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Date : 3rd September 01

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Our ref. : WSITF17 *Page:* 1 of 10

Vicky

As discussed in our recent telephone conversation, here is a copy of the method statement from the consultants we've contracted to monitor the emissions from our coating areas.

Regards

[redacted]

D J Warrington

STATEMENT OF WORK

1 STACK SURVEY

1.1 Scope Of Work

This service is aimed at providing a comprehensive assessment of process and fugitive emissions to the external environment to meet the legislative requirements of the Environmental Protection Act 1990.

Two environmental scientists will conduct a **three [3] day** visit to the site to examine the Company's operations and to measure environmental emissions. The objectives of this evaluation will be:

- to establish the nature and measure the extent of environmental emissions; and
- to review compliance with the Environmental Protection Act.

1.2 Report

An interpretative report will be issued. The report will contain the following information:

- description of processes and conditions examined;
- a tabulation of emission data with comparisons against relevant emission limits;
- profiled emissions of specific analytes, where appropriate;
- discussion of results and findings; and
- recommendations for the reduction or elimination of emission.

1.3 Site Requirements

Assistance will be required from a person responsible for the operation or maintenance of the plant and processes and we will expect the following to be available at the start of the survey:

- safe means of access; and an appropriate sampling platform;
- sampling ports;
- mains power [240 and/or 110 Volts];
- an inventory of substances used in the processes being surveyed; with access to hazard data sheets; and
- information regarding work patterns, process duration and production runs.

1.4 Sampling Protocol - D A S-1 [Paint Shop]

Location	No. of Stacks	Sampling Protocol	Substances Monitored and Type of Sampling	Total No. of Samples
Vapour degreaser	1	Four 15- min Nc, Ex	Chlorinated volatile organic compounds [Trichloroethylene]	4
Paint Kitchen	1	1 hour, C, Ex	Volatile organic compounds	Profile
Spray booth	1	Two 30-min Nc, Ex	Particulate matter	2
		Two 30-min Nc, Ex	Isocyanates	2
		2-hour C, Ex	Volatile organic compounds	Profile
Drying Oven	1	2-hour C, Ex	Volatile organic compounds	Profile

1.5 Sampling Protocol - D A S-2 [Paint Shop]

Location	No. of Stacks	Sampling Protocol	Substances Monitored and Type of Sampling	Total No. of Samples
Spray booth	1	Two 30-min Nc, Ex	Particulate matter	2
		Two 30-min Nc, Ex	Isocyanates	2
		2-hour C, Ex	Volatile organic compounds	Profile
Drying Oven	1	2-hour C, Ex	Volatile organic compounds	Profile

† Ex = extractive; Nc = non-continuous; C = continuous

† May be altered by Field Scientist on date of survey depending upon process conditions.

1.6 Sampling Protocol - Wheel & Brake [Paint Shop]

Location	No. of Stacks	Sampling Protocol	Substances Monitored and Type of Sampling	Total No. of Samples
Paint Kitchen	1	1 hour, C, Ex	Volatile organic compounds	Profile
Spray booth	2	Two 30-min Nc, Ex	Particulate matter	4
		Two 30-min Nc, Ex	Isocyanates	4
		2-hour C, Ex	Volatile organic compounds	Profile
Drying Tunnel	1	2-hour C, Ex	Volatile organic compounds	Profile

† Ex = extractive; Nc = non-continuous; C = continuous

† May be altered by Field Scientist on date of survey depending upon process conditions.

1.7 Sampling Protocol - D A I P C [Paint Shop]

Location	No. of Stacks	Sampling Protocol	Substances Monitored and Type of Sampling	Total No. of Samples
Paint Kitchen	1	1 hour, C, Ex	Volatile organic compounds	Profile
Spray booth	1	Two 30-min Nc, Ex	Particulate matter	2
		Two 30-min Nc, Ex	Isocyanates	2
		2-hour C, Ex	Volatile organic compounds	Profile
Drying Tunnel	1	2-hour C, Ex	Volatile organic compounds	Profile

† Ex = extractive; Nc = non-continuous; C = continuous

† May be altered by Field Scientist on date of survey depending upon process conditions.

1 OBJECTIVES

The aim of this document is to state the protocols and methods of sampling and analysis that will be implemented by the OEH Group field personnel during evaluation of stack emissions from prescribed processes. The protocols are intended to satisfy the emission monitoring requirements of the Coventry City Council, Environmental Health Unit regarding Local Authority Air Pollution Control.

2 INTRODUCTION

The process that is being assessed at the Coventry Plant of Dunlop Aviation Services Limited is that of the Coating of Metals during manufacture of Aircraft Wheels. The process might qualify for LAAPC and will thus require an authorisation. On that basis, it will be essential to demonstrate to the local authority that the existing process complies with the following emission limits:

- Volatile organic compounds (VOC) must not exceed 50 mg/m^3 , where non-compliant coatings are used;
- Emission concentrations of isocyanates must not exceed 0.1 mg/m^3 ;
- Emission concentrations of total particulate matter must not exceed 50 mg/m^3

The scope of work proposed here is designed to assess the validity of the above mentioned requirements.

3 STACK SAMPLING

3.1 Personnel

OEH Group Limited proposes to undertake the sampling protocol described below using two field scientists for 3 days.

3.2 Sample Collection

Sampling will be undertaken, wherever practical, on vertical straight sections and at locations that are approximately 5-6 duct diameters away from the fan. Where this critria cannot be met due to duct & fan design, a best effort approach will be adopted to demonstrate the validity of the data collectd.

Monitoring periods will coincide with the normal running cycles of the process. Sampling will be maintained for a minimum of 1 - 2 hours at the emission points to take into account the potential variations in the process and the diversity in manufacturing at Dunlop Aviation Services Limited.

Prior to start of the sampling, the equipment will be inspected for leaks, integrity of tubing, and presence of the correct collection media. Sampling will proceed only if the leak is less than 5% of the normal sample volume rate under normal vacuum conditions.

Field sampling will follow the principles outlined below.

MEASUREMENT OR ANALYTE	TECHNIQUE AND SAMPLING PROTOCOL	PRECISION OF MEASUREMENT	METHOD REF.
Dimensions	Measuring rod and tape measure	± 1mm	BS 3405
Temperature	Thermocouple connected to a hand held calibrated electronic thermometer.	± 1°C	BS:3405
Velocity Pressure	Pitot tubes connected to a calibrated electronic differential pressure gauge by two equal lengths of tubing.	± 1 Pa	BS:1042 S2.1 (1983) BS:3405
Total particulate matter	Sampling through a sample holder fitted with a preweighed glass fibre filter linked to a Stackmite sampling unit.	± 10	BS-3405
Total isocyanates	Sampling through a midget impinger filled with absorbing solution linked to a portable sampling pump	± 10	MDHS 25 [modified]
Volatile organic compounds	Direct reading flame ionisation response on field equipment. Measurement will be backed by simultaneous sampling of stack stream using standard charcoal tubes to provide speciation of VOCs	± 10	US-EPA 25a

3.3 Process Details

During monitoring, accurate production logs will be collected. The information will be employed to derive the types and quantities of prescribed substances employed during manufacture.

3.4 Provision Of Safe Access

There is a legal requirement for the provision of safe means of access and a safe place of work. This Statutory requirement affects our Personnel, particularly in respect of ladders, platforms, or stagings, where they have to work at a place from which they will be liable to fall a distance of 2.0 metres (6ft 6 ins) or more.

Client will provide adequate and safe access to the roof and stacks via use of a mobile cherry picker and or scaffolding.

4 METHODS OF ANALYSIS

ANALYTE	ANALYSIS TECHNIQUE	DETECTION LIMIT	PRECISION OF MEASUREMENT (%)
VOC	Direct reading flame ionisation response on field equipment Solvent Desorption/Gas Chromatography for charcoal tubes used in speciation.	0.1 mgm^{-3} as carbon	± 5
Total particulate matter	Calibrated microbalance	0.1 $mg.m^{-3}$	± 5
Total isocyanates	High Performance Liquid Chromatography	0.01 $mg.m^{-3}$	± 10

5 DATA REDUCTION AND REPORTING

5.1 Calculation Of Response Factors Of VOC

Instrumental responses [millivolts or ppm methane] will be downloaded through a datalogging device to a portable computer where conversions to VOC (as Carbon) will be made. Two robust methods of conversion will be employed as described below.

5.1.1 Method 1: Calculation Of Composite Response Factors

Using the production information and knowledge of solvent utilisation throughout the measurement period, a Composite Response Factor (CRF) will be calculated from the following equation:

$$\textbf{Composite Response Factor} = \Sigma\,[RFn \times Cn] \,/\, \Sigma\,[Cn]$$

Where RF_n are the response factors of the solvents relative to methane or to the calibration gas , C_n are the concentrations of solvent in the solvent blend employed.

5.1.2 Method 2: Calculate Of Mean Response Factors

Based on analytical information obtained from the 'speciation' charcoal tubes the relative amounts and concentrations of each solvent present in the sample will be calculated. These are converted to concentration of carbon and summed to provide an average mgC/m^3 over the sampling period. Thereon the Mean Response Factor (MRF) is calculated from the following equation:

$$\textbf{Mean Response Factor} = \Sigma\,[Cn/Rt]$$

Where C_n is the carbon concentrations of individual solvents as determined in the laboratory, and R_t is the mean instrument response over the measurement period.

All emission concentrations will be expressed at reference conditions of 273K and 101.3kPa. The calculation used for such correction is:

$$Cr = Cm \times [Tm/273] \times [101.3/Pm]$$

Where Cr is the concentration at reference conditions, Cm is the measured concentration, Tm and Pm are the measured temperature and pressure, respectively.

5.3 Calculation Of Mass Emission, Where Required

The annual mass emission [Ma], expressed in kg VOC/year from the prescribed process will be determined using the following equation:

$$Ma = Cm \times Qm \times Pr$$

Where Cm is the measured concentrations of VOC in $mg.m^{-1}$; Qm is the mean volume flow rate measured at the sampling point and expressed in $m3.hr^{-1}$; and Pr is the production rate expressed in hours per year.

Calculation of annual mass emission necessitates the availability of accurate production information from the process operator.

5.4 Report

Based on the information provided above, the emission testing programme will be presented in a written report that will contain the following information:

- Plant and process description.
- Diagram of sampling positions.
- Date and times of sampling.
- Plant operating conditions during sampling.
- Duration of samples.
- Concentrations of analytes being measured (in mg/m^3), corrected for standard reference conditions as defined in the process guidance note.
- Details of the analytical methods employed, and accuracy of the measurements.
- Discussion of data and conclusions.
- Name of scientist undertaking the monitoring.

All raw data appertaining to the survey are retained indefinitely and will be available to the Client, on request.

2 ACCREDITATION

Service category	ISO-9002	UKAS[1]	IIP
Consultancy	yes	no	yes
Analysis			
- total dusts and fumes	yes	yes	yes
- selected solvents	yes	yes	yes
- isocyanates	yes	yes	yes
[1] ***UKAS lab number 1821***			
Stack sampling team is a member of the Source Testing Association			

TO Vicky [illegible] From [illegible] @ [illegible] Aviation

6 QUALITY ASSURANCE

6.1 Equipment Calibration - Voc Detectors

The flame ionisation detectors will be calibrated on site prior to, during, and at the end of the monitoring survey. One gas concentration, close to the emission limit will be employed. Zero gas responses will be determined before and after each survey.

6.2 Accreditation

The sampling team is a Member of the Source Testing Association. The in-house laboratory is accredited under UKAS [Lab No. 1821] for the determination of TPM, solvents and isocyanates.

6.3 Sampling Team

Field personnel will be nominated one week prior to commencement of the survey. Personnel are experienced qualified environmental scientist with a minimum of 3 years experience in stack sampling and data interpretation. Personnel will be fully briefed on the work and will contact the client prior to the site visit to make final arrangements and to ensure that normal production condition will be maintained.

Final Page of Document

MEASUREMENT OF ENVIRONMENTAL EMISSIONS

DURING

SPRAY COATING OF COMPONENTS FOR THE AVIATION INDUSTRY

at

DUNLOP AEROSPACE BRAKING SYSTEMS
HOLBROOK LANE
COVENTRY
WARWIKSHIRE
CV6 4AA

REPORT NO:	OEH/31943/STAK/SD77	**CLIENT REF:**	Mr Pat Cullen
DATE OF VISIT:	16 – 18 March, 2004	**CONTACT ON SITE:**	Mr Dave Warrington
DATE OF REPORT:	15 April, 2004	**DISK REFERENCE:**	N:\GenAdmin$\CT\Stak Reports\OEH31943.doc 15/04/2004 11:45

DATA PROTECTION ACT REGISTRATION NO: B0479 03 4

CONFIDENTIALITY UNDERTAKING

We undertake that we will not knowingly make use or disclose any confidential information or photographs relating to your business which may have come to our knowledge or attention as a result of our visit on site or otherwise as a result of the work carried out by us in connection with the preparation of this report. If you have any queries or comments regarding this report, please contact the Customer Services, OEH Group Limited Tel: 0121 359 5361.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Date Of Test & Test Areas	Emissions sampling from a number of stacks in DAS 1, DAS 2, DAIPC and the Wheel & Brake paint shops was conducted between 16th & 18th March 2004.
Test Conditions	All processes were said to be operating under relatively normal conditions throughout the sampling periods.
Compliance	Full compliance with the guidance note was achieved on this occasion.
General Observations	Due to limited plant operation in some areas, sampling times were relatively short.

Surveyed and reported by:

[redacted]

Jonathan Litterick *BSc (Hons)*
Environmental Scientist

Verified by:

[redacted]

Andy Barnes *BSc (Hons)*
Environmental Scientist

for and on behalf of OEH Group Limited

If you have any queries or comments regarding this report, please contact Customer Services, OEH Group Ltd. Tel: 0121 359 5361.

1 INTRODUCTION

1.1 Purpose of Survey

The aim of the survey described in this report was to verify compliance with the requirements of the relevant Process Guidance Note, PG6/40(94) – Coating and Recoating of Aircraft and Aircraft Components.

1.2 Terms of Reference

Dunlop Aerospace Braking Systems, Holbrook Lane, Coventry, Warwickshire, CV6 4AA, has commissioned OEH Group Limited to carry out the work described in this report. Monitoring was carried out between 16th and 18th March 2004, by Bill Roberts and Jonathan Litterick, at the request of Mr Dave Warrington.

The work was carried out in accordance with OEH Proposal ref: EFH-10471 dated 28th November 2003 and with the client's instructions.

OEH Group is accredited under ISO-9002 for the provision of health, safety and environmental consultancy services. The work described in this report was carried out in accord with our ISO-9000 Standard Operating Procedures and Level III: Consultancy Work Instructions.

The field sampling and interpretations made in this report are not covered by the scope of OEH's accreditation under UKAS.

1.3 Plant conditions

Production schedules on the dates of the survey were described as relatively normal. Thus, the data reported herein must be considered typical and representative of the environmental levels experienced during normal daily workloads on this site.

2 PROCESS DESCRIPTION

Dunlop Aerospace Braking Systems produce various aircraft components at their Coventry factory. When compared to many other industrial sectors, the activities carried out are very labour intensive, with relatively low volumes of product. General descriptions of the processes tested are given below.

2.1 Degreasing

Before paint application, products are degreased in modern vapour degreasing tanks, which are vented via lip extraction and discharged to atmosphere without abatement. The tanks are sealed with hydraulic lids, which are opened to allow insertion and removal of items from the tank. Items for degreasing are immersed for 15 minutes in trichloroethylene, after which they are lifted into the vapour zone for 10 minutes and then removed from the tank.

2.2 Paint Kitchens

Paint mixtures required for the spray booths are weighed and formulated on a bench inside an enclosed room. There is extraction from the bench, which passes directly to atmosphere, without abatement. Whilst the actual mixing process lasts only for a matter of minutes, the extraction is left on all day. The various bulk containers of the paint mix ingredients are also stored in these rooms.

2.3 Spray Booths

Paint spraying takes place in large "walk-in" spray booths. All booths now employ wet back abatement. Primer and topcoat application is carried out in all booths

2.4 Drying Ovens

In between coat applications, and after final topcoat application, items are oven dried for between 30 and 60 minutes. All drying ovens are electrically operated, and emissions are fan extracted and vented directly to atmosphere with no abatement.

3 METHODS

3.1 Stack Sampling

3.1.1 Stack Velocity & Temperature Measurements

Stack velocity was investigated using an ellipsoidal nosed pitot tube coupled to an electronic manometer. Temperature measurements were taken using a K-type thermocouple connected to an electronic thermometer. The procedure is designed to fulfil the main procedural requirements of BSEN 13284:2002 & BSISO 9096:2003 for the preliminary flow and temperature traverse and for the calculation of volumetric flow rate.

