ³	0.8
Particulate Mass rate, kg/hour	0.012
Emission Limit value	50.000

Sample Train Blank Results	
Sample Blank Particulate Concentration, mg/m ³	0.42
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Company Name: Covrad Heat Transfer Date: 10/01/2006

Site Ref: Coventry

Run: 1

Stack Ref: Industrial right INT

	VOC as C	VOC as C kg/hr	VOC as Toluene mg/m³	VOC as Toluene kg/hr
Average	10.86	0.26	11.90	0.29
Max	16.40	0.40	17.96	0.44
Min	8.20	0.20	8.98	0.22
Moisture. %				

Time min	VOC, ppm	VOC as C, mg/m ³	VOC as Toluene,mg/m³	O2 FACTOR
12:43	5	8.20	8.98	1.00
12:44	5	8.20	8.98	1.00
12:45	6	9.84	10.78	1.00
12:46	6	9.84	10.78	1.00
12:47	7	11.48	12.57	1.00
12:48	7	11.48	12.57	1.00
12:49	8	13.12	14.37	1.00
12:50	7	11.48	12.57	1.00
12:51	7	11.48	12.57	1.00
12:52	6	9.84	10.78	1.00
12:53	6	9.84	10.78	1.00
12:54	6	9.84	10.78	1.00
12:55	5	8.20	8.98	1.00
12:56	9	14.76	16.17	1.00
12:57	10	16.40	17.96	1.00
12:58	6	9.84	10.78	1.00
12:59	5	8.20	8.98	1.00
13:00	5	8.20	8.98	1.00
13:01	5	8.20	8.98	1.00
13:02	6	9.84	10.78	1.00
13:03	6	9.84	10.78	1.00
13:04	6	9.84	10.78	1.00
13:05	6	9.84	10.78	1.00
13:06	7	11.48	12.57	1.00
13:07	7	11.48	12.57	1.00
13:08	6	9.84	10.78	1.00
13:09	6	9.84	10.78	1.00
13:10	6	9.84	10.78	1.00
13:11	6	9.84	10.78	1.00
13:12	6	9.84	10.78	1.00
13:13	6	9.84	10.78	1.00

Site Name: Coventry

Sampling Point Ref: Industrial booth Left INT

Job / Report Reference: FYS3926

Date:09/1/06 Run: 1

				0.6				
Stack Static p	ress.mm H ₂ O:	0.2	0.2 Stack Area (m2):					
Traverse		Port A			Port B	Port B		
Point No.	Δр,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp		
	mm H ₂ O		°C	mm H₂O		°C		
1	10.1	3.178	20	9.8	3.130	20		
2	9.9	3.146	20	8.9	2.983	20		
3	9.8	3.130	20	8.8	2.966	20		
4	9.6	3.098	20	7.5	2.739	20		
5	8.8	2.966	20	5.8	2.408	20		
6	8.7	2.950	20	6.5	2.550	20		
7	8.5	2.915	20	7.4	2.720	20		
8	7.2	2.683	20	8	2.828	20		
9	6.8	2.608	20	7	2.646	20		
10	5.5	2.345	20	6.4	2.530	20		
Minimum	5.5	2.345	20	5.8	2.408	20		
Maximum	10.1	3.178	20	9.8	3.130	20		
Mean	8.5	2.902	20.0	7.6	2.750	20.0		
Sum	84.9	29.021	200	76.1	27.501	200		
Total Sum				161	56.522	400		

Max. pitot press. =	10.1
Min. pitot press. =	5.5
Ratio Max:Min =	1.8 :1

Gas Data

Oxygen %	21.0
CO₂ %	0.04
CO %	

Oxygen concount	
Required Correction Value	O
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

Visit Number: 1

RPS Health, Safety & Environment
MCERTS Report (v7) – Part 2 – Summary Information
Appendix 1: General Information

3						_			g	_		Appendix 1: General Informat
	Endpoint.								Α		Sample Point	Company Name: Covrad Heat Transfer Lt In-stack Filter? Ste Name: Coventry Sampling Point Ref: Industrial booth Left I Outstack Filter? Sample Filter Velights Filter Sample Filter Velights Filter Sample Filter Velights Filter Sample Filter Velights Filter Reference: FYS3926 Probe Washings 394099 RPS Probe Washings 394098 RPS
32.00	32	28	24	20	16	12	œ	4	0		Clock Time	rad Heat Transfer Lt In- rdustrial booth Left Ou pur. FYS3926 Sample Filter Weights 394099 394098
8.350		6.6	6.8	6,8	6.8	8.8	9.9	9.9	9,6		Pitot Δ p, m/s-1	Outstack Filler? Outstack Filler? Operators RPS RPS RPS
20.0	20	20	20	20	20	20	20	26	20		Stack Temp, °C	No N
25.2		20.536	20.536	20.536	20.536	29,898	29.898	29.898	29,898	Dasired	Orlfic	Ber. Press.mm Hg
25.2		20.5	20.5	20,5	20.5	29.9	29.9	29.9	29,9	Actual	Orlfice m/s-1	751.53 0.82 2 2 Probe Wash
1.0	360623								359655	m³	Gas Moter Reading	K Factor Dn used Nozzle No. Nozzle No. Sample Filter Blank Weighings 394109 RPS 394600 RPS 394600 RPS
20,0	20	20	20	20	20	20	20	20	20	Ċ	Temp at Gas Meter Outlet	3.02 8 8 8 0.04 0.54
NA	N/A	N/A	Z/A	N/A	N/A	N/A	N/A	N/A	N/A	ငိ	Condenser Temp,	
160,0	160	160	160	160	160	160	160	160	160	റ്	Filter Box Temp	Ambient Temp. Slart Time Slop Time Slop Time Implinger 1 Implinger 2 Implinger 3 Implinger 4 Implinger 6 Slica Gel
160,0	160	160	160	160	160	160	160	160	160	ငိ	Probe	12 13:40 14:12
-10.4		-12	<u> </u>	-	: 3	능	9	늄	4	inches Hg	Pump	Total
N/A	N/A	N/A	Z	2	Z	N/A	N.	Z X	N/A	റ്റ	Impinger Stem Temp.	increase q
7,6/1		2.608	2.608	2.606	2.608	3,146	3.146	3.146	3,146	- CONTRACTOR OF THE PERSON OF	Root A p.	Leak Rate (fin / %) Leak Rate (start / %) Box/Probe setting

Site Name: Coventry

Job / Report Reference: FYS3926

Date:09/1/06 Run: 1

Sampling Point Ref: Industrial booth Left INT	Run: 1
Meter Volume Sampled, acm	0.968
Sample Run Start Time	13:40
Sample Run End Time	14:12
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
	20.0
Average Stack Temp, °C Meter Volume at STP, scm	0.894
Meter Volume at STP, SCH Meter Volume at Wet STP, scm	0.894
Meter Volume at Wet 317, Schi	0.0
Stack Moisture Content, % Average Stack Velocity, m/sec	9.588
	2.711
Stack Flow Rate, acms Stack Flow Rate, scms dry,STP	2,496
11	8.00
Nozzle Diameter, mm	104.6
% Isokinetic Variation	0.6
Total Mass of Particulate, mg Percentage of Total Particulate Collected on Filter	19.4
Percentage of Total Particulate Collected of Titles	0.7
Stack Particulate Concentration, mg/m³	0.006
Particulate Mass rate, kg/hour	50.000
Emission Limit value	30.000

Sample Train Blank Results	
Sample Blank Particulate Concentration, mg/m³	0.60
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: New booth 1 Job / Report Reference: FYS3926 Date:10/1/06 Run: 2

•				Stack Diameter (m) 0.79					
Stack Static p	oress.mm H ₂ O:	0.2	Stack Area (m2): 0.490168			0.49016814			
Traverse		Port A		Port B					
Point No.	Δp,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp			
	mm H₂O		°C	mm H ₂ O		°C			
1	9.1	3.017	20	7.1	2.665	20			
2	8.8	2.966	20	9.8	3.130	20			
3	7.2	2.683	20	9.1	3.017	20			
4	5	2.236	20	8.5	2.915	20			
5	3.7	1.924	20	8.2	2.864	20			
6	4.6	2.145	20	7.1	2.665	20			
7	3.4	1.844	20	6.5	2.550	20			
8	5.2	2.280	20	6.6	2.569	20			
9	5.3	2.302	20	7.8	2.793	20			
10	8.6	2.933	20	8.4	2.898	20			
Minimum	3.4	1.844	20	6.5	2.550	20			
Maximum	9.1	3.017	20	9.8	3.130	20			
Mean	6.1	2.433	20.0	7.9	2.807	20.0			
Sum	60.9	24.330	200	79.1	28.065	200			
Total Sum				140	52.395	400			

Max. pitot press. =	9.8
Min. pitot press. =	3.4
Ratio Max:Min =	2.9 :1

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

Visit Number: 1

RPS Health, Safety & Environment MCERTS Report (v7) – Part 2 – Summary Information Appendix 1: General Information

ĵ	7	_										Appendix 1: General Information 물길 물일일 등
	Endpoint.		4		မ		8		1		Sample Point	Company Name: Covrad Heat Tra Site Name: Coventry Sampling Point Ref: New booth 1 Date:10/1/06 Run: 2 Job / Report Reference: FYS3926 Run: 2 Job / Report Reference: FYS3926 Run: 33400 Filter 33400 Probe Washings 33400
32.00	32	28	24	20	16	12	80	4	0		Clock Time	Company Name: Covrad Heat Transfer Lt In-stack Filter? Site Name: Coventry Sampling Point Ref: New booth 1 Outstack Filter? Sampling Point Ref: New booth 2 Operators Upob / Report Reference: FYS3926 Sample Filter Weights Filter 394987 RPS Probe Washings 394599 RPS
7.900		a	9	7.8	7.8	7.8	7.8	7	7		Pitot A p.	outstack Filter? Cutstack Filter? Operators Operators RPS RPS RPS
18.9	îâ	19	19	19	19	19	19	19	1,9		Stack Temp, °C	Ves GHSP Increase/mg 0.1
65.6		74.79	74.79	64.818	64.618	64,818	64.818	58.17	58,17	Desired	Orifice m/s-1	Bur. Press.mm Hg
65,8		75	75	65	65	85	65	58	58	Actual	m/s-1	751.53 0.82 0.82 Probe Wash
0.8	421648								420884	m³	Gas Meter Reading	K Factor Dn used Nozzie No. Sample Filter Blank Weighings 194557 RPS 394500 RPS
20.9	22	22	22	21	21	21	21	19	19	ď	Temp at Gas Meter Outlet	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Condenser Temp,	
160,0	160	160	160	160	160	160	160	160	160	റ്	Filter Box Temp	Amblent Temp. Start Time Stop Time Stop Time Implinger 1 Implinger 2 Implinger 3 Implinger 4 Implinger 5 Silica Gel
160.0	160	160	160	160	160	160	160	160	160	റ്	Probe	12 14:02 14:34 14:34 Weights
-9.6		-10	-6	-9	ъ	ę,	θ-	<u>:</u>	7	inches Hg	Pump Vacuum	ts
NIA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Impinger Stem Temp.	Increase: 9 0.0 0.0 0.0 0.0
2.496	0.000	3.000	3.000	2.793	2.793	2.793	2.793	2.646	2.646		Root A p,	Leak Rate (fin / %) Leak Rate (start / %) Box/Probe setting
		5							-	1		Report Issue Number: 1 Date of Issue: February 2006 Page 34 of 59

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06

Run: 2

Sampling Point Ref: New booth 1	Run: 2		
Meter Volume Sampled, acm	0.765		
Sample Run Start Time	14:02		
Sample Run End Time	14:34		
Total Actual Sampling Time, min	32.0		
Barometric Pressure, mm Hg	751.53		
Stack Pressure, mm Hg	751.54		
Average Stack Temp, °C	18.9		
Meter Volume at STP, scm	0.707		
Meter Volume at Wet STP, scm	0.707		
Stack Moisture Content, %	0.0		
Average Stack Velocity, m/sec	8,302		
Stack Flow Rate, acms	4.069		
Stack Flow Rate, scms dry,STP	3.762		
Nozzle Diameter, mm	8.00		
% Isokinetic Variation	95.2		
Total Mass of Particulate, mg	3.3		
Percentage of Total Particulate Collected on Filter	3.0		
Stack Particulate Concentration, mg/m ³	47		
Particulate Mass rate, kg/hour	0.064		
Emission Limit value	50.000		

Sample Train Blank Results								
Sample Blank Particulate Concentration, mg/m³	0.85							
Total Weight Gain, mg (Sample Train Blank)	0.6							
Blank Result Less than 10% of Limit Value	Yes							

Company Name: Covrad Heat Transfer Date: 10/01/2006 Site Ref: Coventry

Stack Ref: New Booth 1

Run: 1

	VOC as C mg/m³	VOC as C kg/hr	VOC as Toluene mg/m³	VOC as Toluene kg/hr
Average	12.30	0.17	13.47	0.19
Max	22.96	0.32	25.15	0.35
Min	0.00	0.00	0.00	0.00
Moisture, %				