The manometer and thermometer are subject to regular calibration by a UKAS accredited test house using NPL traceable standards.

3.1.2 Total Particulate Matter (TPM)

Periodic extractive sampling for Total Particulate Matter (TPM) was conducted using a Stackmite 9096 sampling train. 37mm Glass Fibre Filters were used, they were conditioned in an identical manner before and after sampling. Sampling protocol was, within the limitations of the sampling plane, in accordance with the main procedural requirements of BSEN 13284:2002 & BSISO 9096:2003. The sampling train was set up and checked for leaks before commencement of the survey and between each sample. The Stackmite unit is calibrated annually and is traceable to NPL standards.

Calibration dated 31 March, 2003.

3.1.3 Volatile Organic Compounds (VOC)

Continuous extractive sampling for VOCs was conducted using a Research Engineers Flame Ionisation Detector (FID) to the requirements of BSEN 13526:2002. The instrument was calibrated on site before commencement of the survey and between each sample, using span gas methane at 90 and 990ppm. These gases are traceable to NPL standard and are re-certified at two yearly intervals as specified by the manufacturer.

Continuous extractive sampling was backed up by periodic extractive sampling for VOCs using calibrated pumps connected to charcoal adsorption tubes. The method is based on, and intended to satisfy the main procedural requirements of BSEN 13649:2002, and provides a correction factor for the instrumental results. The tubes are used to speciate the total VOC, so that the individual contributions from various compounds can be quantified.

3.1.4 Isocyanates

Periodic extractive sampling for Isocyanates was conducted using a calibrated pump connected to an impinger sampling train containing a solution of 1-(2-methoxyphenyl)piperazine. The method is based on, and intended to satisfy the main procedural requirements of ISO 16702.

3.2 Analysis

3.2.1 Techniques & Detection Limits

Analyte	Analysis Technique	Detection Limit	Analytical Precision, %	Method Reference
TPM	Gravimetric	20 µg	1	LSOP 202
Isocyanates	HPLC	0.02 µg NCO	10	LSOP 502
Continuous VOC	Flame Ionisation Detector	0.2 $mg.m^{-3}$ as carbon	5	BSEN 13526:2002
Periodic VOC	Gas Chromatography	2 µg as carbon	5	Variation on LSOP 402

3.2.2 Accreditation

Service Category	ISO-9002	UKAS[1]
Consultancy	Yes	No
Analysis		
- Dusts (air filter samples); Lab Method LSOP 202, based on MDHS14 (latest issue)	Yes	Yes
- Solvents (B, T, X 111-T, TCE, PERC); Lab Method LSOP402, based on Various NIOSH	Yes	Yes
- Solvents (all other species); Based on Various NIOSH	Yes	No
- Isocyanates (impinger samples); based on MDHS25	Yes	No
[1]UKAS lab number 1821		
Stack sampling team is a member of the Source Testing Association		

4 PRESENTATION OF RESULTS

The following table gives summary details of the mean emission concentrations measured for all parameters from all positions.

Sampling Position	Mean Particulate Emission ($mg.m^{-3}$)	Mean Isocyanate Emission ($mg.m^{-3}$)	Mean VOC Emission ($mgC.m^{-3}$)
DAIPC Kitchen	-	-	15.5
DAIPC Spray booth	0.1	<0.001	19.2
DAIPC Oven	-	-	10.5
DAS 2 Spray booth	0.06	<0.001	12.1
DAS 2 Oven	-	-	6.9
W & B Kitchen	-	-	33.7
W & B Spray booth (LHS)	n/a		
W & B Spray booth (RHS)	0.4	<0.001	28.9
W & B Oven	-	-	44.7
DAS 1 Kitchen	-	-	14.4
DAS 1 Spray booth	0.7	<0.001	24.0
DAS 1 Oven	-	-	29.2

Results reported at Standard Conditions of 273K and 101.3kPa, no correction for water vapour content.

n/a = testing not possible due to lack of process operation over sampling visit.

Sampling Position	Mean VOC Emission ($mgC.m^{-3}$)	Mean VOC Mass Emission (kg/8hr)
DAS 1 Degreaser	37.3	0.23
W & B Degreaser	23.1	0.19
DAS 2 Degreaser	117.1	1.00

Results reported at Standard Conditions of 273K and 101.3kPa, no correction for water vapour content.

Detailed results for all sampling positions are included in the Appendices of this report as follows:

Appendix I lists in tabular form further details of the TCE and Isocyanate results for each sample.

Appendix II lists in tabular form further details of the particulate results for each sample, including additional data from the pitot traverses, along with filter weight details and sampling parameters.

The recorded data for VOC concentrations is presented in both graphical and tabular form in Appendix III.

5 DISCUSSION

The processes monitored are covered by the Secretary of States Guidance Note PG6/40(94) – Coating and Recoating of Aircraft and Aircraft Components. This note states the following emission limits:

Emissions	Concentrations
Total Particulate Matter	50 $mg.m^{-3}$
Isocyanates (expressed as total NCO group)	0.1 $mg.m^{-3}$
Volatile Organic Compounds (as total carbon) other than from coating mixing vessels, organic solvent cleaning or degreasing operations or chemical stripping operations.	50 $mg.m^{-3}$
Volatile Organic Compounds (as total carbon) from coating mixing vessels, organic solvent cleaning or degreasing operations or chemical stripping operations where the individual source gives rise to a mass emission of chlorinated volatile organic compounds which exceeds 1% of the total solvent holding capacity of the equipment in any 8 hour period.	20 $mg.m^{-3}$

5.1 Spray Booths

The paints in use during tests on all booths were PR143 epoxy primers, and FE93/832 glossy topcoats, in various colours.

5.1.1 Total Particulate Matter

Emission releases of total particulate matter were all less than 1$mg.m^{-3}$, therefore significantly below the 50 $mg.m^{-3}$ limit for all spray booths tested, thus achieving compliance with the Environmental Protection Act 1990.

5.1.2 Volatile Organic Compounds

For all spraybooths, the average VOC emissions were below the 50 $mg.m^{-3}$ limit, and broadly in line with the previous visit.

5.1.3 Isocyanates

Isocyanate results for all booths were less than the analytical limit of detection, which is 0.001$mg.m^{-3}$, and were therefore all well below the emissions limit of 0.1 $mg.m^{-3}$

5.2 Paint Kitchens

5.2.1 Volatile Organic Compounds

For all paint kitchens, the average VOC emissions were below the 50 $mg.m^{-3}$ limit, and broadly in line with the previous visits.

The average result from the Wheel & Brake paint kitchen was lower then the level of 97.5 $mg.m^{-3}$ recorded on the last visit.

5.3 Ovens

5.3.1 Volatile Organic Compounds

Emissions of volatile organic compounds from all ovens tested were well below the authorised limit of 50 $mg.m^{-3}$, and in line with the previous visit, thus demonstrating compliance with the Environmental Protection Act 1990.

5.4 Degreasers

5.4.1 Volatile Organic Compounds

Emissions of volatile organic compounds from the DAS 1 degreaser, at an average of 37.3 $mg.m^{-3}$, the DAS 2 degreaser, at an average of 117.1 $mg.m^{-3}$ and the Wheel & Brake degreaser, at 23.1 $mg.m^{-3}$ were above the authorised limit of 20 $mg.m^{-3}$. However, this limit is only applicable where the mass emission in 8 hours is above 1% of the solvent holding capacity of the tank, it therefore does not apply to either unit.

All three tanks have a solvent capacity of 350 litres. The density of Trichloroethylene (TCE) is 1.46 kg/litre, and therefore the capacity of each is 510kg. From the average emission concentrations and the volumetric flowrates, the mass emissions over 8 hours were calculated to be as follows:

Wheel and Brake Degreaser, TCE emissions = 0.19 kg in 8 hours (0.04% of capacity)

DAS 1 Degreaser, TCE emissions = 0.23 kg in 8 hours (0.05 % of capacity)

DAS 2 Degreaser, TCE emissions = 1.00 kg in 8 hours (0.20 % of capacity)

6 CONCLUSIONS

From the data reported it can be seen that all of the processes demonstrate compliance with the authorisation under normal and typical workloads.

7 APPENDICES

Appendix I: Detailed Isocyanate & VOC Results Tables

Appendix II: Detailed Particulate & Flowrate Results Tables

Appendix III: VOC Profiling Data

APPENDIX I

DETAILED ISOCYANATE & VOC RESULTS TABLES

ISOCYANATE RELEASE DATA FOR DUNLOP AEROSPACE BRAKING SYSTEMS

			ENVIRONMENTAL RELEASE LEVELS[1]
	STACK REFERENCE AND ACTIVITY MONITORED		DAIPC SPRAYBOOTH
	TIME OF SAMPLING		13:20 – 13:30
	DATE OF SAMPLING		17th March 2004
ANALYTE(S)	UNITS	RELEASE LIMIT	
Isocyanate (As NCO Group)	$mg.m^{-3}$	0.1	<0.001

[1] Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.

ISOCYANATE RELEASE DATA FOR DUNLOP AEROSPACE BRAKING SYSTEMS

			ENVIRONMENTAL RELEASE LEVELS[1]	
	STACK REFERENCE AND ACTIVITY MONITORED		DAS 2 SPRAYBOOTH	
	TIME OF SAMPLING		10:08 – 10:39	11:15 – 11:46
	DATE OF SAMPLING		16th March 2004	
ANALYTE(S)	UNITS	RELEASE LIMIT		
Isocyanate (As NCO Group)	$mg.m^{-3}$	0.1	<0.001	<0.001

[1] Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.

ISOCYANATE RELEASE DATA FOR DUNLOP AEROSPACE BRAKING SYSTEMS

			ENVIRONMENTAL RELEASE LEVELS[1]	
	STACK REFERENCE AND ACTIVITY MONITORED		WHEEL & BRAKE SPRAYBOOTH (RHS)	
	TIME OF SAMPLING		10:07 – 10:37	10:39 – 11:09
	DATE OF SAMPLING		17th March 2004	
ANALYTE(S)	UNITS	RELEASE LIMIT		
Isocyanate (As NCO Group)	$mg.m^{-3}$	0.1	<0.001	<0.001

[1] Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.

ISOCYANATE RELEASE DATA FOR DUNLOP AEROSPACE BRAKING SYSTEMS

			ENVIRONMENTAL RELEASE LEVELS[1]	
	STACK REFERENCE AND ACTIVITY MONITORED		DAS 1 SPRAYBOOTH	
	TIME OF SAMPLING		13:31- 13:52	14:24 – 14:41
	DATE OF SAMPLING		16th March 2004	
ANALYTE(S)	UNITS	RELEASE LIMIT		
Isocyanate (As NCO Group)	$mg.m^{-3}$	0.1	<0.001	<0.001

[1] Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.

VOC RELEASE DATA FOR DUNLOP AEROSPACE BRAKING SYSTEMS

			ENVIRONMENTAL RELEASE LEVELS[1]	
	STACK REFERENCE AND ACTIVITY MONITORED		WHEEL & BRAKE DEGREASER	
	TIME OF SAMPLING		11:28 – 11:57	
	DATE OF SAMPLING		17th March 2004	
ANALYTE(S)	UNITS	RELEASE LIMIT		
VOC (TCE)	$mg.m^{-3}$	20	23.1	

[1] Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.

VOC RELEASE DATA FOR DUNLOP AEROSPACE

			ENVIRONMENTAL RELEASE LEVELS[1]	
	STACK REFERENCE AND ACTIVITY MONITORED		DAS 2 DEGREASER	
	TIME OF SAMPLING		9:48 – 10:31	10:45 – 11:15
	DATE OF SAMPLING		16th March 2004	
ANALYTE(S)	UNITS	RELEASE LIMIT		
VOC (TCE)	$mg.m^{-3}$	20	111.9	122.3

[1] Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.

VOC RELEASE DATA FOR DUNLOP AEROSPACE

			ENVIRONMENTAL RELEASE LEVELS	
	STACK REFERENCE AND ACTIVITY MONITORED		DAS 1 DEGREASER	
	TIME OF SAMPLING		12:14 – 13:08	13:10 – 13:40
	DATE OF SAMPLING		16th March 2004	
ANALYTE(S)	UNITS	RELEASE LIMIT		
VOC (TCE)	$mg.m^{-3}$	20	39.2	35.4

[1] **Release data and stack flow parameters have been corrected for standard temperature (273°K) and pressure (101.3kPa) but no correction has been made for water vapour.**

APPENDIX II

DETAILED PARTICULATE & FLOWRATE RESULTS TABLES

APPENDIX III

VOC PROFILING DATA

Plant Type	DAS1 Degreaser	Stack Area (m²)	0.018
Job Number	OEH31943	Ambient Temp (°C)	27
Client Name	Dunlop ABS	Stack Diameter (cm)	15
Date	16-Mar-04	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	-190
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*90*	*111*	*110*	*113*	*112*	*100*	*114*	*109*	*91*	*80*
Temperature (°C)	*29*	*29*	*29*	*29*	*29*	*29*	*29*	*29*	*29*	*29*
Duct Velocity (m/s)	12.4	13.8	13.7	13.9	13.8	13.1	14.0	13.7	12.5	11.7

Absolute Mean Duct Velocity (m/s)	13.3
Absolute Flow Rate (m³/hr)	844
Normalised Flow Rate (Nm³/hr)	764

Plant Type	DAS 1 Kitchen	Stack Area (m²)	0.045
Job Number	OEH 31943	Ambient Temp (C)	23
Client Name	Dunlop Aviation	Stack Diameter (cm)	24
Date	18th March 2004	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	30
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*110*	*60*	*40*	*45*	*24*	*20*	*27*	*50*	*56*	*30*
Temperature (°C)	*22*	*22*	*22*	*22*	*22*	*22*	*22*	*22*	*22*	*22*
Duct Velocity (m/s)	13.6	10.0	8.2	8.7	6.3	5.8	6.7	9.1	9.7	7.1

Absolute Mean Duct Velocity (m/s)	8.5
Absolute Flow Rate (m³/hr)	1388
Normalised Flow Rate (Nm³/hr)	1285

Plant Type	DAS1 Spray Booth	Stack Area (m²)		0.632	
Job Number	OEH31943	Meter Temp (°C)		30	
Client Name	Dunlop ABS	Stack Diameter (cm)	Length	80	
Date	16-Mar-04		Width	79	
		Pitot Factor		1.00	
		Pitot Factor (sqrt)		1.00	
		Stack Pressure (Pa)		-60	
		Ambient Pressure (kPa)		101.3	
		Nozzle Size (mm)		5	

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*60*	*18*	*1*	*1*	*1*	*1*	*1*	*1*	*10*	*10*
Temperature (°C)	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*
Duct Velocity (m/s)	10.0	5.5	1.3	1.3	1.3	1.3	1.3	1.3	4.1	4.1
Traverse Point	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*38*	*4*	*4*	*6*	*6*	*3*	*4*	*6*	*25*	*35*
Temperature (°C)	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*
Duct Velocity (m/s)	7.9	2.6	2.6	3.2	3.2	2.2	2.6	3.2	6.4	7.6
Traverse Point	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*150*	*70*	*80*	*82*	*84*	*36*	*22*	*30*	*25*	*57*
Temperature (°C)	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*	*20*
Duct Velocity (m/s)	15.8	10.8	11.5	11.7	11.8	7.7	6.0	7.1	6.4	9.7

Absolute Mean Duct Velocity (m/s)	5.7
Absolute Flow Rate (m³/hr)	12998
Normalised Flow Rate (Nm³/hr)	12104

Sampling Run 1 **Time: 13:32 - 13:52**

Sampling Point	Centre Point				Initial Meter Reading (l)	780000
Sampling Rate (l/min)	13.0				Final Meter Reading (l)	780357
Sampling Duration (mins)	30				Volume Sampled (l)	357
Filter N°	8309				Isokineticity Error (%)	-8.5
Volume Sampled (m³)	Meter	0.357	Expected	0.390	*(Maximum Allowed Error = 10%)*	
Corrected Volume =	0.32 Nm³ (at NTP)					

Sampling Run 2 **Time: 14:24 - 14:41**

Sampling Point	Centre Point				Initial Meter Reading (l)	780357
Sampling Rate (l/min)	13				Final Meter Reading (l)	780569
Sampling Duration (mins)	17				Volume Sampled (l)	212
Filter N°	8310				Isokineticity Error (%)	-4.1
Volume Sampled (m³)	Meter	0.212	Expected	0.221	*(Maximum Allowed Error = 10%)*	
Corrected Volume =	0.19 Nm³ (at NTP)					

FILTER WEIGHTS

Test Number	Filter N°	Pre-Weight (mg)	Post-Weight (mg)	Acetone Rinse (m	Gain (mg)
1	8309	55.62	55.82	0.00	0.20
2	8310	55.86	55.99	0.00	0.13

TEST RESULTS

	Test 1	Test 2	Mean
Particulate Concentration(mg/Nm³)	0.6	0.7	0.7
Mass Emission (g/hr)	7.5	8.2	7.9

Plant Type	**DAS 1 Oven**	Stack Area (m²)	0.053
Job Number	**OEH 31943**	Ambient Temp (C)	25
Client Name	**Dunlop Aviation**	Stack Diameter (cm)	26
Date	**16th March 2004**	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	-17
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*3*	*4*	*4*	*5*	*6*	*5*	*5*	*4*	*3*	*4*
Temperature (°C)	*95*	*95*	*95*	*95*	*95*	*95*	*95*	*95*	*95*	*95*
Duct Velocity (m/s)	2.5	2.9	2.9	3.2	3.5	3.2	3.2	2.9	2.5	2.9

Absolute Mean Duct Velocity (m/s)	**3.0**
Absolute Flow Rate (m³/hr)	**570**
Normalised Flow Rate (Nm³/hr)	**422**

Plant Type	**DAS2 Degreaser**	Stack Area (m²)	0.031
Job Number	**OEH31043**	Ambient Temp (°C)	23
Client Name	**Dunlop ABS**	Stack Diameter (cm)	20
Date	**16-Mar-04**	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	-70
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*90*	*88*	*75*	*50*	*62*	*52*	*50*	*40*	*55*	*70*
Temperature (°C)	*24*	*24*	*24*	*24*	*24*	*24*	*24*	*24*	*24*	*24*
Duct Velocity (m/s)	12.3	12.2	11.2	9.2	10.2	9.4	9.2	8.2	9.6	10.9

Absolute Mean Duct Velocity (m/s)	**10.2**
Absolute Flow Rate (m³/hr)	**1158**
Normalised Flow Rate (Nm³/hr)	**1065**

Plant Type	DAS2 Spray Booth	Stack Area (m²)	0.547
Job Number	OEH31943	Meter Temp (°C)	30
Client Name	Dunlop ABS	Stack Diameter (cm)	Length 76
Date	16-Mar-04		Width 72
		Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	55
		Ambient Pressure (kPa)	101.3
		Nozzle Size (mm)	5

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*80*	*64*	*60*	*53*	*50*	*56*	*40*	*34*	*28*	*21*
Temperature (°C)	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*
Duct Velocity (m/s)	11.5	10.3	10.0	9.4	9.1	9.6	8.1	7.5	6.8	5.9
Traverse Point	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*54*	*60*	*53*	*38*	*35*	*33*	*20*	*22*	*20*	*22*
Temperature (°C)	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*
Duct Velocity (m/s)	9.5	10.0	9.4	7.9	7.6	7.4	5.8	6.0	5.8	6.0

Absolute Mean Duct Velocity (m/s)	8.2
Absolute Flow Rate (m³/hr)	16106
Normalised Flow Rate (Nm³/hr)	15066

Sampling Run 1 **Time: 10:05 - 10:35**

Sampling Point	A3		A8	Initial Meter Reading (l)	284950
Sampling Rate (l/min)	*11.1*		*8.6*	Final Meter Reading (l)	285248
Sampling Duration (mins)	*15*		*15*	Volume Sampled (l)	298
Filter N°	*8307*			Isokineticity Error (%)	0.6
Volume Sampled (m³)	Meter	0.298	Expected 0.296	*(Maximum Allowed Error = 10%)*	

Corrected Volume = 0.27 Nm³ (at NTP)

Sampling Run 2 **Time: 10:36 - 11:06**

Sampling Point	A3		A8	Initial Meter Reading (l)	285250
Sampling Rate (l/min)	*11.1*		*8.6*	Final Meter Reading (l)	285550
Sampling Duration (mins)	*15*		*15*	Volume Sampled (l)	300
Filter N°	*8308*			Isokineticity Error (%)	1.3
Volume Sampled (m³)	Meter	0.300	Expected 0.296	*(Maximum Allowed Error = 10%)*	

Corrected Volume = 0.27 Nm³ (at NTP)

FILTER WEIGHTS

Test Number	Filter N°	Pre-Weight (mg)	Post-Weight (mg)	Acetone Rinse (m	Gain (mg)
1	8307	55.95	55.97	0.00	0.02
2	8308	56.66	56.67	0.00	0.01

TEST RESULTS

	Test 1	Test 2	Mean
Particulate Concentration(mg/Nm³)	0.07	0.04	0.06
Mass Emission (g/hr)	1.12	0.56	0.84

Plant Type	DAS 2 Oven	Stack Area (m²)	0.049
Job Number	OEH 31943	Ambient Temp (C)	18
Client Name	Dunlop Aviation	Stack Diameter (cm)	25
Date	16th March 2004	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	-5
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*12*	*11*	*14*	*12*	*11*	*12*	*10*	*11*	*12*	*10*
Temperature (°C)	*98*	*98*	*98*	*98*	*98*	*98*	*98*	*98*	*98*	*98*
Duct Velocity (m/s)	5.0	4.8	5.4	5.0	4.8	5.0	4.6	4.8	5.0	4.6

Absolute Mean Duct Velocity (m/s)	**4.9**
Absolute Flow Rate (m³/hr)	**869**
Normalised Flow Rate (Nm³/hr)	**639**

Plant Type	W & B Degreaser	Stack Area (m²)	0.025
Job Number	OEH31943	Ambient Temp (°C)	23
Client Name	Dunlop ABS	Stack Diameter (cm)	18
Date	17-Mar-04	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	56
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*53*	*58*	*67*	*73*	*81*	*98*	*108*	*118*	*130*	*125*
Temperature (°C)	*26*	*26*	*26*	*26*	*26*	*26*	*26*	*26*	*26*	*26*
Duct Velocity (m/s)	9.5	9.9	10.7	11.1	11.7	12.9	13.5	14.1	14.8	14.6

Absolute Mean Duct Velocity (m/s)	**12.3**
Absolute Flow Rate (m³/hr)	**1126**
Normalised Flow Rate (Nm³/hr)	**1029**

Plant Type	W & B Kitchen	Stack Area (m²)	0.071
Job Number	OEH 31943	Ambient Temp (C)	24
Client Name	Dunlop Aviation	Stack Diameter (cm)	30
Date	17th March 2004	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	10
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*15*	*16*	*17*	*16*	*17*	*19*	*20*	*22*	*23*	*22*
Temperature (°C)	*22*	*22*	*22*	*22*	*22*	*22*	*22*	*22*	*22*	*22*
Duct Velocity (m/s)	5.0	5.2	5.3	5.2	5.3	5.6	5.8	6.1	6.2	6.1

Absolute Mean Duct Velocity (m/s)	5.6
Absolute Flow Rate (m³/hr)	1420
Normalised Flow Rate (Nm³/hr)	1314

Plant Type	W&B Spray Booth - RHS	Stack Area (m²)		0.497
Job Number	OEH31943	Meter Temp (°C)		30
Client Name	Dunlop ABS	Stack Diameter (cm)	Length	71
Date	17-Mar-04		Width	70
		Pitot Factor		1.00
		Pitot Factor (sqrt)		1.00
		Stack Pressure (Pa)		73.3
		Ambient Pressure (kPa)		101.3
		Nozzle Size (mm)		5

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*90*	*90*	*85*	*75*	*83*	*72*	*63*	*47*	*38*	*28*
Temperature (°C)	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*
Duct Velocity (m/s)	12.2	12.2	11.9	11.1	11.7	10.9	10.2	8.8	7.9	6.8
Traverse Point	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*55*	*30*	*20*	*18*	*15*	*13*	*16*	*18*	*12*	*5*
Temperature (°C)	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*
Duct Velocity (m/s)	9.5	7.0	5.8	5.5	5.0	4.6	5.1	5.5	4.5	2.9

Absolute Mean Duct Velocity (m/s)	8.0
Absolute Flow Rate (m³/hr)	14242
Normalised Flow Rate (Nm³/hr)	13325

Sampling Run 1 **Time: 10:07 - 10:37**

Sampling Point	A3	A8	B3	B8
Sampling Rate (l/min)	*14.4*	*10.8*	*7.0*	*6.7*
Sampling Duration (mins)	*7.5*	*7.5*	*7.5*	*7.5*
Filter N°	*8311*			
Volume Sampled (m³)	Meter 0.300		Expected 0.292	

Initial Meter Reading (l)	780600
Final Meter Reading (l)	780900
Volume Sampled (l)	300
Isokineticity Error (%)	2.8
(Maximum Allowed Error = 10%)	

Corrected Volume = 0.27 Nm³ (at NTP)

Sampling Run 2 **Time: 10:39 - 10:59**

Sampling Point	A3	A8	B3	B8
Sampling Rate (l/min)	*14.4*	*10.8*	*7.0*	*6.7*
Sampling Duration (mins)	*5*	*5*	*5*	*5*
Filter N°	*8312*			
Volume Sampled (m³)	Meter 0.200		Expected 0.195	

Initial Meter Reading (l)	780910
Final Meter Reading (l)	781110
Volume Sampled (l)	200
Isokineticity Error (%)	2.8
(Maximum Allowed Error = 10%)	

Corrected Volume = 0.18 Nm³ (at NTP)

FILTER WEIGHTS

Test Number	Filter N°	Pre-Weight (mg)	Post-Weight (mg)	Acetone Rinse (m	Gain (mg)
1	8311	56.54	56.67	0.00	0.13
2	8312	55.56	55.62	0.00	0.06

TEST RESULTS

	Test 1	Test 2	Mean
Particulate Concentration(mg/Nm³)	0.5	0.3	0.4
Mass Emission (g/hr)	6.4	4.4	5.4

Plant Type	W & B Oven	Stack Area (m²)	0.049
Job Number	OEH 31943	Ambient Temp (C)	22
Client Name	Dunlop Aviation	Stack Diameter (cm)	25
Date	16th March 2004	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	-6
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*2*	*4*	*3*	*4*	*4*	*4*	*7*	*4*	*2*	*2*
Temperature (°C)	*79*	*79*	*79*	*79*	*79*	*79*	*79*	*79*	*79*	*79*
Duct Velocity (m/s)	2.0	2.8	2.4	2.8	2.8	2.8	3.7	2.8	2.0	2.0

Absolute Mean Duct Velocity (m/s)	**2.6**
Absolute Flow Rate (m³/hr)	**465**
Normalised Flow Rate (Nm³/hr)	**361**

Plant Type	DAIPC Kitchen	Stack Area (m²)	0.181
Job Number	OEH 31943	Ambient Temp (C)	25
Client Name	Dunlop Aviation	Stack Diameter (cm)	48
Date	17th March 2004	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	35
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*82*	*75*	*43*	*25*	*13*	*20*	*28*	*20*	*45*	*56*
Temperature (°C)	*25*	*25*	*25*	*25*	*25*	*25*	*25*	*25*	*25*	*25*
Duct Velocity (m/s)	11.8	11.3	8.5	6.5	4.7	5.8	6.9	5.8	8.7	9.7

Absolute Mean Duct Velocity (m/s)	8.0
Absolute Flow Rate (m³/hr)	5193
Normalised Flow Rate (Nm³/hr)	4759

Plant Type	DAIPC Spray Booth	Stack Area (m²)	0.830
Job Number	OEH31943	Meter Temp (°C)	30
Client Name	Dunlop ABS	Stack Diameter (cm)	Length 83
Date	17-Mar-04		Width 100
		Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	590
		Ambient Pressure (kPa)	101.3
		Nozzle Size (mm)	5

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*60*	*2*	*5*	*7*	*8*	*14*	*16*	*22*	*26*	*28*
Temperature (°C)	*21*	*21*	*21*	*21*	*21*	*21*	*21*	*21*	*21*	*21*
Duct Velocity (m/s)	10.0	1.8	2.9	3.4	3.7	4.8	5.2	6.1	6.6	6.8
Traverse Point	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
Distance From Near Wall (D)	0.065	0.125	0.250	0.375	0.450	0.550	0.625	0.750	0.875	0.935
Pitot Reading (Pa)	*77*	*95*	*70*	*70*	*75*	*55*	*50*	*60*	*50*	*54*
Temperature (°C)	*21*	*21*	*21*	*21*	*21*	*21*	*21*	*21*	*21*	*21*
Duct Velocity (m/s)	11.3	12.6	10.8	10.8	11.2	9.6	9.1	10.0	9.1	9.5

Absolute Mean Duct Velocity (m/s)	7.8
Absolute Flow Rate (m³/hr)	23198
Normalised Flow Rate (Nm³/hr)	21666

Sampling Run 1 **Time: 13:20 - 13:30**

Sampling Point	Centre Point			
Sampling Rate (l/min)	12.1			
Sampling Duration (mins)	10			
Filter N°	8313			
Volume Sampled (m³)	Meter	0.123	Expected	0.121

Initial Meter Reading (l)	781112
Final Meter Reading (l)	781235
Volume Sampled (l)	123
Isokineticity Error (%)	1.7
(Maximum Allowed Error = 10%)	

Corrected Volume = 0.11 Nm³ (at NTP)

FILTER WEIGHTS

Test Number	Filter N°	Pre-Weight (mg)	Post-Weight (mg)	Acetone Rinse (m	Gain (mg)
1	8313	53.80	53.81	0.00	0.01

TEST RESULTS

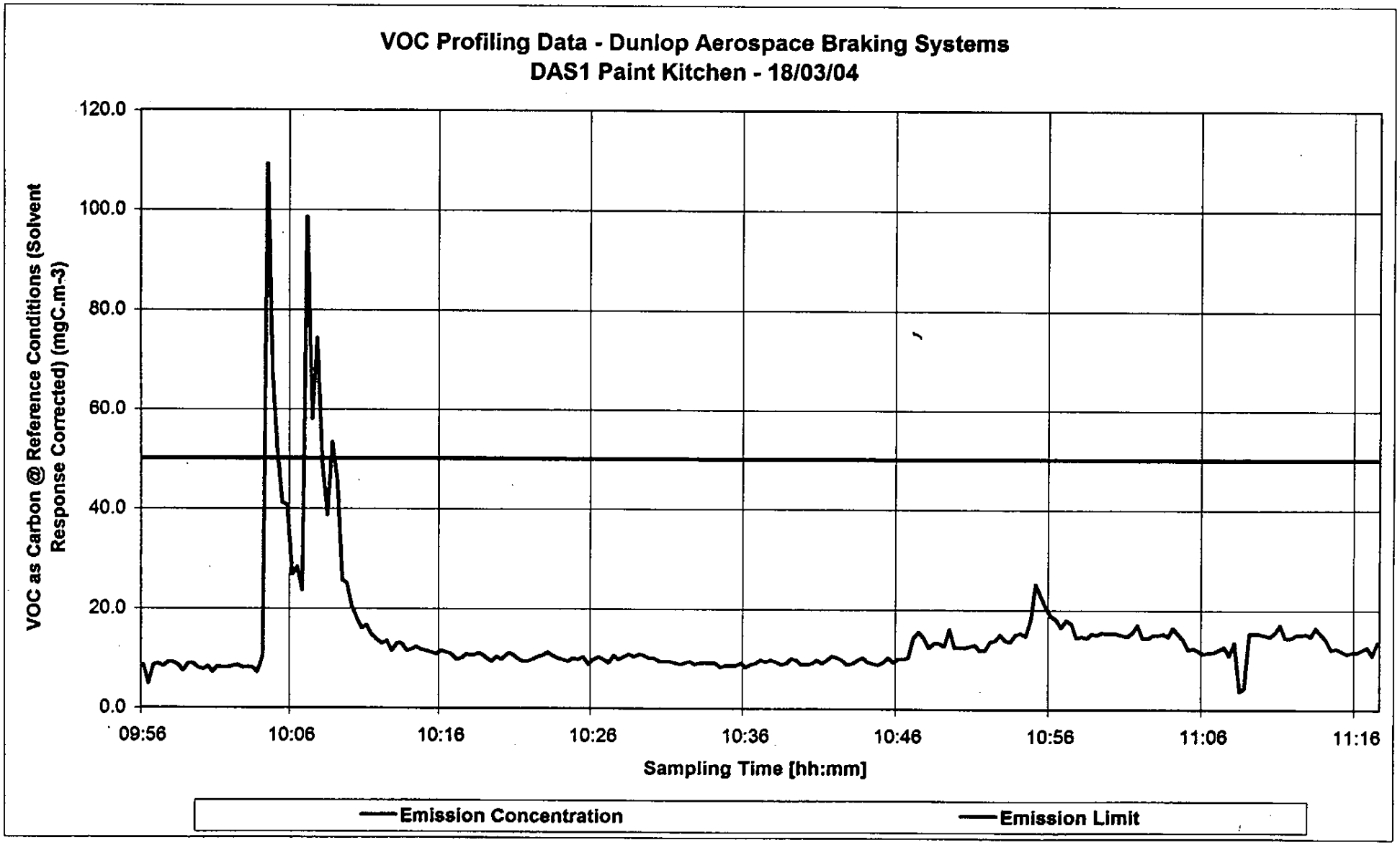
	Test 1	Mean
Particulate Concentration (mg/Nm³)	0.1	0.1
Mass Emission (g/hr)	2.0	2.0