Time min	VOC, ppm	VOC as C, mg/m³	VOC as Toluene,mg/m³	O2 FACTOR
11:55	12	19.68	21.55	1.00
11:56	14	22.96	25.15	1.00
11:57	10	16.40	17.96	1.00
11:58	8	13.12	14.37	1.00
11:59	6	9.84	10.78	1.00
12:00	6	9.84	10.78	1.00
12:01	8	13.12	14.37	1.00
12:02	10	16.40	17.96	1.00
12:03	6	9.84	10.78	1.00
12:04	6	9.84	10.78	1.00
12:05	6	9.84	10.78	1.00
12:06	4	6.56	7.18	1.00
12:07	4	6.56	7.18	1.00
12:08	0	0.00	0.00	1.00
12:09	8	13.12	14.37	1.00 1.00
12:10	12	19.68 36.08 42.64	21.55	
12:11	22		39.51 46.70	1.00
12:12	26			1.00
12:13	20	32.80	35.92	1.00
12:14	14	22.96	25.15	1.00
12:15	8	13.12	14.37	1.00
12:16	4	6.56	7.18	1.00
12:17	12	19.68	21.55	1.00
12:18	10	16.40	17.96	1.00
12:19	8	13.12	14.37	1.00
12:20	4	6.56	7.18	1.00
12:21	4	6.56	7.18	1.00
12:22	4	6.56	7.18	1.00
12:23	4	6.56	7.18	1.00
12:24	8	13.12	14.37	1.00
12:25	2	3.28	3.59	1.00

Site Name: Coventry

Sampling Point Ref: New booth 2 Job / Report Reference: FYS3926 Date:09/1/06

Run: 1

JOD / Nepolt Neseletice. I 100020									
			Stack Diameter (m) 0.79						
Stack Static p	oress.mm H ₂ O:	0.2	Stack Area (m2):			0.49016814			
Traverse		Port A	1.7.2	Port B					
Point No.	Δp,	Root ∆ p	Stack Temp	∆ p,	Root ∆ p	Stack Temp			
	mm H₂O		°C	mm H₂O		°C			
1	9.1	3.017	20	7.1	2.665	20			
2	8.8	2.966	20	9.8	3.130	20			
3	7.2	2.683	20	9.1	3.017	20			
4	5	2.236	20	8.5	2.915	20			
5	3.7	1.924	20	8.2	2.864	20			
6	4.6	2.145	20	7.1	2.665	20			
7	3.4	1.844	20	6.5	2.550	20			
8	5.2	2.280	20	6.6	2.569	20			
9	5.3	2.302	20	7.8	2.793	20			
10	8.6	2.933	20	8.4	2.898	20			
Minimum	3.4	1.844	20	6.5	2.550	20			
Maximum	9.1	3.017	20	9.8	3.130	20			
Mean	6.1	2.433	20.0	7.9	2.807	20.0			
Sum	60.9	24.330	200	79.1	28.065	200			
Total Sum				140	52.395	400			

		_
Max. pitot press. =	9.8	٦
Min. pitot press. =	3.4	
Ratio Max:Min =	2.9 :1	1

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Oxygen consection	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

RPS Health, Safety & Environment
MCERTS Report (v7) – Part 2 – Summary Information
Appendix 1: General Information

	Endpoint.		4		ω		N		1		Sample Point	Company Name: Covrad Heat Transfer Lt In-stack Filter/ Camping Point Ref: New booth 2 Outstack Filter/ Date:091/105 Operators Uob / Report Reference: FYS3926 Sample Filter Weights Sample Filter Weights 394598 RPS Probe Washings 394598 RPS
32.00	32	28	24	20	16	12	60	4	0		Clock Time min	ad Heat Transfer Lt in- lew booth 2 Ou e: FYS3926 Sample Filter Weights 394599
13.844	8.3	8.3	13.2	13,2	13.8	13.8	17	17	20		Pitot A p. m/s-1	In-stack Filter? Outstack Filter? Operators ARPS RPS RPS RPS
17.3	17	17	17	17	17	17	1 8	18	18		Stack Temp, °C	No Ves 1.13
78.2		44.654	71.016	71,016	74.244	74.244	91.46	91.46	107.6	Desired	Orffic	Bar. Press.mm Hg
78.3		45	71	71	7.4	74	92	92	107	Actual	Orlfice m/s-1	751.53 0.82 0.82
0.9	417630								416731	m³	Gas Meter Roading	Sample Filter Blank Weighings 994108 394600 RPS 394600 RPS
19.1	20	19	19	19	19	19	19	₩	150	ó	Temp at Gas Meter Outlet	5.35 7 7 7 7 7 7 0.04
N/A	N/A	NA	N/A	N/A	N A	N/A	N/A	N/A	Z/A	റീ	Condenser Temp,	
160.0	160	160	160	160	160	160	160	160	160	ိင	Filter Box Temp	Ambient Temp. Start Time Stop Time Stop Time Implinger 1 Implinger 2 Implinger 4 Implinger 4 Implinger 4 Implinger 4 Islica Gel
160.0	160	160	160	160	160	160	160	160	160	റ്	Probe Temp	09:38 O2:38 Night initial state st
-9.6		-10	ф	ģ	ь	ф	ģ	=	-	Inches Ho	Pump	Nts Final 1887
NA	N/A	NA	N/A	N/A	N/A	N/A	N.	N/A	N/A	റ്	Impinger Stern Temp.	
3.686	2.861	2.881	3.633	3.633	3.715	3.715	4.123	4.123	4.472		Root Δ p,	Leak Rate (fin / %) Leak Rate (start / %) Box/Probe setting

Site Name: Coventry

Date:09/1/06 Job / Report Reference: FYS3926 Run: 1

Sampling Point Ref: New booth 2	Run: 1
Meter Volume Sampled, acm	0.899
Sample Run Start Time	9:38
Sample Run End Time	2:38
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	17.3
Meter Volume at STP, scm	0.837
Meter Volume at Wet STP, scm	0.837
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	12.229
Stack Flow Rate, acms	5.994
Stack Flow Rate, scms dry,STP	5,570
Nozzle Diameter, mm	7.00
% Isokinetic Variation	99,4
Total Mass of Particulate, mg	1.2
Percentage of Total Particulate Collected on Filter	8.1
Stack Particulate Concentration, mg/m ³	1.5
Particulate Mass rate, kg/hour	0.029
Emission Limit value	50.000

Sample Train Blank Res	ults
Sample Blank Particulate Concentration, mg/m ³	0.65
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: New booth 2 Job / Report Reference: FYS3926 Date:09/1/06

Run: 2

otaon otano p	1000:1111111120:	0.2		Olack Alca (II	14-1.	0.40010014		
Traverse		Port A		Port B				
Point No.	Δp,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp		
	mm H ₂ O		°C	mm H ₂ O		°C		
1	9.1	3.017	20	7.1	2.665	20		
2	8.8	2.966	20	9.8	3.130	20		
3	7.2	2.683	20	9.1	3.017	20		
4	5	2.236	20	8.5	2.915	20		
5	3.7	1.924	20	8.2	2.864	20		
6	4.6	2.145	20	7.1	2.665	20		
7	3.4	1.844	20	6.5	2.550	20		
8	5.2	2.280	20	6.6	2.569	20		
9	5.3	2.302	20	7.8	2.793	20		
10	8.6	2.933	20	8.4	2.898	20		
Minimum	3.4	1.844	20	6.5	2.550	20		
Maximum	9.1	3.017	20	9.8	3.130	20		
Mean	6.1	2.433	20.0	7.9	2.807	20.0		
Sum	60.9	24.330	200	79.1	28.065	200		
Total Sum				140	52.395	400		

Max. pitot press. =	9.8
Min. pitot press. =	3.4
Ratio Max:Min =	2.9 :1

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

ex)gen concenen	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

RPS Health, Safety & Environment
MCERTS Report (v7) – Part 2 – Summary Information

te: Coventry	_£	_											Appendix 1: General Information
	Cimponia	Endpoint		4		ω		N		-		Sample Point	Company Name: Covrad Heat Transfer Lt. In-stack Filter? Ste Name: Coventry Sampling Point Ref: New booth 2 Outstack Filter? Date:09/1/06 Operators Sample Filter Weights Sample Filter Weights Simple Filter Weights Sample Filter Weights
3.70	33 00	39	28	24	20	16	12	СО	4	0		Clock Time	rad Heat Transfer Lt In-s lew booth 2 Op- ce: FYS3926 Sample Filter Weights 394090 1916
13.422	15 422	8.3	20	20	16,2	16.3	19.2	19.2	9.8	9.6		Pitot ∆ p,	in-stack Filter? Outstack Filter? Operators Filts RPS RPS RPS
:	173	17	17	17	17	17	17	18	≅ .	18		Stack Temp,	Ves GH/SP 0.1
d.6	87 R		107.6	107.6	87,156	87.694	103.296	103.296	52,724	52,724	Desired	Orific	Bar. Press.mm Hg
01.0	87 A		108	108	88	88	103	1 23	52	52	Actual	Orlfice m/s-1	751.53 0.82 2 Filter Probe Wash
	1.0	418600								417630	m ³	Gas Metor Reading	K Factor Dn usod Nozzie No. Sample Filter Blank Weighings 394108 394500 RPS 394500 RPS
<u>s.</u>	19.1	20	19	19	19	19	ij	19	19	19	റ്	Temp at Gas Meter Outlet	5.38 5.38 7 7 7 0.04 0.5
3	N/A	N/A	ΝΆ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Temp.	
100.00	160.0	160	160	160	160	160	160	160	160	160	റ്	Filter Box Temp	Ambient Temp. Start Time Stop Time Meights Implinger 1 Implinger 2 Implinger 3 Implinger 5 Silica Gel
1000	160.0	160	160	160	160	160	160	160	160	160	റ്	Probe	12 10:40 11:12 11:12 Impinger Weights Impinger Weights
	-9.6		-10	ф	ф	ģ	ţ,	ώ	<u>.</u>	11	Inches Hg	Pump	Final
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Z A	N/A	ငိ	Implinger Stem Temp.	increase 9.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0
	3.879	2.881	4.472	4.472	4.025	4.037	4.382	4.382	3.130	3.130		Root ∆p,	Leak Rate (fin / %) Leak Rate (start / %) Box/Probe setting
isit Number: 1													Report Issue Number: 1 Date of Issue: February 2006 Page 41 of 59

Site Name: Coventry

Job / Report Reference: FYS3926

Date:09/1/06 Run: 2

Sampling Point Ref: New booth 2	Run: 2
Meter Volume Sampled, acm	0.970
Sample Run Start Time	10:40
Sample Run End Time	11:12
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	17,3
Meter Volume at STP, scm	0.904
Meter Volume at Wet STP, scm	0.904
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	12.869
Stack Flow Rate, acms	6.308
Stack Flow Rate, scms dry,STP	5,862
Nozzle Diameter, mm	7.00
% Isokinetic Variation	102.0
Total Mass of Particulate, mg	1.2
Percentage of Total Particulate Collected on Filter	8.1
Stack Particulate Concentration, mg/m ³	1.4
Particulate Mass rate, kg/hour	0.029
Emission Limit value	50.000

Sample Train Blank Resul	is
Sample Blank Particulate Concentration, mg/m³	0.60
Total Weight Gain, mg (Sample Train Blank)	0.54
Blank Result Less than 10% of Limit Value	Yes

Company Name: Covrad Heat Transfer Date: 10/01/2006

Site Ref: Coventry

Run: 1

Stack Ref: New Booth 2

	VOC as C mg/m³	VOC as C kg/hr	VOC as Toluene mg/m³	VOC as Toluene kg/hr
Average	4.20	0.08	4.60	0.09
Max	14.76	0.29	16.17	0.31
Min	0.00	0.00	0.00	0.00
Moisture, %				

Time min	VOC, ppm	VOC as C, mg/m³	VOC as Toluene,mg/m³	O2 FACTOR	
10:22	0	0.00	0.00	1.00	
10:23	0	0.00	0.00	1.00	
10:24	4	6.56	7.18	1.00	
10:25	9	14.76	16.17	1.00	
10:26	7	11.48	12.57	1.00	
10:27	7	11.48	12.57	1.00	
10:28	8	13.12	14.37	1.00	
10:29	2	3.28	3.59	1.00	
10:30	0	0.00	0.00	1.00	
10:31	0	0.00	0.00	1.00	
10:32	0	0.00	0.00	1.00	
10:33	0	0.00	0.00	1.00	
10:34	1	1.64	1.80	1.00	
10:35	0	0.00	0.00	1.00	
10:36	0	0.00	0.00	1.00	
10:37	3	4.92	5.39	1.00	
10:38	5	8.20	8.98	1.00	
10:39	6	9.84	10.78	1.00	
10:40	5	8.20	8.98	1.00	
10:41	2	3.28	3.59	1.00	
10:42	0	0.00	0.00	1.00	
10:43	0	0.00	0.00	1.00	
10:44	0	0.00	0.00	1.00	
10:45	0	0.00	0.00	1.00	
10:46	4	6.56	7.18	1.00	
10:47	8	13.12	14.37	1.00	
10:48	10	16.40	17.96	1.00	
10:49	8	13.12	14.37	1.00	
10:50	3	4.92	5.39	1.00	
10:51	0	0.00	0.00 0.00		
10:52	0	0.00	0.00	1.00	