Plant Type	DAIPC Oven	Stack Area (m²)	0.042
Job Number	OEH 31943	Ambient Temp (C)	24
Client Name	Dunlop Aviation	Stack Diameter (cm)	23
Date	17th March 2004	Pitot Factor	1.00
		Pitot Factor (sqrt)	1.00
		Stack Pressure (Pa)	0
		Ambient Pressure (kPa)	101.3

PITOT SURVEY

Traverse Point	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Distance From Near Wall (D	0.065	0.150	0.250	0.350	0.450	0.550	0.650	0.750	0.850	0.935
Pitot Reading (Pa)	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Temperature (°C)	*97*	*97*	*97*	*97*	*97*	*97*	*97*	*97*	*97*	*97*
Duct Velocity (m/s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

Absolute Mean Duct Velocity (m/s)	**1.4**
Absolute Flow Rate (m³/hr)	**217**
Normalised Flow Rate (Nm³/hr)	**160**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAS1 Paint Kitchen - 18/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
09:56
10:06
10:16
10:26
10:36
10:46
10:56
11:06
11:16
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6505/6**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
9:56:00	4.3	22	8.65
9:56:20	2.4	22	4.90
9:56:40	4.3	22	8.65
9:57:00	4.5	22	8.92
9:57:20	4.2	22	8.35
9:57:40	4.6	22	9.23
9:58:00	4.6	22	9.23
9:58:20	4.3	22	8.65
9:58:40	3.7	22	7.50
9:59:00	4.5	22	8.92
9:59:20	4.5	22	8.92
9:59:40	4.0	22	8.08
10:00:00	3.9	22	7.77
10:00:20	4.2	22	8.35
10:00:40	3.6	22	7.20
10:01:00	4.2	22	8.35
10:01:20	4.0	22	8.08
10:01:40	4.0	22	8.08
10:02:00	4.2	22	8.35
10:02:20	4.3	22	8.65
10:02:40	4.0	22	8.08
10:03:00	4.0	22	8.08
10:03:20	4.0	22	8.08
10:03:40	3.6	22	7.20
10:04:00	5.2	22	10.38
10:04:20	54.5	22	109.24
10:04:40	33.5	22	67.16
10:05:00	26.0	22	52.15
10:05:20	20.6	22	41.20
10:05:40	20.3	22	40.62
10:06:00	13.4	22	26.80
10:06:20	14.1	22	28.26
10:06:40	11.8	22	23.62
10:07:00	49.2	22	98.55
10:07:20	28.9	22	57.93
10:07:40	37.1	22	74.35
10:08:00	24.5	22	49.01
10:08:20	19.3	22	38.63
10:08:40	26.6	22	53.33
10:09:00	22.7	22	45.52
10:09:20	12.8	22	25.65
10:09:40	12.5	22	25.08
10:10:00	10.2	22	20.45
10:10:20	9.1	22	18.15

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6505/6**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:10:40	8.0	22	16.12
10:11:00	8.3	22	16.73
10:11:20	7.3	22	14.70
10:11:40	6.9	22	13.82
10:12:00	6.5	22	12.98
10:12:20	6.8	22	13.55
10:12:40	5.8	22	11.52
10:13:00	6.5	22	12.98
10:13:20	6.5	22	12.98
10:13:40	5.8	22	11.52
10:14:00	5.9	22	11.83
10:14:20	6.2	22	12.41
10:14:40	5.9	22	11.83
10:15:00	5.8	22	11.52
10:15:20	5.6	22	11.26
10:15:40	5.5	22	10.95
10:16:00	5.8	22	11.52
10:16:20	5.6	22	11.26
10:16:40	5.5	22	10.95
10:17:00	4.9	22	9.80
10:17:20	5.0	22	10.07
10:17:40	5.5	22	10.95
10:18:00	5.3	22	10.64
10:18:20	5.5	22	10.95
10:18:40	5.5	22	10.95
10:19:00	5.0	22	10.07
10:19:20	4.7	22	9.50
10:19:40	5.2	22	10.38
10:20:00	4.9	22	9.80
10:20:20	5.5	22	10.95
10:20:40	5.5	22	10.95
10:21:00	5.0	22	10.07
10:21:20	4.7	22	9.50
10:21:40	4.7	22	9.50
10:22:00	4.9	22	9.80
10:22:20	5.2	22	10.38
10:22:40	5.3	22	10.64
10:23:00	5.6	22	11.26
10:23:20	5.3	22	10.64
10:23:40	5.0	22	10.07
10:24:00	4.9	22	9.80
10:24:20	4.7	22	9.50
10:24:40	5.0	22	10.07
10:25:00	4.9	22	9.80

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6505/6**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:25:20	5.2	22	10.38
10:25:40	4.5	22	8.92
10:26:00	4.9	22	9.80
10:26:20	5.2	22	10.38
10:26:40	4.9	22	9.80
10:27:00	4.6	22	9.23
10:27:20	5.3	22	10.64
10:27:40	4.9	22	9.80
10:28:00	5.2	22	10.38
10:28:20	5.5	22	10.95
10:28:40	5.2	22	10.38
10:29:00	5.5	22	10.95
10:29:20	5.3	22	10.64
10:29:40	5.0	22	10.07
10:30:00	5.0	22	10.07
10:30:20	4.7	22	9.50
10:30:40	4.7	22	9.50
10:31:00	4.7	22	9.50
10:31:20	4.6	22	9.23
10:31:40	4.5	22	8.92
10:32:00	4.6	22	9.23
10:32:20	4.7	22	9.50
10:32:40	4.5	22	8.92
10:33:00	4.6	22	9.23
10:33:20	4.6	22	9.23
10:33:40	4.6	22	9.23
10:34:00	4.6	22	9.23
10:34:20	4.2	22	8.35
10:34:40	4.3	22	8.65
10:35:00	4.3	22	8.65
10:35:20	4.3	22	8.65
10:35:40	4.6	22	9.23
10:36:00	4.2	22	8.35
10:36:20	4.5	22	8.92
10:36:40	4.6	22	9.23
10:37:00	4.9	22	9.80
10:37:20	4.7	22	9.50
10:37:40	4.9	22	9.80
10:38:00	4.7	22	9.50
10:38:20	4.5	22	8.92
10:38:40	4.6	22	9.23
10:39:00	5.0	22	10.07
10:39:20	4.9	22	9.80
10:39:40	4.5	22	8.92

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6505/6**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:40:00	4.5	22	8.92
10:40:20	4.6	22	9.23
10:40:40	4.9	22	9.80
10:41:00	4.6	22	9.23
10:41:20	4.9	22	9.80
10:41:40	5.3	22	10.64
10:42:00	5.2	22	10.38
10:42:20	4.9	22	9.80
10:42:40	4.5	22	8.92
10:43:00	4.6	22	9.23
10:43:20	4.9	22	9.80
10:43:40	5.2	22	10.38
10:44:00	4.7	22	9.50
10:44:20	4.6	22	9.23
10:44:40	4.5	22	8.92
10:45:00	4.7	22	9.50
10:45:20	5.2	22	10.38
10:45:40	4.7	22	9.50
10:46:00	5.0	22	10.07
10:46:20	5.0	22	10.07
10:46:40	5.2	22	10.38
10:47:00	7.2	22	14.40
10:47:20	7.8	22	15.54
10:47:40	7.2	22	14.40
10:48:00	6.2	22	12.41
10:48:20	6.6	22	13.25
10:48:40	6.6	22	13.25
10:49:00	6.3	22	12.67
10:49:20	8.0	22	16.12
10:49:40	6.2	22	12.41
10:50:00	6.2	22	12.41
10:50:20	6.2	22	12.41
10:50:40	6.3	22	12.67
10:51:00	6.5	22	12.98
10:51:20	5.9	22	11.83
10:51:40	5.9	22	11.83
10:52:00	6.8	22	13.55
10:52:20	6.9	22	13.82
10:52:40	7.5	22	14.97
10:53:00	6.9	22	13.82
10:53:20	6.8	22	13.55
10:53:40	7.5	22	14.97
10:54:00	7.6	22	15.28
10:54:20	7.3	22	14.70

VOC Emission Data

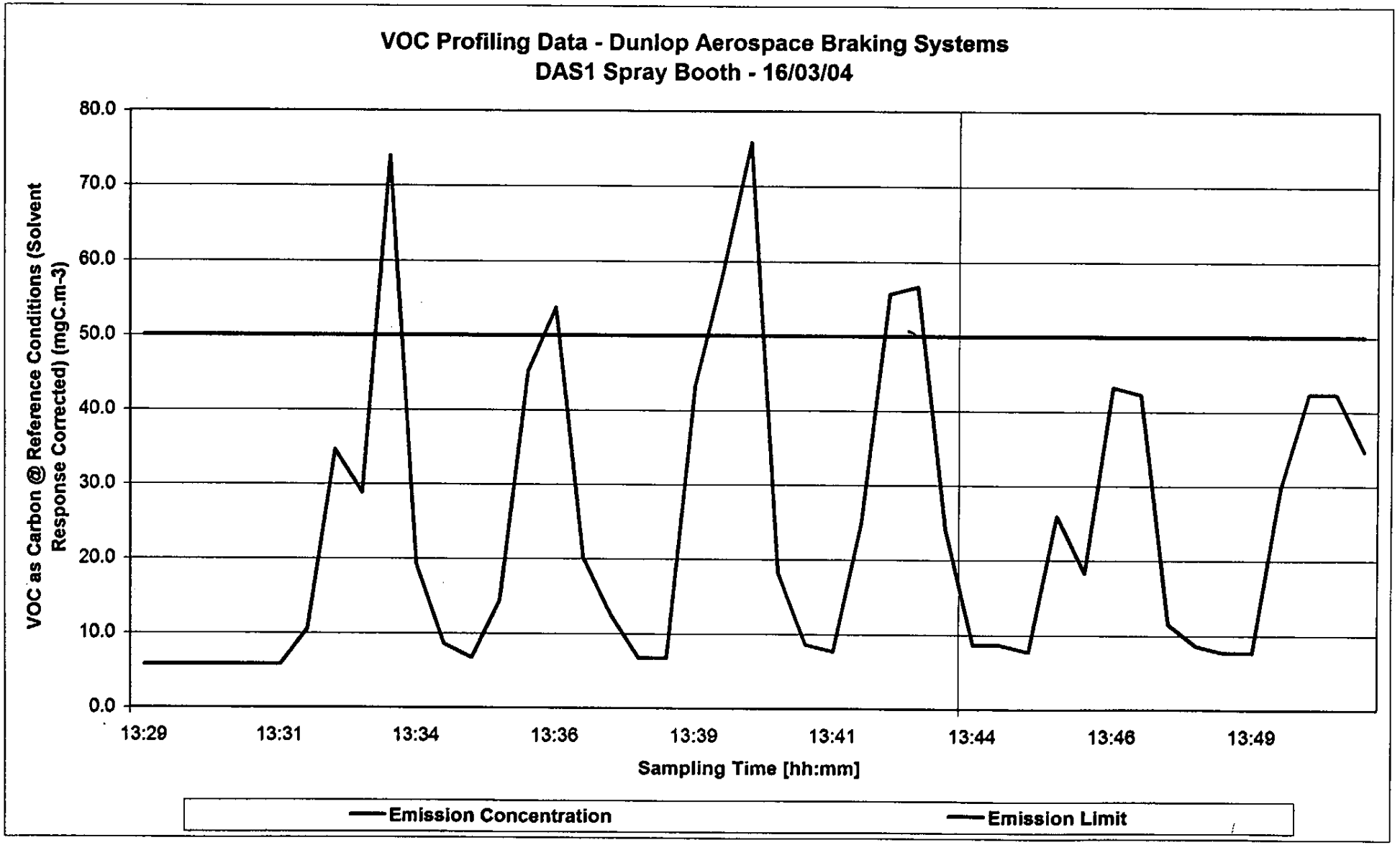
Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6505/6**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:54:40	9.1	22	18.15
10:55:00	12.5	22	25.08
10:55:20	11.4	22	22.78
10:55:40	10.2	22	20.45
10:56:00	9.3	22	18.72
10:56:20	9.1	22	18.15
10:56:40	8.2	22	16.43
10:57:00	8.9	22	17.88
10:57:20	8.6	22	17.31
10:57:40	7.2	22	14.40
10:58:00	7.3	22	14.70
10:58:20	7.2	22	14.40
10:58:40	7.6	22	15.28
10:59:00	7.5	22	14.97
10:59:20	7.8	22	15.54
10:59:40	7.6	22	15.28
11:00:00	7.6	22	15.28
11:00:20	7.6	22	15.28
11:00:40	7.5	22	14.97
11:01:00	7.3	22	14.70
11:01:20	7.8	22	15.54
11:01:40	8.5	22	17.00
11:02:00	7.2	22	14.40
11:02:20	7.2	22	14.40
11:02:40	7.5	22	14.97
11:03:00	7.5	22	14.97
11:03:20	7.6	22	15.28
11:03:40	7.3	22	14.70
11:04:00	8.2	22	16.43
11:04:20	7.6	22	15.28
11:04:40	7.0	22	14.13
11:05:00	6.0	22	12.10
11:05:20	6.2	22	12.41
11:05:40	5.9	22	11.83
11:06:00	5.6	22	11.26
11:06:20	5.8	22	11.52
11:06:40	5.8	22	11.52
11:07:00	6.0	22	12.10
11:07:20	6.3	22	12.67
11:07:40	5.5	22	10.95
11:08:00	6.8	22	13.55
11:08:20	1.9	22	3.75
11:08:40	2.2	22	4.33
11:09:00	7.6	22	15.28

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6505/6**
		Instrument Ran	**357**
		Emission Limit:	**50**