Operator: Covrad Heat Transfer Ltd Site: Coventry

Company Name: Covrad Heat Transfer Ltd

Site Name: Coventry

Sampling Point Ref: New booth 3 Job / Report Reference: FYS3926 Date:10/1/06

Run: 1

DOD I ICEPUILI	ob / Report Reference. 1 100020							
•			Stack Diameter (m) 0.79					
Stack Static p	oress.mm H ₂ O:	0.2		0.49016814				
Traverse		Port A		Port B				
Point No.	Δp,	Root ∆ p	Stack Temp	Δр,	Root ∆ p	Stack Temp		
	mm H ₂ O		°C	mm H₂O		°C		
1	9.1	3.017	20	7.1	2.665	20		
2	8.8	2.966	20	9.8	3.130	20		
3	7.2	2.683	20	9.1	3.017	20		
4	5	2.236	20	8.5	2.915	20		
5	3.7	1.924	20	8.2	2.864	20		
6	4.6	2.145	20	7.1	2.665	20		
7	3.4	1.844	20	6.5	2.550	20		
8	5.2	2.280	20	6.6	2.569	20		
9	5.3	2.302	20	7.8	2.793	. 20		
10	8.6	2.933	20	8.4	2.898	20		
Minimum	3.4	1.844	20	6.5	2.550	20		
Maximum	9.1	3.017	20	9.8	3.130	20		
Mean	6.1	2.433	20.0	7.9	2.807	20.0		
Sum	60.9	24.330	200	79.1	28.065	200		
Total Sum				140	52.395	400		

Max. pitot press. =	9.8
Min. pitot press. =	3.4
Ratio Max:Min =	2.9 :1

Gas Data

Oxygen %	21.0
CO₂ %	0.04
CO %	

Oxygen Correction	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m²?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

RPS Health, Safety & Environment
MCERTS Report (v7) – Part 2 – Summary Information
Appendix 1: General Information

Company Name: Covered Heat Transfer Lt. In-stack Filter? No. Bar. Press.mm Hg 751.53 Sile Name: Coveredly Covered Heat Transfer Lt. In-stack Filter? Vos. Cp 0.82 Sampling Point Ref: New booth 3 Outstack Filter? Yes Cp 0.82 Run: 1 Cperations GH/SP Bws% 2 Job / Report Reference: FYS3926 Sample Filter Weights GH/SP Bws% 2 Filter 394091 RPS 0.1 Filter Probe Washings RPS 0.1 Filter 394599 RPS 0.5 Probe Washings Orifice m/s-1 Probe Washings Sample Point Clock Time Phot Δ p. Stack Temp. Orifice m/s-1 Probe Wash 1 0 14 17 116.34 117 2 8 9.8 17 81.438 82 3 16 12.8 17 105.508 106	
No Bar. Press.mm Hg Yes Cp ChlSP Bws% Cp ChlCass.mm GH/SP Bws% ChlCass.mm Confice Confice	
Bar. Press.mm Hg Cp Cp Orifice Desired 116.34 116.34 116.34 81.438 81.438	
K Factor Dn used Nozzle No. Sample Filter Blank Weighings Reference Laboratory 394597 RPS 394500 RPS 394500 RPS 418830	
8.31 8 8 8 9 (Increase, mg. 0.1 0.1 Temp at Gas Mater Outlet 9°C CC 19 19 19 19	
Condenser Temp, NIA NIA NIA	
Ambient Temp. Start Time Stop Time Stop Time Stop Time Implinger 1 Implinger 2 Implinger 3 Implinger 4 Implinger 4 Implinger 4 Implinger 6 Silica Gel 160 160 160	
11:20 11:20 11:52 11:52 Impinger Weights Inhiliation Probe Temp °C 160 160 160 160 160	
Pump Vacuum Inches Hg -11 -11	
Incresse 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	
	Loak Rate (fin / %) Leak Rate (start / %) Leak Rate (start / %) Box/Probe setting 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.

Visit Number: 1

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06 Run: 1

Sampling Point Ref: New booth 3	Run: 1
Meter Volume Sampled, acm	1.030
Sample Run Start Time	11:20
Sample Run End Time	11:52
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	17.0
Meter Volume at STP, scm	0.961
Meter Volume at Wet STP, scm	0.961
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	10.476
Stack Flow Rate, acms	5.135
Stack Flow Rate, scms dry,STP	4.777
Nozzle Diameter, mm	8.00
% Isokinetic Variation	102.0
Total Mass of Particulate, mg	0.6
Percentage of Total Particulate Collected on Filter	16.7
Stack Particulate Concentration, mg/m ³	0.6
Particulate Mass rate, kg/hour	0.011
Emission Limit value	50.000

Sample Train Blank Result	S
Sample Blank Particulate Concentration, mg/m³	0.62
Total Weight Gain, mg (Sample Train Blank)	0.6
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: New booth 3 Job / Report Reference: FYS3926 Date:10/1/06

Run: 2

				Stack Diameter	er (m) 🛛 [0.79
Stack Static press.mm H ₂ O: 0.2		Stack Area (m2):		0.49016814		
Traverse		Port A			Port B	
Point No.	Δр,	Root ∆ p	Stack Temp	Δр,	Root ∆ p	Stack Temp
	mm H₂O		°C	mm H₂O		°C
1	9.1	3.017	20	7.1	2.665	20
2	8.8	2.966	20	9.8	3.130	20
3	7.2	2.683	20	9.1	3.017	20
4	5	2.236	20	8.5	2.915	20
5	3.7	1.924	20	8.2	2.864	20
6	4.6	2.145	20	7.1	2.665	20
7	3.4	1.844	20	6.5	2.550	20
8	5.2	2.280	20	6.6	2.569	20
9	5.3	2.302	20	7.8	2.793	20
10	8.6	2.933	20	8.4	2.898	20
Minimum	3.4	1.844	20	6.5	2.550	20
Maximum	9.1	3.017	20	9.8	3.130	20
Mean	6.1	2.433	20.0	7.9	2.807	20.0
Sum	60.9	24.330	200	79.1	28.065	200
Total Sum				140	52.395	400

Max. pitot press. =	9.8
Min. pitot press. =	3.4
Ratio Max:Min =	2.9 :1

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Oxygen Correction	
Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06	
Run: 2	