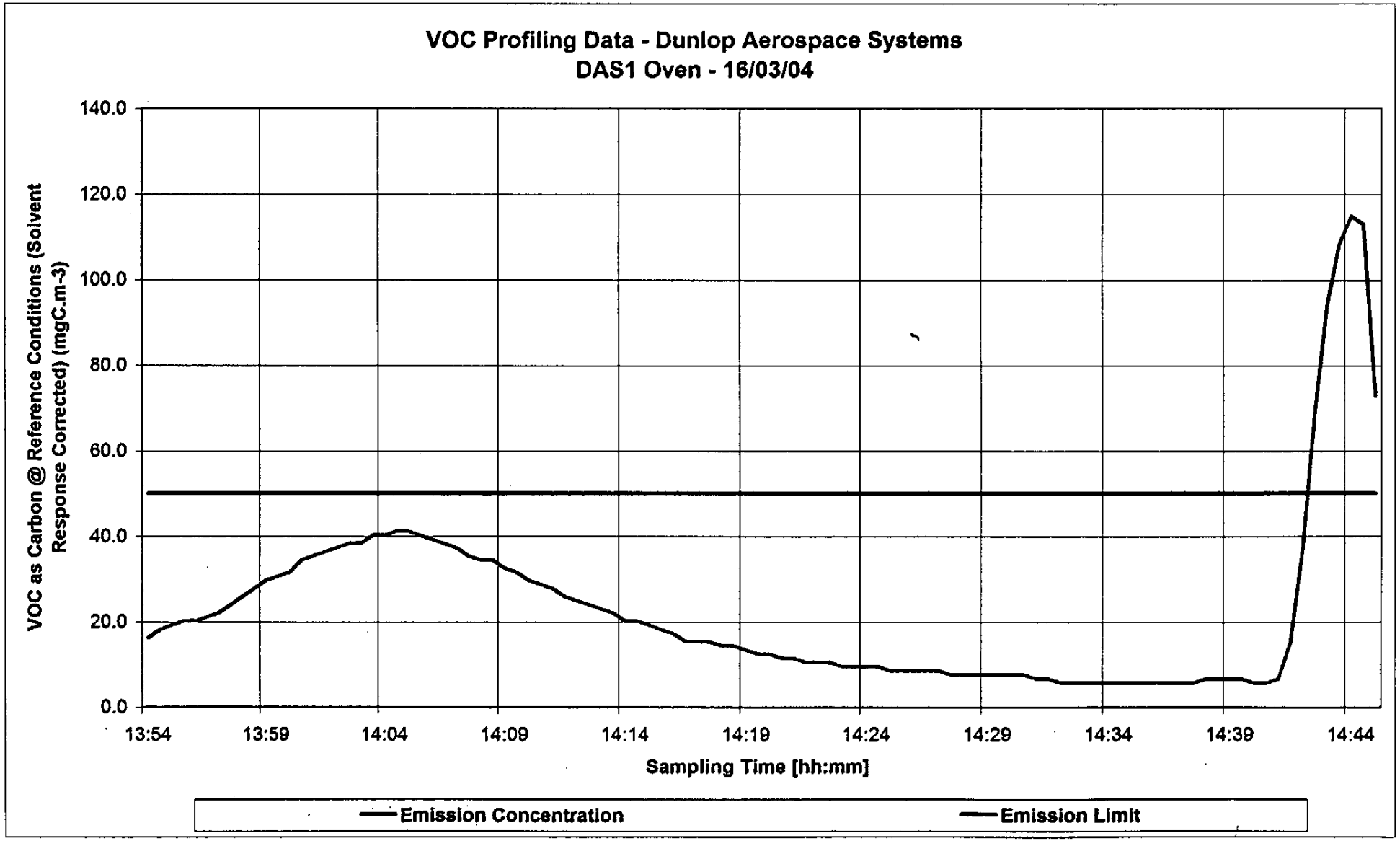
Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:09:20	7.6	22	15.28
11:09:40	7.6	22	15.28
11:10:00	7.5	22	14.97
11:10:20	7.3	22	14.70
11:10:40	7.8	22	15.54
11:11:00	8.5	22	17.00
11:11:20	7.2	22	14.40
11:11:40	7.2	22	14.40
11:12:00	7.5	22	14.97
11:12:20	7.5	22	14.97
11:12:40	7.6	22	15.28
11:13:00	7.3	22	14.70
11:13:20	8.2	22	16.43
11:13:40	7.6	22	15.28
11:14:00	7.0	22	14.13
11:14:20	6.0	22	12.10
11:14:40	6.2	22	12.41
11:15:00	5.9	22	11.83
11:15:20	5.6	22	11.26
11:15:40	5.8	22	11.52
11:16:00	5.8	22	11.52
11:16:20	6.0	22	12.10
11:16:40	6.3	22	12.67
11:17:00	5.5	22	10.95
11:17:20	6.8	22	13.55
Average	**7.2**		**14.4**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAS1 Spray Booth - 16/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
13:29
13:31
13:34
13:36
13:39
13:41
13:44
13:46
13:49
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Spray Booth**	**Calibration Gas**	**Methane**
Date:	**16-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6490**
		Instrument Ran	**0.7**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
13:29:00	2.3	20	5.76
13:29:30	2.3	20	5.76
13:30:00	2.3	20	5.76
13:30:30	2.3	20	5.76
13:31:00	2.3	20	5.76
13:31:30	2.3	20	5.76
13:32:00	4.2	20	10.56
13:32:30	13.8	20	34.55
13:33:00	11.5	20	28.79
13:33:30	29.4	20	73.91
13:34:00	7.6	20	19.20
13:34:30	3.4	20	8.64
13:35:00	2.7	20	6.72
13:35:30	5.7	20	14.40
13:36:00	18.0	20	45.11
13:36:30	21.4	20	53.75
13:37:00	8.0	20	20.16
13:37:30	5.0	20	12.48
13:38:00	2.7	20	6.72
13:38:30	2.7	20	6.72
13:39:00	17.2	20	43.19
13:39:30	23.3	20	58.55
13:40:00	30.2	20	75.83
13:40:30	7.3	20	18.24
13:41:00	3.4	20	8.64
13:41:30	3.1	20	7.68
13:42:00	9.9	20	24.96
13:42:30	22.2	20	55.67
13:43:00	22.5	20	56.63
13:43:30	9.6	20	24.00
13:44:00	3.4	20	8.64
13:44:30	3.4	20	8.64
13:45:00	3.1	20	7.68
13:45:30	10.3	20	25.92
13:46:00	7.3	20	18.24
13:46:30	17.2	20	43.19
13:47:00	16.8	20	42.23
13:47:30	4.6	20	11.52
13:48:00	3.4	20	8.64
13:48:30	3.1	20	7.68
13:49:00	3.1	20	7.68
13:49:30	11.8	20	29.75
13:50:00	16.8	20	42.23
13:50:30	16.8	20	42.23
Average	**9.5**		**24.0**


VOC Profiling Data - Dunlop Aerospace Systems
DAS1 Oven - 16/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
13:54
13:59
14:04
14:09
14:14
14:19
14:24
14:29
14:34
14:39
14:44
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**DAS1 Oven**
Date:	**16-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**1**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
13:54:00	6.5	95	16.29
13:54:30	7.3	95	18.20
13:55:00	7.6	95	19.16
13:55:30	8.0	95	20.12
13:56:00	8.0	95	20.12
13:56:30	8.4	95	21.07
13:57:00	8.8	95	22.03
13:57:30	9.6	95	23.95
13:58:00	10.3	95	25.86
13:58:30	11.1	95	27.78
13:59:00	11.8	95	29.70
13:59:30	12.2	95	30.65
14:00:00	12.6	95	31.61
14:00:30	13.8	95	34.49
14:01:00	14.1	95	35.44
14:01:30	14.5	95	36.40
14:02:00	14.9	95	37.36
14:02:30	15.3	95	38.32
14:03:00	15.3	95	38.32
14:03:30	16.0	95	40.23
14:04:00	16.0	95	40.23
14:04:30	16.4	95	41.19
14:05:00	16.4	95	41.19
14:05:30	16.0	95	40.23
14:06:00	15.7	95	39.28
14:06:30	15.3	95	38.32
14:07:00	14.9	95	37.36
14:07:30	14.1	95	35.44
14:08:00	13.8	95	34.49
14:08:30	13.8	95	34.49
14:09:00	13.0	95	32.57
14:09:30	12.6	95	31.61
14:10:00	11.8	95	29.70
14:10:30	11.5	95	28.74
14:11:00	11.1	95	27.78
14:11:30	10.3	95	25.86
14:12:00	9.9	95	24.91
14:12:30	9.6	95	23.95
14:13:00	9.2	95	22.99
14:13:30	8.8	95	22.03
14:14:00	8.0	95	20.12
14:14:30	8.0	95	20.12
14:15:00	7.6	95	19.16
14:15:30	7.3	95	18.20

VOC Emission Data

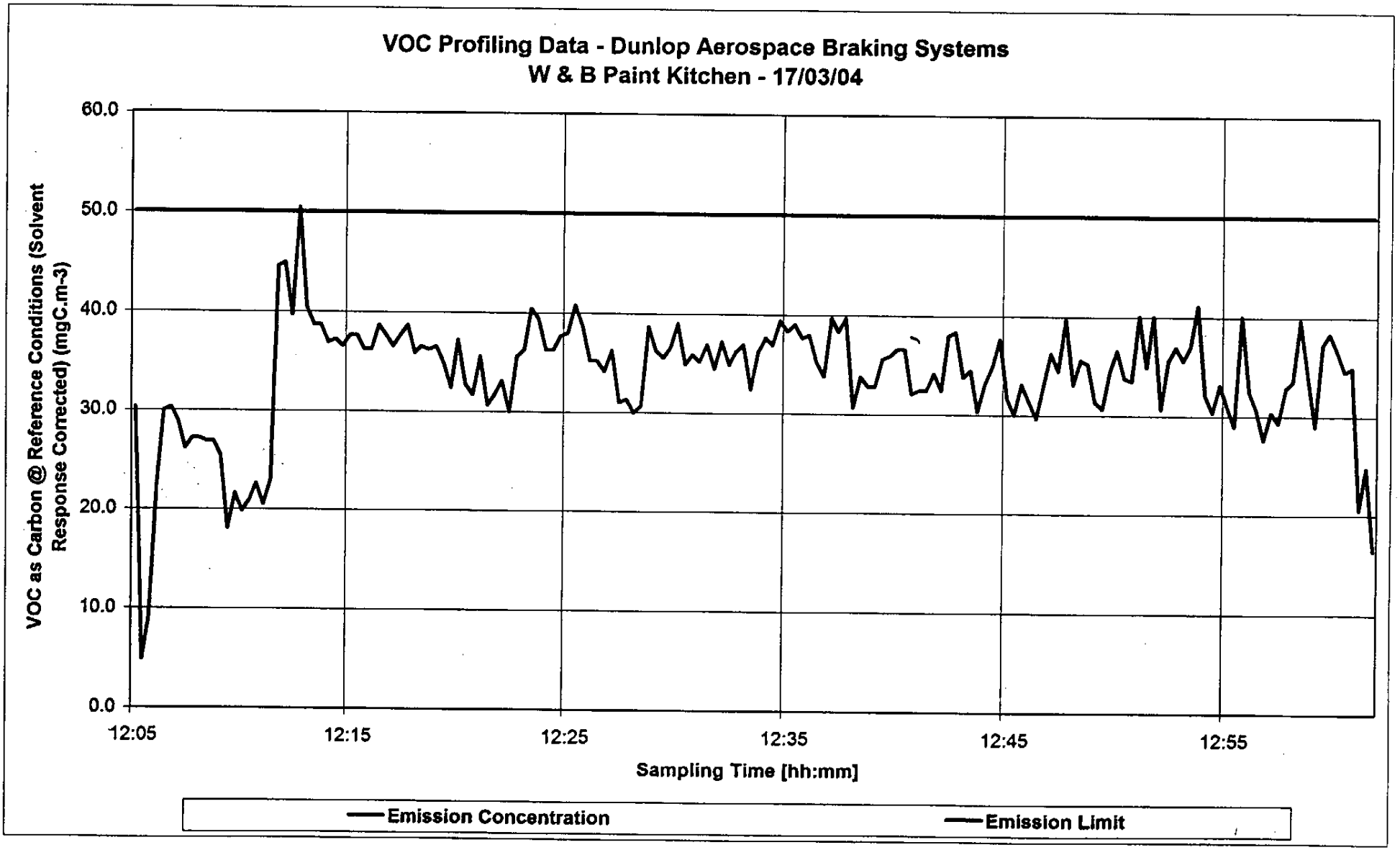
Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Oven**	**Calibration Gas**	**Methane**
Date:	**16-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**n/a**
		Instrument Ran	**1**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
14:16:00	6.9	95	17.24
14:16:30	6.1	95	15.33
14:17:00	6.1	95	15.33
14:17:30	6.1	95	15.33
14:18:00	5.7	95	14.37
14:18:30	5.7	95	14.37
14:19:00	5.3	95	13.41
14:19:30	5.0	95	12.45
14:20:00	5.0	95	12.45
14:20:30	4.6	95	11.50
14:21:00	4.6	95	11.50
14:21:30	4.2	95	10.54
14:22:00	4.2	95	10.54
14:22:30	4.2	95	10.54
14:23:00	3.8	95	9.58
14:23:30	3.8	95	9.58
14:24:00	3.8	95	9.58
14:24:30	3.8	95	9.58
14:25:00	3.4	95	8.62
14:25:30	3.4	95	8.62
14:26:00	3.4	95	8.62
14:26:30	3.4	95	8.62
14:27:00	3.4	95	8.62
14:27:30	3.1	95	7.66
14:28:00	3.1	95	7.66
14:28:30	3.1	95	7.66
14:29:00	3.1	95	7.66
14:29:30	3.1	95	7.66
14:30:00	3.1	95	7.66
14:30:30	3.1	95	7.66
14:31:00	2.7	95	6.71
14:31:30	2.7	95	6.71
14:32:00	2.3	95	5.75
14:32:30	2.3	95	5.75
14:33:00	2.3	95	5.75
14:33:30	2.3	95	5.75
14:34:00	2.3	95	5.75
14:34:30	2.3	95	5.75
14:35:00	2.3	95	5.75
14:35:30	2.3	95	5.75
14:36:00	2.3	95	5.75
14:36:30	2.3	95	5.75
14:37:00	2.3	95	5.75
14:37:30	2.3	95	5.75

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS1 Oven**	**Calibration Gas**	**Methane**
Date:	**16-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**n/a**
		Instrument Ran	**1**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
14:38:00	2.7	95	6.71
14:38:30	2.7	95	6.71
14:39:00	2.7	95	6.71
14:39:30	2.7	95	6.71
14:40:00	2.3	95	5.75
14:40:30	2.3	95	5.75
14:41:00	2.7	95	6.71
14:41:30	6.1	95	15.33
14:42:00	14.9	95	37.36
14:42:30	27.5	95	68.97
14:43:00	37.4	95	93.88
14:43:30	43.2	95	108.25
14:44:00	45.8	95	114.95
14:44:30	45.1	95	113.04
14:45:00	29.0	95	72.80
Average	**9.2**		**29.2**


VOC Profiling Data - Dunlop Aerospace Braking Systems
W & B Paint Kitchen - 17/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
12:05
12:15
12:25
12:35
12:45
12:55
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**W&B Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6500/1**
		Instrument Ran	**514**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
12:05:00	18.0	22	30.29
12:05:20	2.9	22	4.86
12:05:40	5.4	22	9.06
12:06:00	13.3	22	22.29
12:06:20	17.8	22	29.92
12:06:40	18.0	22	30.29
12:07:00	17.2	22	28.91
12:07:20	15.6	22	26.13
12:07:40	16.2	22	27.15
12:08:00	16.2	22	27.15
12:08:20	16.0	22	26.82
12:08:40	16.0	22	26.82
12:09:00	15.1	22	25.39
12:09:20	10.8	22	18.08
12:09:40	12.9	22	21.60
12:10:00	11.8	22	19.84
12:10:20	12.4	22	20.90
12:10:40	13.5	22	22.62
12:11:00	12.2	22	20.53
12:11:20	13.7	22	22.99
12:11:40	26.5	22	44.54
12:12:00	26.7	22	44.91
12:12:20	23.6	22	39.68
12:12:40	30.0	22	50.46
12:13:00	24.0	22	40.37
12:13:20	23.0	22	38.66
12:13:40	23.0	22	38.66
12:14:00	22.0	22	36.91
12:14:20	22.2	22	37.23
12:14:40	21.8	22	36.54
12:15:00	22.4	22	37.60
12:15:20	22.4	22	37.60
12:15:40	21.6	22	36.21
12:16:00	21.6	22	36.21
12:16:20	23.0	22	38.66
12:16:40	22.4	22	37.60
12:17:00	21.8	22	36.54
12:17:20	22.4	22	37.60
12:17:40	23.0	22	38.66
12:18:00	21.3	22	35.84
12:18:20	21.8	22	36.54
12:18:40	21.6	22	36.21
12:19:00	21.8	22	36.54
12:19:20	20.7	22	34.82

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**W&B Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6500/1**
		Instrument Ran	**514**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
12:19:40	19.3	22	32.37
12:20:00	22.2	22	37.23
12:20:20	19.5	22	32.74
12:20:40	18.9	22	31.68
12:21:00	21.1	22	35.52
12:21:20	18.2	22	30.62
12:21:40	18.9	22	31.68
12:22:00	19.7	22	33.07
12:22:20	17.8	22	29.92
12:22:40	21.1	22	35.52
12:23:00	21.6	22	36.21
12:23:20	24.0	22	40.37
12:23:40	23.4	22	39.36
12:24:00	21.6	22	36.21
12:24:20	21.6	22	36.21
12:24:40	22.4	22	37.60
12:25:00	22.6	22	37.92
12:25:20	24.3	22	40.74
12:25:40	23.0	22	38.66
12:26:00	20.9	22	35.15
12:26:20	20.9	22	35.15
12:26:40	20.3	22	34.13
12:27:00	21.6	22	36.21
12:27:20	18.4	22	30.99
12:27:40	18.6	22	31.31
12:28:00	17.8	22	29.92
12:28:20	18.2	22	30.62
12:28:40	23.0	22	38.66
12:29:00	21.6	22	36.21
12:29:20	21.1	22	35.52
12:29:40	21.8	22	36.54
12:30:00	23.2	22	38.99
12:30:20	20.7	22	34.82
12:30:40	21.3	22	35.84
12:31:00	20.9	22	35.15
12:31:20	22.0	22	36.91
12:31:40	20.5	22	34.45
12:32:00	22.2	22	37.23
12:32:20	20.7	22	34.82
12:32:40	21.6	22	36.21
12:33:00	22.0	22	36.91
12:33:20	19.3	22	32.37
12:33:40	21.6	22	36.21
12:34:00	22.4	22	37.60

VOC Emission Data

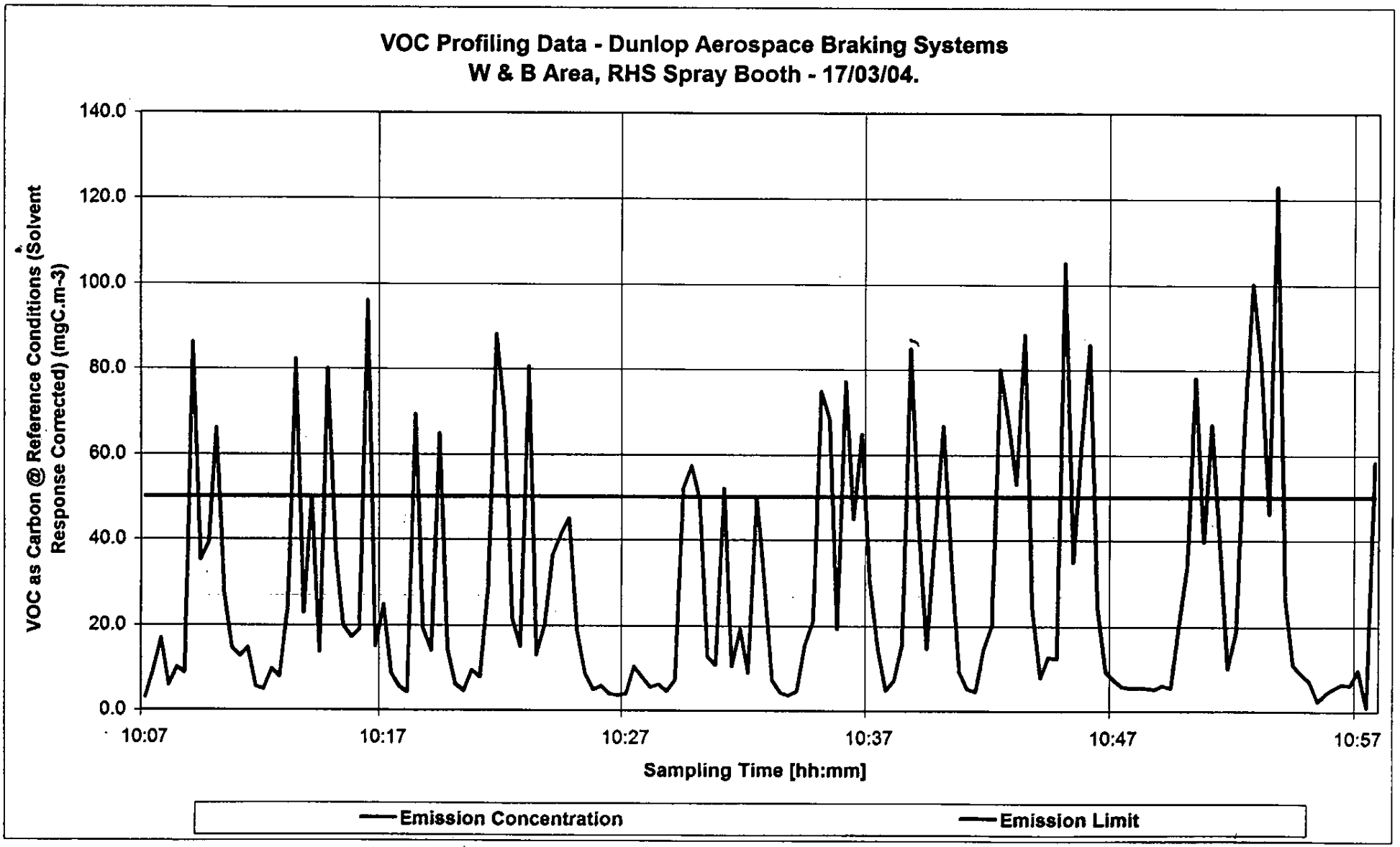
Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**W&B Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6500/1**
		Instrument Ran	**514**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
12:34:20	22.0	22	36.91
12:34:40	23.4	22	39.36
12:35:00	22.8	22	38.29
12:35:20	23.2	22	38.99
12:35:40	22.4	22	37.60
12:36:00	22.6	22	37.92
12:36:20	20.9	22	35.15
12:36:40	20.1	22	33.76
12:37:00	23.6	22	39.68
12:37:20	22.8	22	38.29
12:37:40	23.6	22	39.68
12:38:00	18.2	22	30.62
12:38:20	20.1	22	33.76
12:38:40	19.5	22	32.74
12:39:00	19.5	22	32.74
12:39:20	21.1	22	35.52
12:39:40	21.3	22	35.84
12:40:00	21.8	22	36.54
12:40:20	21.8	22	36.54
12:40:40	19.1	22	32.00
12:41:00	19.3	22	32.37
12:41:20	19.3	22	32.37
12:41:40	20.3	22	34.13
12:42:00	19.3	22	32.37
12:42:20	22.6	22	37.92
12:42:40	22.8	22	38.29
12:43:00	20.1	22	33.76
12:43:20	20.5	22	34.45
12:43:40	18.0	22	30.29
12:44:00	19.7	22	33.07
12:44:20	20.7	22	34.82
12:44:40	22.4	22	37.60
12:45:00	18.9	22	31.68
12:45:20	17.8	22	29.92
12:45:40	19.7	22	33.07
12:46:00	18.6	22	31.31
12:46:20	17.6	22	29.60
12:46:40	19.7	22	33.07
12:47:00	21.6	22	36.21
12:47:20	20.5	22	34.45
12:47:40	23.6	22	39.68
12:48:00	19.7	22	33.07
12:48:20	21.1	22	35.52
12:48:40	20.9	22	35.15

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**W&B Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6500/1**
		Instrument Ran	**514**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
12:49:00	18.6	22	31.31
12:49:20	18.2	22	30.62
12:49:40	20.5	22	34.45
12:50:00	21.8	22	36.54
12:50:20	20.1	22	33.76
12:50:40	19.9	22	33.44
12:51:00	23.8	22	40.05
12:51:20	20.7	22	34.82
12:51:40	23.8	22	40.05
12:52:00	18.2	22	30.62
12:52:20	21.1	22	35.52
12:52:40	22.0	22	36.91
12:53:00	21.1	22	35.52
12:53:20	22.0	22	36.91
12:53:40	24.5	22	41.07
12:54:00	19.1	22	32.00
12:54:20	18.0	22	30.29
12:54:40	19.7	22	33.07
12:55:00	18.4	22	30.99
12:55:20	17.2	22	28.91
12:55:40	23.8	22	40.05
12:56:00	19.3	22	32.37
12:56:20	18.2	22	30.62
12:56:40	16.4	22	27.52
12:57:00	18.0	22	30.29
12:57:20	17.4	22	29.23
12:57:40	19.5	22	32.74
12:58:00	19.9	22	33.44
12:58:20	23.6	22	39.68
12:58:40	20.3	22	34.13
12:59:00	17.2	22	28.91
12:59:20	22.2	22	37.23
12:59:40	22.8	22	38.29
13:00:00	21.8	22	36.54
13:00:20	20.5	22	34.45
13:00:40	20.7	22	34.82
13:01:00	12.2	22	20.53
13:01:20	14.7	22	24.70
13:01:40	9.7	22	16.37
Average	**20.1**		**33.7**


VOC Profiling Data - Dunlop Aerospace Braking Systems
W & B Area, RHS Spray Booth - 17/03/04.
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
10:07
10:17
10:27
10:37
10:47
10:57
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**B Spray Booth RHS**
Date:	**17-Mar-04**
Scientist:	**JL & BR**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**6493/4**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:07:00	1.9	15	2.94
10:07:20	5.8	15	9.12
10:07:40	10.8	15	16.90
10:08:00	3.7	15	5.84
10:08:20	6.4	15	10.07
10:08:40	5.6	15	8.78
10:09:00	54.9	15	86.24
10:09:20	22.4	15	35.14
10:09:40	24.9	15	39.03
10:10:00	42.1	15	66.05
10:10:20	17.4	15	27.32
10:10:40	9.3	15	14.65
10:11:00	8.1	15	12.71
10:11:20	9.3	15	14.65
10:11:40	3.5	15	5.53
10:12:00	3.1	15	4.88
10:12:20	6.2	15	9.77
10:12:40	5.0	15	7.82
10:13:00	15.3	15	24.08
10:13:20	52.4	15	82.31
10:13:40	14.5	15	22.78
10:14:00	31.7	15	49.80
10:14:20	8.7	15	13.66
10:14:40	51.0	15	80.06
10:15:00	23.4	15	36.79
10:15:20	12.6	15	19.84
10:15:40	11.0	15	17.25
10:16:00	12.0	15	18.89
10:16:20	61.2	15	96.01
10:16:40	9.5	15	14.96
10:17:00	15.7	15	24.73
10:17:20	5.6	15	8.78
10:17:40	3.5	15	5.53
10:18:00	2.7	15	4.24
10:18:20	44.1	15	69.29
10:18:40	12.2	15	19.19
10:19:00	8.9	15	14.01
10:19:20	41.2	15	64.76
10:19:40	9.1	15	14.31
10:20:00	3.9	15	6.18
10:20:20	2.9	15	4.54
10:20:40	6.0	15	9.42
10:21:00	5.0	15	7.82
10:21:20	18.0	15	28.31

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**B Spray Booth RHS**
Date:	**17-Mar-04**
Scientist:	**JL & BR**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**6493/4**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:21:40	56.2	15	88.18
10:22:00	44.1	15	69.29
10:22:20	13.7	15	21.48
10:22:40	9.5	15	14.96
10:23:00	51.4	15	80.71
10:23:20	8.3	15	13.01
10:23:40	12.9	15	20.19
10:24:00	23.2	15	36.44
10:24:20	26.3	15	41.33
10:24:40	28.6	15	44.91
10:25:00	11.8	15	18.54
10:25:20	5.6	15	8.78
10:25:40	3.1	15	4.88
10:26:00	3.7	15	5.84
10:26:20	2.5	15	3.89
10:26:40	2.3	15	3.59
10:27:00	2.5	15	3.89
10:27:20	6.6	15	10.42
10:27:40	5.0	15	7.82
10:28:00	3.5	15	5.53
10:28:20	3.9	15	6.18
10:28:40	2.9	15	4.54
10:29:00	4.6	15	7.18
10:29:20	33.2	15	52.05
10:29:40	36.5	15	57.28
10:30:00	31.5	15	49.45
10:30:20	8.1	15	12.71
10:30:40	6.8	15	10.72
10:31:00	33.2	15	52.05
10:31:20	6.6	15	10.42
10:31:40	12.2	15	19.19
10:32:00	5.6	15	8.78
10:32:20	31.9	15	50.10
10:32:40	19.1	15	29.91
10:33:00	4.6	15	7.18
10:33:20	2.7	15	4.24
10:33:40	2.3	15	3.59
10:34:00	2.9	15	4.54
10:34:20	9.7	15	15.30
10:34:40	13.5	15	21.14
10:35:00	47.7	15	74.83
10:35:20	43.5	15	68.34
10:35:40	12.2	15	19.19
10:36:00	49.1	15	77.12

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**B Spray Booth RHS**
Date:	**17-Mar-04**
Scientist:	**JL & BR**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**6493/4**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:36:20	28.6	15	44.91
10:36:40	41.2	15	64.76
10:37:00	19.5	15	30.61
10:37:20	9.3	15	14.65
10:37:40	3.1	15	4.88
10:38:00	4.6	15	7.18
10:38:20	9.9	15	15.61
10:38:40	54.1	15	84.94
10:39:00	28.0	15	43.92
10:39:20	9.3	15	14.65
10:39:40	26.1	15	40.98
10:40:00	42.5	15	66.70
10:40:20	22.8	15	35.79
10:40:40	5.8	15	9.12
10:41:00	3.3	15	5.19
10:41:20	2.9	15	4.54
10:41:40	9.1	15	14.31
10:42:00	12.9	15	20.19
10:42:20	51.0	15	80.06
10:42:40	42.9	15	67.35
10:43:00	33.8	15	53.04
10:43:20	56.2	15	88.18
10:43:40	15.3	15	24.08
10:44:00	5.0	15	7.82
10:44:20	8.1	15	12.71
10:44:40	7.9	15	12.36
10:45:00	66.9	15	105.09
10:45:20	22.2	15	34.80
10:45:40	39.6	15	62.16
10:46:00	54.7	15	85.89
10:46:20	15.7	15	24.73
10:46:40	6.0	15	9.42
10:47:00	4.8	15	7.48
10:47:20	3.7	15	5.84
10:47:40	3.5	15	5.53
10:48:00	3.5	15	5.53
10:48:20	3.5	15	5.53
10:48:40	3.3	15	5.19
10:49:00	3.9	15	6.18
10:49:20	3.5	15	5.53
10:49:40	12.6	15	19.84
10:50:00	21.8	15	34.15
10:50:20	49.8	15	78.11
10:50:40	25.3	15	39.68

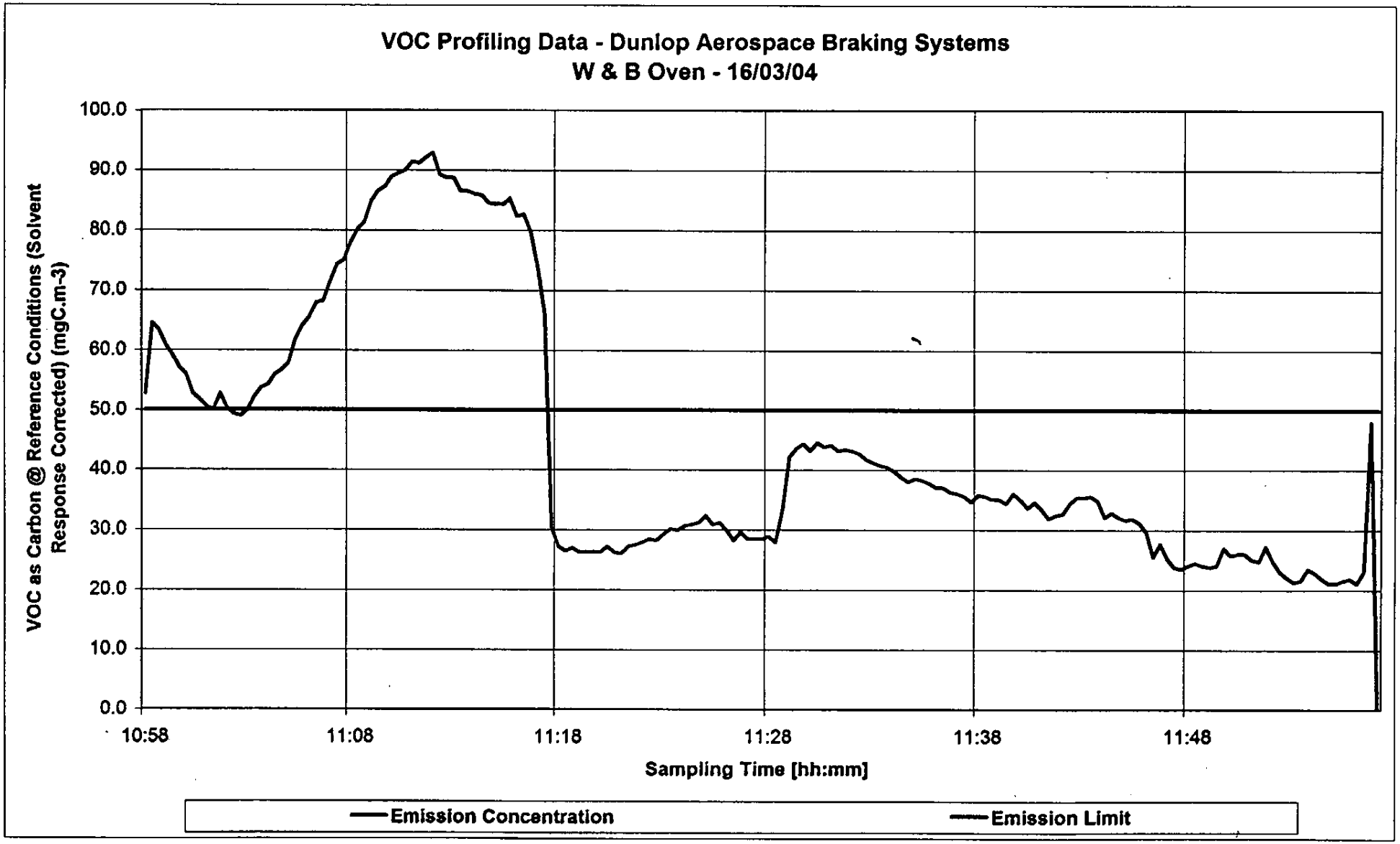
VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**B Spray Booth RHS**
Date:	**17-Mar-04**
Scientist:	**JL & BR**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**6493/4**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:51:00	42.7	15	67.05
10:51:20	24.3	15	38.08
10:51:40	6.4	15	10.07
10:52:00	12.0	15	18.89
10:52:20	42.9	15	67.35
10:52:40	63.8	15	100.20
10:53:00	52.4	15	82.31
10:53:20	29.4	15	46.21
10:53:40	78.3	15	122.98
10:54:00	17.0	15	26.67
10:54:20	7.0	15	11.07
10:54:40	5.6	15	8.78
10:55:00	4.6	15	7.18
10:55:20	1.5	15	2.29
10:55:40	2.7	15	4.24
10:56:00	3.5	15	5.53
10:56:20	4.1	15	6.48
10:56:40	3.9	15	6.18
10:57:00	6.2	15	9.77
10:57:20	0.6	15	0.99
10:57:40	37.1	15	58.23
Average	**18.4**		**28.9**