Sampling Point Ref: New booth 3	Run: 2
Meter Volume Sampled, acm	0.984
Sample Run Start Time	11:20
Sample Run End Time	11:52
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	18.0
Meter Volume at STP, scm	0.918
Meter Volume at Wet STP, scm	0.918
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	10.524
Stack Flow Rate, acms	5.158
Stack Flow Rate, scms dry,STP	4.783
Nozzle Diameter, mm	8.00
% Isokinetic Variation	97.3
Total Mass of Particulate, mg	0.6
Percentage of Total Particulate Collected on Filter	16.7
Stack Particulate Concentration, mg/m ³	0.7
Particulate Mass rate, kg/hour	0.011
Emission Limit value	50.000

Sample Train Blank Results	
Sample Blank Particulate Concentration, mg/m³	0.65
Total Weight Gain, mg (Sample Train Blank)	0.6
Blank Result Less than 10% of Limit Value	Yes

Company Name: Covrad Heat Transfer Date: 10/01/2006 Site Ref: Coventry Run: 1

Stack Ref: New Booth 3

	VOC as C mg/m³	VOC as C kg/hr	VOC as Toluene mg/m³	VOC as Toluene kg/hr
Average	16.91	0.28	18.52	0.31
Max	36.08	0.60	39.51	0.66
Min	4.92	0.08	5.39	0.09
Moisture, %				

Time min	VOC, ppm	VOC as C, mg/m³	VOC as Toluene,mg/m³	O2 FACTOR	
11:16	7	11.48	12.57	1.00	
11:17	7	11.48	12.57	1.00	
11:18	7	11.48	12.57	1.00	
11:19	5	8.20	8.98	1.00	
11:20	12	19.68	21.55	1.00	
11:21	15	24.60	26.94	1.00	
11:22	22	36.08	39.51	1.00	
11:23	12	19.68	21.55	1.00	
11:24	7	11.48	12.57	1.00	
11:25	3	4.92	5.39	1.00	
11:26	16	26.24	28.74	1.00	
11:27	10	16.40	17.96	1.00	
11:28	14	22.96	25.15	1.00	
11:29	14	22.96	25.15	1.00	
11:30	6	9.84	10.78	1.00	
11:31	8	13.12	14.37	1.00	
11:32	6	9.84	10.78	1.00	
11:33	6	9.84	10.78	1.00	
11:34	34	55.76	61.07	1.00	
11:35	22	36.08	39.51	1.00	
11:36	11	18.04	19.76	1.00	
11:37	10	10	16,40	17.96	1.00
11:38	8	13.12	14.37	1.00	
11:39	8	13.12	14.37	1.00	
11:40	6	9.84	10.78	1.00	
11:41	6	9.84	10.78	1.00	
11:42	6	9.84	10.78	1.00	
11:43	10	16.40	17.96	1.00	
11:44	6	9.84	10.78	1.00	
11:45	4	6.56	7.18	1.00	
11:46	4	6.56	7.18	1.00	

Site Name: Coventry

Sampling Point Ref: Red Oxide Job / Report Reference: FYS3926 Date:10/1/06

Run: 1

			_	Stack Diameter	er (m)	0.79
Stack Static p	ress.mm H₂O:	0.2		0.49016814		
Traverse		Port A			Port B	
Point No.	Δр,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp
	mm H ₂ O		ိုင	mm H ₂ O		°C
1	9.8	3.130	19			
2	10.2	3.194	19			
3	10.4	3.225	19			
4	9.8	3.130	19	SE SEL PRINCE LANCE		
5	9.8	3.130	19			
6	8.8	2.966	19			
7	8.2	2.864	19			
8	7.6	2.757	19			
9	7.8	2.793	19			
10	7.8	2.793	19			The second secon
Minimum	7.6	2.757	19	0.0	0.000	0
Maximum	10.4	3.225	19	0.0	0.000	0
Mean	9.0	2.998	19.0	#DIV/0!	#DIV/0!	#DIV/0!
Sum	90.2	29.983	190	0	0.000	0
Total Sum		1555		90.2	29.983	190

Max. pitot press. =	10.4
Min. pitot press. =	7.6
Ratio Max:Min =	1.4 :1

Gas Data

Oxygen %	21.0
CO₂ %	0.04
CO %	

Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow; angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

	Endpoint.								>		Sample Point	Filter Probe Washings		Company Name: Covrad Heat Transfer Lt-In-stack Filter? Site Name: Coventry Sampling Point Ref; Red Oxide Date: 10/1/05 Run: 1 Obb / Report Reference: FYS3926	Appendix 1: General Information
32.00	32	28	24	20	16	12	æ	4	0		Clock Time min	394098 394098	Sample Filter Weights	vrad Heat Transfer Red Oxide ce: FYS3926	
9.963		10.1	10.2	8.8	to	10.2	10.2	ó	10.2		Pitot A p, mm H ₂ O	RPS RPS	ghts	Lt In-stack Filter? Outstack Filter? Operators	
19.0	19	19	19	18	19	ø	₩	19	19		Stack Temp, °C	0.99 0.59		Yes GH/SP	
103.4		104.838	105.876	91.344	103.8	105.876	105.876	103.8	105.876	Desired	Orifice A]Bar. Press.mm Hg]Cp]Bws%	
103.7		106	106	91.3	104	106	108	104	106	Actual	Orlfice & H, mm H ₂ O	Filter Probe Wash	,	0.82 2	
1.0	40464								39460	m ³	Gas Meter Reading	394600 RPS	Sample Fifter Blank Weighings	K Factor On used Nozzle No.	-
20,0	20	20	20	20	20	20	20	20	20	င်	Temp at Gas Meter Outlet	Ulillaciesse, mp. 0.1		10.38 8 8	
A/N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	റ്	Condenser Temp,				
160.0	160	160	160	160	160	160	160	160	160	റ്	Filter Box Temp	Weights Impinger 1 Impinger 2 Impinger 3 Impinger 4 Impinger 5 Silica Gel		Ambient Temp. Start Time Stop Time	
160.0	160	160	160	160	160	160	160	160	160	റ്	Probe	Gerindalise Resident	mainage Wala	12 13:40 14:12	
-10,4		-12	4	-10	-10	-10	-10	-10	-10	Inches Hg	Pump	REGISTORE SERVICE	ŧ		
#DIV/0I										ദ്	Impinger Stem Temp.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			
3.156		3.178	3.194	2.966	3.162	3.194	3,194	3,162	3,194		Root Δ p,			Leak Rate (fin / %) Leak Rate (start / %) Box/Probe setting	
														42 5°C	Report Issue Number: 1 Date of Issue: February 2006 Page 52 of 59