VOC Profiling Data - Dunlop Aerospace Braking Systems
W & B Oven - 16/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
10:58
11:08
11:18
11:28
11:38
11:48
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**W & B Oven**	**Calibration Gas**	**Methane**
Date:	**16-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**n/a**
		Instrument Ran	**400**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:58:00	34.7	79	52.68
10:58:20	42.4	79	64.47
10:58:40	41.6	79	63.23
10:59:00	40.0	79	60.79
10:59:20	38.9	79	59.06
10:59:40	37.6	79	57.11
11:00:00	36.8	79	55.87
11:00:20	34.7	79	52.68
11:00:40	34.0	79	51.70
11:01:00	33.2	79	50.50
11:01:20	32.9	79	50.01
11:01:40	34.7	79	52.68
11:02:00	33.1	79	50.24
11:02:20	32.4	79	49.26
11:02:40	32.3	79	49.00
11:03:00	32.9	79	50.01
11:03:20	34.4	79	52.19
11:03:40	35.3	79	53.69
11:04:00	35.7	79	54.18
11:04:20	36.8	79	55.87
11:04:40	37.3	79	56.62
11:05:00	38.1	79	57.83
11:05:20	40.7	79	61.76
11:05:40	42.1	79	63.98
11:06:00	43.1	79	65.44
11:06:20	44.7	79	67.89
11:06:40	44.9	79	68.15
11:07:00	46.9	79	71.30
11:07:20	48.9	79	74.27
11:07:40	49.4	79	74.98
11:08:00	51.3	79	77.95
11:08:20	52.7	79	80.13
11:08:40	53.6	79	81.37
11:09:00	55.8	79	84.82
11:09:20	56.9	79	86.51
11:09:40	57.4	79	87.26
11:10:00	58.5	79	88.95
11:10:20	58.9	79	89.47
11:10:40	59.2	79	89.96
11:11:00	60.2	79	91.43
11:11:20	60.0	79	91.17
11:11:40	60.6	79	92.14
11:12:00	61.1	79	92.89
11:12:20	58.7	79	89.21
11:12:40	58.4	79	88.72

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**W & B Oven**
Date:	**16-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**400**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:13:00	58.4	79	88.72
11:13:20	56.9	79	86.51
11:13:40	56.9	79	86.51
11:14:00	56.6	79	86.02
11:14:20	56.5	79	85.79
11:14:40	55.7	79	84.56
11:15:00	55.5	79	84.30
11:15:20	55.5	79	84.30
11:15:40	56.1	79	85.31
11:16:00	54.2	79	82.34
11:16:20	54.4	79	82.60
11:16:40	52.4	79	79.64
11:17:00	48.6	79	73.78
11:17:20	43.5	79	66.16
11:17:40	20.0	79	30.38
11:18:00	17.9	79	27.22
11:18:20	17.4	79	26.47
11:18:40	17.7	79	26.96
11:19:00	17.3	79	26.21
11:19:20	17.3	79	26.21
11:19:40	17.3	79	26.21
11:20:00	17.3	79	26.21
11:20:20	17.9	79	27.22
11:20:40	17.3	79	26.21
11:21:00	17.1	79	25.98
11:21:20	17.9	79	27.22
11:21:40	18.1	79	27.45
11:22:00	18.4	79	27.94
11:22:20	18.7	79	28.42
11:22:40	18.6	79	28.20
11:23:00	19.2	79	29.17
11:23:20	19.8	79	30.15
11:23:40	19.7	79	29.89
11:24:00	20.2	79	30.64
11:24:20	20.3	79	30.87
11:24:40	20.5	79	31.13
11:25:00	21.3	79	32.36
11:25:20	20.3	79	30.87
11:25:40	20.5	79	31.13
11:26:00	19.7	79	29.89
11:26:20	18.6	79	28.20
11:26:40	19.5	79	29.66
11:27:00	18.7	79	28.42
11:27:20	18.7	79	28.42
11:27:40	18.7	79	28.42

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**W & B Oven**
Date:	**16-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**400**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions (mgC.m^{-3})	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m^{-3})
11:28:00	19.0	79	28.91
11:28:20	18.4	79	27.94
11:28:40	21.9	79	33.34
11:29:00	27.8	79	42.16
11:29:20	28.7	79	43.63
11:29:40	29.2	79	44.35
11:30:00	28.4	79	43.14
11:30:20	29.4	79	44.61
11:30:40	28.9	79	43.86
11:31:00	29.0	79	44.12
11:31:20	28.4	79	43.14
11:31:40	28.5	79	43.37
11:32:00	28.4	79	43.14
11:32:20	28.1	79	42.65
11:32:40	27.4	79	41.68
11:33:00	27.1	79	41.19
11:33:20	26.8	79	40.70
11:33:40	26.6	79	40.44
11:34:00	26.1	79	39.69
11:34:20	25.5	79	38.71
11:34:40	25.0	79	38.00
11:35:00	25.3	79	38.48
11:35:20	25.2	79	38.22
11:35:40	24.8	79	37.74
11:36:00	24.4	79	37.02
11:36:20	24.4	79	37.02
11:36:40	23.9	79	36.27
11:37:00	23.7	79	36.04
11:37:20	23.4	79	35.52
11:37:40	22.7	79	34.55
11:38:00	23.6	79	35.78
11:38:20	23.4	79	35.52
11:38:40	23.1	79	35.03
11:39:00	23.1	79	35.03
11:39:20	22.6	79	34.32
11:39:40	23.7	79	36.04
11:40:00	23.1	79	35.03
11:40:20	22.1	79	33.57
11:40:40	22.7	79	34.55
11:41:00	21.9	79	33.34
11:41:20	21.0	79	31.88
11:41:40	21.3	79	32.36
11:42:00	21.5	79	32.59
11:42:20	22.6	79	34.32
11:42:40	23.2	79	35.29

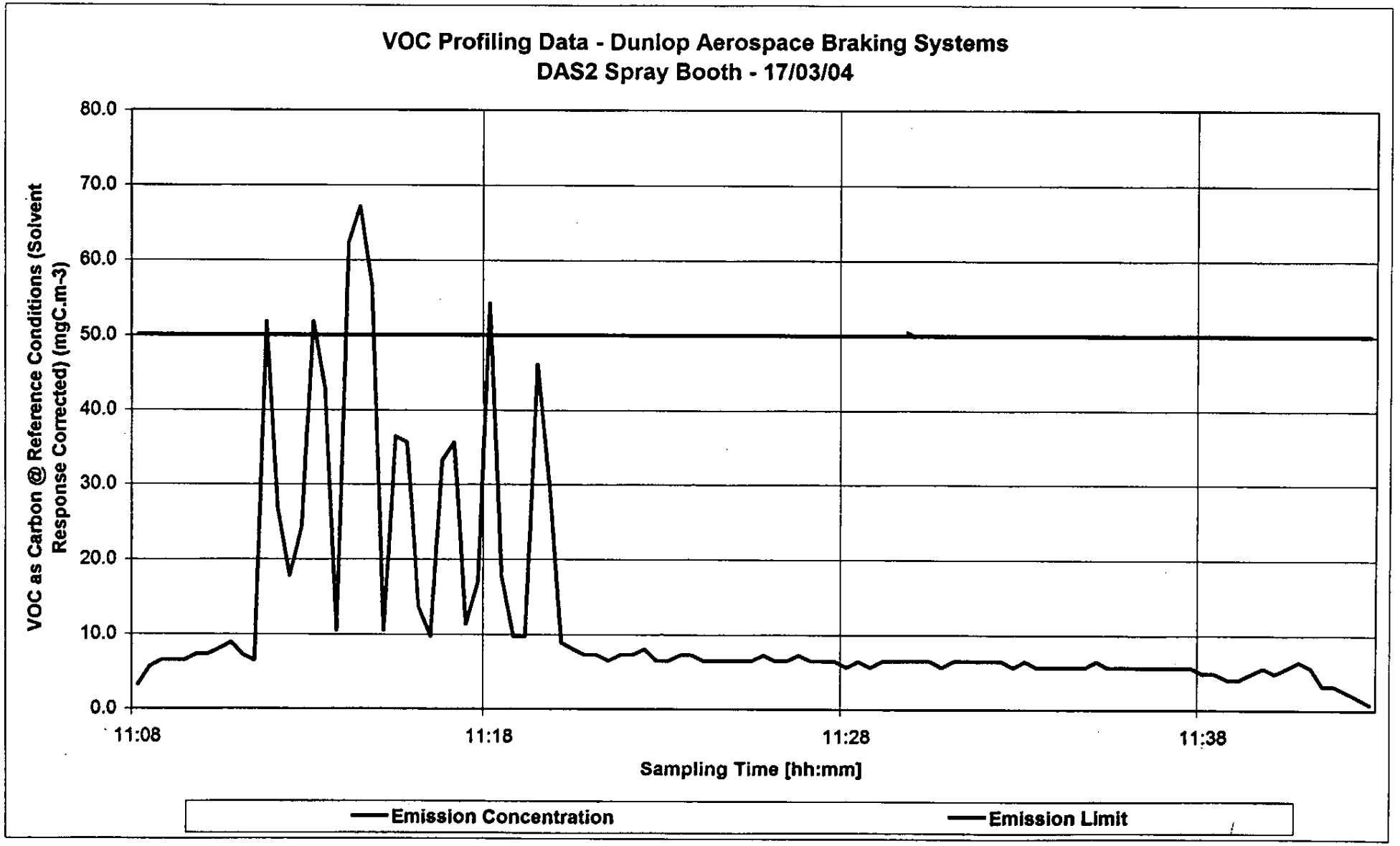
VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**W & B Oven**
Date:	**16-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**400**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:43:00	23.2	79	35.29
11:43:20	23.4	79	35.52
11:43:40	22.9	79	34.81
11:44:00	21.1	79	32.10
11:44:20	21.6	79	32.85
11:44:40	21.1	79	32.10
11:45:00	20.8	79	31.61
11:45:20	21.0	79	31.88
11:45:40	20.5	79	31.13
11:46:00	19.5	79	29.66
11:46:20	16.8	79	25.49
11:46:40	18.2	79	27.71
11:47:00	16.6	79	25.23
11:47:20	15.6	79	23.77
11:47:40	15.5	79	23.54
11:48:00	15.8	79	24.03
11:48:20	16.1	79	24.52
11:48:40	15.8	79	24.03
11:49:00	15.6	79	23.77
11:49:20	15.8	79	24.03
11:49:40	17.7	79	26.96
11:50:00	16.9	79	25.72
11:50:20	17.1	79	25.98
11:50:40	17.1	79	25.98
11:51:00	16.5	79	25.01
11:51:20	16.3	79	24.74
11:51:40	17.9	79	27.22
11:52:00	16.3	79	24.74
11:52:20	15.2	79	23.05
11:52:40	14.5	79	22.04
11:53:00	14.0	79	21.33
11:53:20	14.2	79	21.55
11:53:40	15.5	79	23.54
11:54:00	15.0	79	22.79
11:54:20	14.4	79	21.81
11:54:40	13.9	79	21.07
11:55:00	13.9	79	21.07
11:55:20	14.2	79	21.55
11:55:40	14.4	79	21.81
11:56:00	13.9	79	21.07
11:56:20	15.2	79	23.05
11:56:40	31.6	79	48.02
Average	**29.4**		**44.7**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAS2 Spray Booth - 17/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
11:08
11:18
11:28
11:38
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS 2 Booth**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6483**
		Instrument Ran	**0.7**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:08:00	1.5	19	3.24
11:08:20	2.7	19	5.66
11:08:40	3.1	19	6.47
11:09:00	3.1	19	6.47
11:09:20	3.1	19	6.47
11:09:40	3.4	19	7.28
11:10:00	3.4	19	7.28
11:10:20	3.8	19	8.09
11:10:40	4.2	19	8.90
11:11:00	3.4	19	7.28
11:11:20	3.1	19	6.47
11:11:40	24.5	19	51.77
11:12:00	12.6	19	26.69
11:12:20	8.4	19	17.80
11:12:40	11.5	19	24.27
11:13:00	24.5	19	51.77
11:13:20	20.2	19	42.87
11:13:40	5.0	19	10.52
11:14:00	29.4	19	62.28
11:14:20	31.7	19	67.14
11:14:40	26.7	19	56.62
11:15:00	5.0	19	10.52
11:15:20	17.2	19	36.40
11:15:40	16.8	19	35.59
11:16:00	6.5	19	13.75
11:16:20	4.6	19	9.71
11:16:40	15.7	19	33.16
11:17:00	16.8	19	35.59
11:17:20	5.3	19	11.32
11:17:40	8.0	19	16.99
11:18:00	25.6	19	54.19
11:18:20	8.4	19	17.80
11:18:40	4.6	19	9.71
11:19:00	4.6	19	9.71
11:19:20	21.8	19	46.11
11:19:40	14.1	19	29.93
11:20:00	4.2	19	8.90
11:20:20	3.8	19	8.09
11:20:40	3.4	19	7.28
11:21:00	3.4	19	7.28
11:21:20	3.1	19	6.47
11:21:40	3.4	19	7.28
11:22:00	3.4	19	7.28
11:22:20	3.8	19	8.09