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06

Run: 1

Sampling Point Ref: Red Oxide Run: 1 Meter Volume Sampled, acm 1.004 Sample Run Start Time 13:40 Sample Run End Time 14:12 Total Actual Sampling Time, min 32.0 Barometric Pressure, mm Hg 751.53 Stack Pressure, mm Hg 751.54 Average Stack Temp, °C 19.0 Meter Volume at STP, scm 0.934 Meter Volume at Wet STP, scm 0.934 Stack Moisture Content, % 0.0 Average Stack Velocity, m/sec 10.498 Stack Flow Rate, acms 5.146 Stack Flow Rate, scms dry,STP 4.755 Nozzle Diameter, mm 8.00 % Isokinetic Variation 99.5 Total Mass of Particulate, mg 1.5 Percentage of Total Particulate Collected on Filter 66.4 Stack Particulate Concentration, mg/m³ 1.6 Particulate Mass rate, kg/hour 0.027 Emission Limit value 50.000

Sample Train Blank Results	
Sample Blank Particulate Concentration, mg/m ³	0.64
Total Weight Gain, mg (Sample Train Blank)	0.6
Blank Result Less than 10% of Limit Value	Yes

Site Name: Coventry

Sampling Point Ref: Red Oxide Job / Report Reference: FYS3926 Date:10/1/06

Run: 2

			Stack Diamet	0.79		
Stack Static p	press.mm H ₂ O;	0.2		0.49016814		
Traverse		Port A				
Point No.	Δp,	Root ∆ p	Stack Temp	Δp,	Root ∆ p	Stack Temp
	mm H₂O		°C	mm H₂O		°C
1	9.8	3.130	19			
2	10.2	3.194	19			
3	10.4	3.225	19		100 TOWN TO A STATE OF	
4	9.8	3.130	19			
5	9.8	3.130	19			
6	8.8	2.966	19		72 (175 (e)), 30e-30e	
7	8.2	2.864	19			
8	7.6	2.757	19	Carlo Andrews	TO THE OWNER OF THE PARTY OF TH	
9	7.8	2.793	19			
10	7.8	2.793	19			
Minimum	7.6	2.757	19	0.0	0.000	0
Maximum	10.4	3.225	19	0.0	0.000	0
Mean	9.0	2.998	19.0	#DIV/0!	#DIV/0!	#DIV/0!
Sum	90.2	29.983	190	0	0.000	0
Total Sum	3445.00.154			90.2	29.983	190

Max. pitot press. =	10.4	
Min. pitot press. =	7.6	
Ratio Max:Min =	1.4 :1	

Gas Data

Oxygen %	21.0
CO ₂ %	0.04
CO %	

Required Correction Value	0
Actual Oxygen Factor	1
Enter 0 if correction is not required	

BS EN 13284-1 & M1 Sample Point Requirements	Requirement Met?
Duct gas Flow: angle with regard to duct access <15°?	Yes
Duct Gas Flow Negative Velocity: Not Permitted	No
Duct Gas Flow: Ratio of max to min velocity <3:1?	Yes
Working Area > 5m ² ?	No
Handrails with removable chains / self closing gates across the top of the ladder?	No
Handrails (approx 0,5 and 1,0 m high) and vertical baseboards (approx 0,25m high)?	Yes
Able to bear 400kg load?	Yes
Handrails not restricting access to ports?	No
Room opposite sampling port equal or greater than the length of the sampling probe plus 1 metre?	No
Sufficient Power (Waterproof 110V BS4343 Standard) close or on the platform?	Yes

Site Name: Coventry

Job / Report Reference: FYS3926

Date:10/1/06

Run: 1

Sampling Point Ref: New booth 1	Run: 1
Meter Volume Sampled, acm	0.929
Sample Run Start Time	14:40
Sample Run End Time	14:12
Total Actual Sampling Time, min	32.0
Barometric Pressure, mm Hg	751.53
Stack Pressure, mm Hg	751.54
Average Stack Temp, °C	18.9
Meter Volume at STP, scm	0.882
Meter Volume at Wet STP, scm	0.882
Stack Moisture Content, %	0.0
Average Stack Velocity, m/sec	8.771
Stack Flow Rate, acms	4.299
Stack Flow Rate, scms dry,STP	3.974
Nozzle Diameter, mm	8.00
% Isokinetic Variation	112.5
Total Mass of Particulate, mg	16.8
Percentage of Total Particulate Collected on Filter	79.6
Stack Particulate Concentration, mg/m ³	19.1
Particulate Mass rate, kg/hour	0.273
Emission Limit value	50.000

Sample Train Blank Results						
Sample Blank Particulate Concentration, mg/m ³	0.68					
Total Weight Gain, mg (Sample Train Blank)	0.6					
Blank Result Less than 10% of Limit Value	Yes					

Company Name: Covrad Heat Transfer Date: 09/01/2006 Site Ref: Coventry Run: 1

Stack Ref: Red Oxide

	VOC as C mg/m ³	VOC as C kg/hr	VOC as Toluene mg/m³	VOC as Toluene kg/hr
Average	22.34	0.37	24.47	0.41
Max	39.36	0.66	43.11	0.72
Min	11.48	0.19	12.57	0.21

Time min	VOC, ppm	VOC as C, mg/m ³	VOC as Toluene,mg/m ³	O2 FACTOR
14:30	11	18.04	19.76	1.00
14:31	8	13.12	14.37	1.00
14:32	10	16.40	17.96	1.00
14:33	12	19.68	21.55	1.00
14:34	22	36.08	39.51	1.00
14:35	14	22.96	25.15	1.00
14:36	16	26.24	28.74	1.00
14:37	22	36.08	39.51	1.00
14:38	15	24.60	26.94	1.00
14:39	24	39.36	43.11	1.00
14:40	16	26.24	28.74	1.00
14:41	11	18.04	19.76	1.00
14:42	7	11.48	12.57	1.00
14:43	14:43 12		21.55	1.00
14:44	10	16.40	17.96	1.00
14:45	8	13.12	14.37	1.00
14:46	11	18.04	19.76	1.00
14:47	10	16.40	17.96	1.00
14:48	22	36.08	39.51	1.00
14:49	16	26.24	28.74	1.00
14:50	15	24.60	26.94	1.00
14:51	16	26.24	28.74	1.00
14:52	7	11.48	12.57	1.00
14:53	8	13.12	14.37	1.00
14:54	10	16.40	17.96	1.00
14:55	12	19.68	21.55	1.00
14:56	11	18.04	19.76	1.00
14:57	24	39.36	43.11	1.00
14:58	22	36.08	39.51	1.00
14:59	14	22.96	25.15	1.00
15:00	12	19.68	21.55	1.00
15:01	8	13.12	14.37	1.00

Company Name: Covrad Heat Transfer Date: 09/01/2006 Site Ref: Coventry Run: 1 Stack Ref: Trike Bath

	VOC as C mg/m ³	VOC as C kg/hr	VOC as Toluene mg/m ³	VOC as Toluene kg/hr
Average	123.10	0.08	134.82	0.08
Max	229.59	0.14	251.46	0.16
Min	72.16	0.05	79.03	0.05
Moisture. %				

ime min	VOC, ppm	voc as c, mg/m°	VOC as Toluene,mg/m ³	O2 FACTOR
14:10	140	229.59	251.46	1.00
14:11	100	163.99	179.61	1.00
14:12	62	101.68	111.36	1.00
14:13	44	72.16	79.03	1.00
14:14	52	85.28	93.40	1.00
14:15	62	101.68	111.36	1.00
14:16	44	72.16	79.03	1.00
14:17	70	114.80	125.73	1.00
14:18	52	85.28	93.40	1.00
14:19	46	75.44	82.62	1.00
14:20	46	75.44	82.62	1.00
14:21	130	213.19	233.50	1.00
14:22	110	180.39	197.57	1.00
14:23 14:24	100	163.99	179.61	1.00
14:25	68	111.52	122.14	1.00
14:26	75 82	123.00	134.71	1.00
14:27	61	134.48 100.04	147.28	1.00
14:28	45	73.80	109.56 80.83	1.00
14:29	61	100.04		1.00
14:30	60	98.40	109.56 107.77	1.00 1.00
14:31	65	106.60	107.77	1.00
14:32	60	98.40	107.77	1.00
14:33	40	65.60	71.85	1.00
14:34	33	54.12	59.27	1.00
14:35	78	127.92	140.10	1.00
14:36	50	82.00	89.81	1.00
14:37	54	88.56	96.99	1.00
14:38	48	78.72	86.21	1.00
14:39	44	72.16	79.03	1.00
14:40	25	41.00	44.90	1.00
14:41	38	62.32	68.25	1.00
14:42	32	52.48	57.48	1.00
14:43	45	73.80	80.83	1.00
14:44	50	82.00	89.81	1.00
14:45	32	52.48	57.48	1.00
14:46	38	62.32	68.25	1.00
14:47	45	73.80	80.83	1.00
14:48	52	85.28	93.40	1.00
14:49	50	82.00	89.81	1.00
14:50	30	49.20	53.88	1.00
14:51	50	82.00	89.81	1.00
14:52	40	65.60	71.85	1.00
14:53	40	65.60	71.85	1.00
14:54	40	65.60	71.85	1.00
14:55	35	57.40	62.86	1.00
14:56	36	59.04	64.66	1.00
14:57	28	45.92	50.29	1.00
14:58	32	52.48	57.48	1.00
14:59	32	52.48	57.48	1.00
15:00	34	55.76	61.07	1.00
15:01	30	49.20	53.88	1.00
15:02	22	36.08	39.51	1.00
15:03	84	137.76	150.87	1.00
15:04	34	55.76	61.07	1.00
15:05	38	62.32	68.25	1.00
15:06	42	68.88	75.44	1.00
15:07	46	75.44	82.62	1.00
15:08	50	82.00	89.81	1.00
15:09	54	88.56	96.99	1.00 R
15:10	58	95.12	104.18	1.00 Date o

TRICHLOROETHYLENE SAMPLING DATA

Client	Covrad	Job Number	FYS3926		
Site	Coventry	Date	09-Jan-06		
Stack	Large Degreaser	Operators	SP/GH	- This	
Pollutant	Trichloroethylene	Sample Method	BS EN 13649		
Absorbent(s)	2 x SKC 226-09 Charcoal Tube	Analysis Method	GC		
Gas Velocity	3.90 m/s	Duct dimensions.	0.25	m	
Gas Temp	21 °C	Duct Area	0.05	m²	
Act. Vol. Flow	0.19 m³/s	S.t.p. Volume Flow	0.18	m³/s	

Run Short Term	Start		Finish		Sample	
Leak Check OK?	Υ		Υ			
Time	14:18		14:28			
Sample Flow Rate (ml/min)	200		200	Net Total Analyte (mg)	0.850	
DGM Temp (°C)	20		20	Atmos Pressure (kPa)	100.9	
Volume Gas Sampled (I)	0.0022			S.t.p. Volume sampled (m³)	0.0021	
No. mins sampling (mins)	11			DGM / Flowmeter error (%)	****	
		As solvent (Trike)	As total carbon		As solvent (Trike)	As total carbon
Mass Emission Rate (g/hr)		263.3	48.1	S.t.p. Emission Conc. (mg/m³)	413.0	75.5

Volume Gas Sampled (I)	10.8		S.t.p. Volume sampled (m³)	0.01	
Volume Gas Sampled (I)	10.8				
DGM Temp (°C)	20	20	Atmos. Pressure (kPa)	100.9	,
Sample Flow Rate (ml/min)	200	200	Net Total Analyte (mg)	3.0	
Time	13.38	14.32		· · · · · · · · · · · · · · · · · · ·	
Leak Check OK?	Y	Y			
Run Long Term	Start	Finish		Sample	

Table 2.8 - Monitoring Results from the (Red Oxide)

Substance Monitored	Emission Monitoring Result	Periodic Monitoring Result	Units	Uncertainty (%)#	Reference V Conditions 273K, 101.3kPa	Sampling Date	Sampling Times	Monitoring Reference Method	Accreditation Operating Status Status	Operating Status
Total Particulate Matter	50*	1.6	mg/m³	Z/A	Dry, 273K, 101.3kPa,	10/9/2004	13:35-	BS ISO	MCERTS	Normal
Run I	N/A	27	g/hr	17.61	for O ₂		14:07	9096:2003		
Total Particulate Matter	50*	1.5	mg/m³	۸//A	Dry, 273K, 101.3kPa,	10/9/2004	12:00-	BS ISO	MCERTS	Normal
Run 2	N/A	25	g/hr	5	for O ₂	101/12/07	12:30	9096:2003		
High Concentration VOC (as	50*	16.91	mg/m³	0 0	Dry, 273K, 101.3kPa,	10/01/2006	11:16-	BS EN	MCERTS	Normal
total organic carbon)	N/A	280	g/hr	70	for O ₂ .		11:46	13526:2002		

Notes:

The uncertainty associated with the quoted result is at the 95% confidence interval As 30 minute mean (Stated in PG 6/23(04)) "Coating of Metals and Plastics"