VOC Emission Data

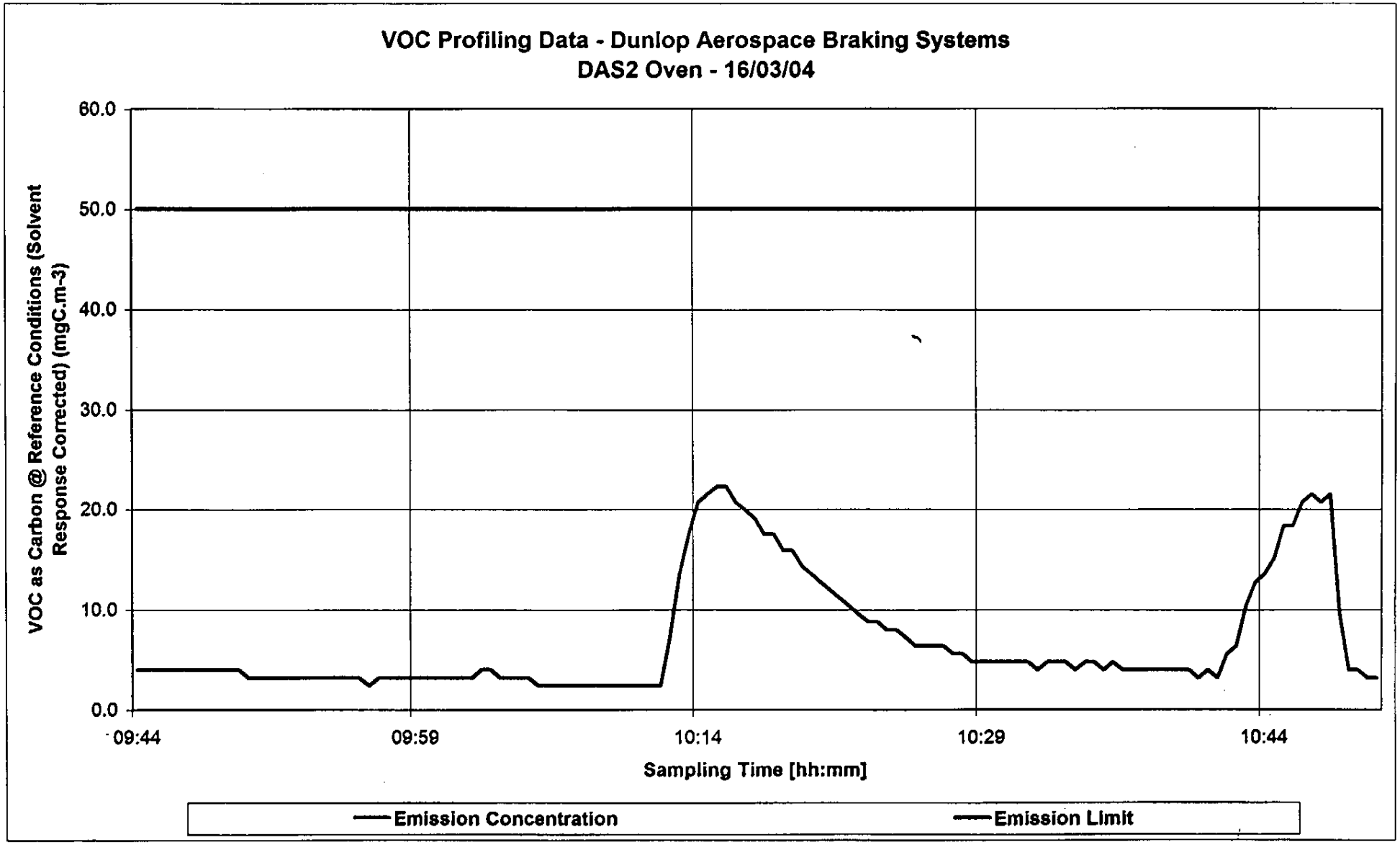
Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS 2 Booth**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6483**
		Instrument Ran	**0.7**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:22:40	3.1	19	6.47
11:23:00	3.1	19	6.47
11:23:20	3.4	19	7.28
11:23:40	3.4	19	7.28
11:24:00	3.1	19	6.47
11:24:20	3.1	19	6.47
11:24:40	3.1	19	6.47
11:25:00	3.1	19	6.47
11:25:20	3.1	19	6.47
11:25:40	3.4	19	7.28
11:26:00	3.1	19	6.47
11:26:20	3.1	19	6.47
11:26:40	3.4	19	7.28
11:27:00	3.1	19	6.47
11:27:20	3.1	19	6.47
11:27:40	3.1	19	6.47
11:28:00	2.7	19	5.66
11:28:20	3.1	19	6.47
11:28:40	2.7	19	5.66
11:29:00	3.1	19	6.47
11:29:20	3.1	19	6.47
11:29:40	3.1	19	6.47
11:30:00	3.1	19	6.47
11:30:20	3.1	19	6.47
11:30:40	2.7	19	5.66
11:31:00	3.1	19	6.47
11:31:20	3.1	19	6.47
11:31:40	3.1	19	6.47
11:32:00	3.1	19	6.47
11:32:20	3.1	19	6.47
11:32:40	2.7	19	5.66
11:33:00	3.1	19	6.47
11:33:20	2.7	19	5.66
11:33:40	2.7	19	5.66
11:34:00	2.7	19	5.66
11:34:20	2.7	19	5.66
11:34:40	2.7	19	5.66
11:35:00	3.1	19	6.47
11:35:20	2.7	19	5.66
11:35:40	2.7	19	5.66
11:36:00	2.7	19	5.66
11:36:20	2.7	19	5.66
11:36:40	2.7	19	5.66
11:37:00	2.7	19	5.66

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS 2 Booth**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6483**
		Instrument Ran	**0.7**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:37:20	2.7	19	5.66
11:37:40	2.7	19	5.66
11:38:00	2.3	19	4.85
11:38:20	2.3	19	4.85
11:38:40	1.9	19	4.04
11:39:00	1.9	19	4.04
11:39:20	2.3	19	4.85
11:39:40	2.7	19	5.66
11:40:00	2.3	19	4.85
11:40:20	2.7	19	5.66
11:40:40	3.1	19	6.47
11:41:00	2.7	19	5.66
11:41:20	1.5	19	3.24
11:41:40	1.5	19	3.24
11:42:00	1.1	19	2.43
11:42:20	0.8	19	1.62
11:42:40	0.4	19	0.81
Average	**5.7**		**12.1**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAS2 Oven - 16/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
09:44
09:59
10:14
10:29
10:44
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**DAS2 Oven**
Date:	**16-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**0.7**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
9:44:00	1.9	98	3.98
9:44:30	1.9	98	3.98
9:45:00	1.9	98	3.98
9:45:30	1.9	98	3.98
9:46:00	1.9	98	3.98
9:46:30	1.9	98	3.98
9:47:00	1.9	98	3.98
9:47:30	1.9	98	3.98
9:48:00	1.9	98	3.98
9:48:30	1.9	98	3.98
9:49:00	1.9	98	3.98
9:49:30	1.9	98	3.98
9:50:00	1.5	98	3.19
9:50:30	1.5	98	3.19
9:51:00	1.5	98	3.19
9:51:30	1.5	98	3.19
9:52:00	1.5	98	3.19
9:52:30	1.5	98	3.19
9:53:00	1.5	98	3.19
9:53:30	1.5	98	3.19
9:54:00	1.5	98	3.19
9:54:30	1.5	98	3.19
9:55:00	1.5	98	3.19
9:55:30	1.5	98	3.19
9:56:00	1.5	98	3.19
9:56:30	1.1	98	2.39
9:57:00	1.5	98	3.19
9:57:30	1.5	98	3.19
9:58:00	1.5	98	3.19
9:58:30	1.5	98	3.19
9:59:00	1.5	98	3.19
9:59:30	1.5	98	3.19
10:00:00	1.5	98	3.19
10:00:30	1.5	98	3.19
10:01:00	1.5	98	3.19
10:01:30	1.5	98	3.19
10:02:00	1.5	98	3.19
10:02:30	1.9	98	3.98
10:03:00	1.9	98	3.98
10:03:30	1.5	98	3.19
10:04:00	1.5	98	3.19
10:04:30	1.5	98	3.19
10:05:00	1.5	98	3.19
10:05:30	1.1	98	2.39
10:06:00	1.1	98	2.39

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAS2 Oven**	**Calibration Gas**	**Methane**
Date:	**16-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**n/a**
		Instrument Ran	**0.7**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:06:30	1.1	98	2.39
10:07:00	1.1	98	2.39
10:07:30	1.1	98	2.39
10:08:00	1.1	98	2.39
10:08:30	1.1	98	2.39
10:09:00	1.1	98	2.39
10:09:30	1.1	98	2.39
10:10:00	1.1	98	2.39
10:10:30	1.1	98	2.39
10:11:00	1.1	98	2.39
10:11:30	1.1	98	2.39
10:12:00	1.1	98	2.39
10:12:30	3.4	98	7.17
10:13:00	6.5	98	13.54
10:13:30	8.4	98	17.52
10:14:00	9.9	98	20.71
10:14:30	10.3	98	21.50
10:15:00	10.7	98	22.30
10:15:30	10.7	98	22.30
10:16:00	9.9	98	20.71
10:16:30	9.6	98	19.91
10:17:00	9.2	98	19.12
10:17:30	8.4	98	17.52
10:18:00	8.4	98	17.52
10:18:30	7.6	98	15.93
10:19:00	7.6	98	15.93
10:19:30	6.9	98	14.34
10:20:00	6.5	98	13.54
10:20:30	6.1	98	12.74
10:21:00	5.7	98	11.95
10:21:30	5.3	98	11.15
10:22:00	5.0	98	10.35
10:22:30	4.6	98	9.56
10:23:00	4.2	98	8.76
10:23:30	4.2	98	8.76
10:24:00	3.8	98	7.96
10:24:30	3.8	98	7.96
10:25:00	3.4	98	7.17
10:25:30	3.1	98	6.37
10:26:00	3.1	98	6.37
10:26:30	3.1	98	6.37
10:27:00	3.1	98	6.37
10:27:30	2.7	98	5.58
10:28:00	2.7	98	5.58
10:28:30	2.3	98	4.78

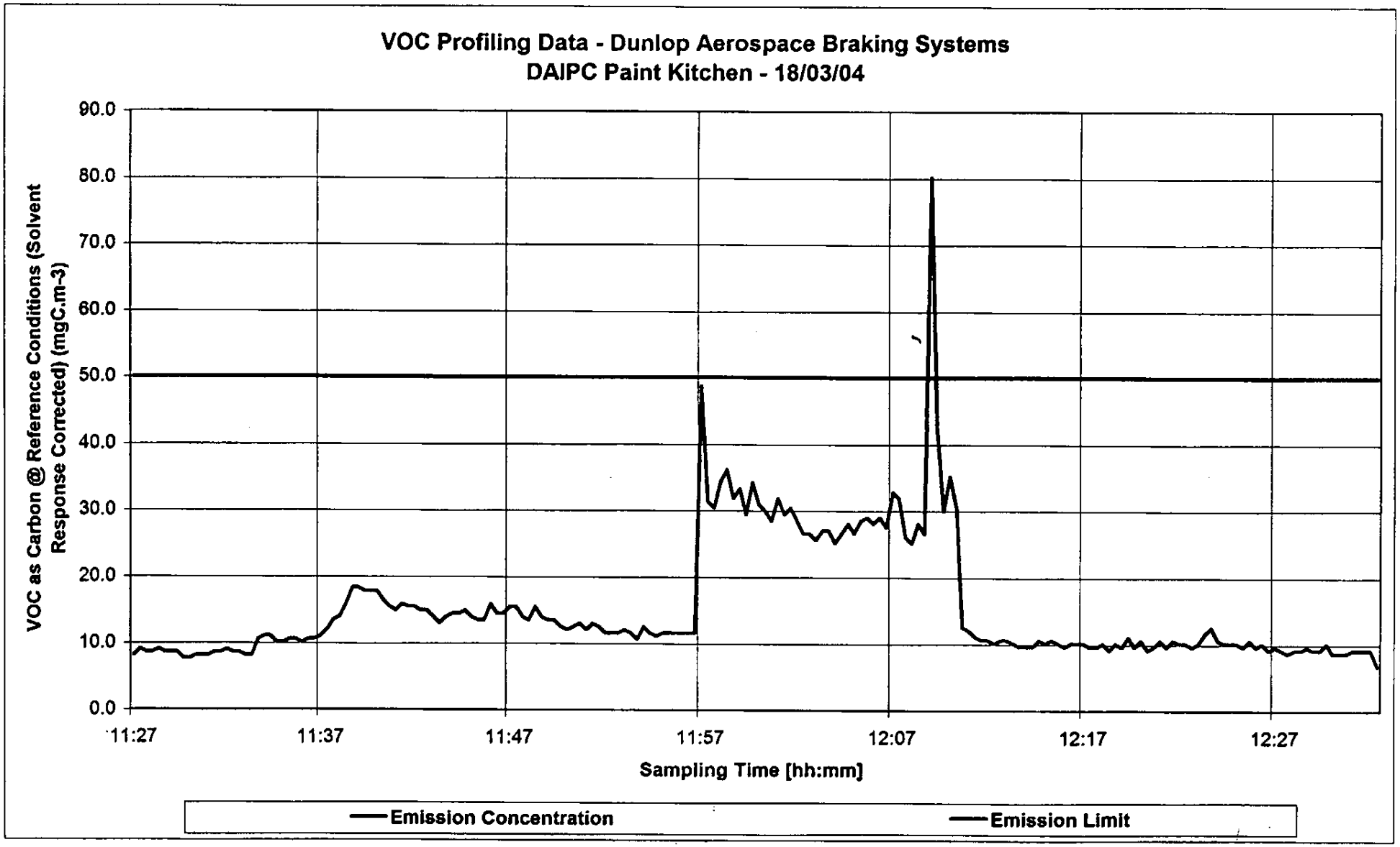
VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**DAS2 Oven**
Date:	**16-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**0.7**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
10:29:00	2.3	98	4.78
10:29:30	2.3	98	4.78
10:30:00	2.3	98	4.78
10:30:30	2.3	98	4.78
10:31:00	2.3	98	4.78
10:31:30	2.3	98	4.78
10:32:00	1.9	98	3.98
10:32:30	2.3	98	4.78
10:33:00	2.3	98	4.78
10:33:30	2.3	98	4.78
10:34:00	1.9	98	3.98
10:34:30	2.3	98	4.78
10:35:00	2.3	98	4.78
10:35:30	1.9	98	3.98
10:36:00	2.3	98	4.78
10:36:30	1.9	98	3.98
10:37:00	1.9	98	3.98
10:37:30	1.9	98	3.98
10:38:00	1.9	98	3.98
10:38:30	1.9	98	3.98
10:39:00	1.9	98	3.98
10:39:30	1.9	98	3.98
10:40:00	1.9	98	3.98
10:40:30	1.5	98	3.19
10:41:00	1.9	98	3.98
10:41:30	1.5	98	3.19
10:42:00	2.7	98	5.58
10:42:30	3.1	98	6.37
10:43:00	5.0	98	10.35
10:43:30	6.1	98	12.74
10:44:00	6.5	98	13.54
10:44:30	7.3	98	15.13
10:45:00	8.8	98	18.32
10:45:30	8.8	98	18.32
10:46:00	9.9	98	20.71
10:46:30	10.3	98	21.50
10:47:00	9.9	98	20.71
10:47:30	10.3	98	21.50
10:48:00	4.6	98	9.56
10:48:30	1.9	98	3.98
10:49:00	1.9	98	3.98
10:49:30	1.5	98	3.19
10:50:00	1.5	98	3.19
Average	**3.3**		**6.9**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAIPC Paint Kitchen - 18/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
11:27
11:37
11:47
11:57
12:07
12:17
12:27
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**IAPC Paint Kitchen**
Date:	**18-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**6507/8**
Instrument Ran	**357**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:27:00	2.4	25	8.21
11:27:20	2.7	25	9.17
11:27:40	2.6	25	8.66
11:28:00	2.6	25	8.66
11:28:20	2.7	25	9.17
11:28:40	2.6	25	8.66
11:29:00	2.6	25	8.66
11:29:20	2.6	25	8.66
11:29:40	2.3	25	7.70
11:30:00	2.3	25	7.70
11:30:20	2.4	25	8.21
11:30:40	2.4	25	8.21
11:31:00	2.4	25	8.21
11:31:20	2.6	25	8.66
11:31:40	2.6	25	8.66
11:32:00	2.7	25	9.17
11:32:20	2.6	25	8.66
11:32:40	2.6	25	8.66
11:33:00	2.4	25	8.21
11:33:20	2.4	25	8.21
11:33:40	3.2	25	10.65
11:34:00	3.3	25	11.10
11:34:20	3.3	25	11.10
11:34:40	3.0	25	10.13
11:35:00	3.0	25	10.13
11:35:20	3.2	25	10.65
11:35:40	3.2	25	10.65
11:36:00	3.0	25	10.13
11:36:20	3.2	25	10.65
11:36:40	3.2	25	10.65
11:37:00	3.3	25	11.10
11:37:20	3.6	25	12.06
11:37:40	4.0	25	13.53
11:38:00	4.2	25	13.98
11:38:20	4.7	25	15.91
11:38:40	5.5	25	18.34
11:39:00	5.5	25	18.34
11:39:20	5.3	25	17.83
11:39:40	5.3	25	17.83
11:40:00	5.3	25	17.83
11:40:20	4.9	25	16.42
11:40:40	4.6	25	15.46
11:41:00	4.5	25	14.94
11:41:20	4.7	25	15.91

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**IAPC Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6507/8**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:41:40	4.6	25	15.46
11:42:00	4.6	25	15.46
11:42:20	4.5	25	14.94
11:42:40	4.5	25	14.94
11:43:00	4.2	25	13.98
11:43:20	3.9	25	13.02
11:43:40	4.2	25	13.98
11:44:00	4.3	25	14.49
11:44:20	4.3	25	14.49
11:44:40	4.5	25	14.94
11:45:00	4.2	25	13.98
11:45:20	4.0	25	13.53
11:45:40	4.0	25	13.53
11:46:00	4.7	25	15.91
11:46:20	4.3	25	14.49
11:46:40	4.3	25	14.49
11:47:00	4.6	25	15.46
11:47:20	4.6	25	15.46
11:47:40	4.2	25	13.98
11:48:00	4.0	25	13.53
11:48:20	4.6	25	15.46
11:48:40	4.2	25	13.98
11:49:00	4.0	25	13.53
11:49:20	4.0	25	13.53
11:49:40	3.7	25	12.57
11:50:00	3.6	25	12.06
11:50:20	3.7	25	12.57
11:50:40	3.9	25	13.02
11:51:00	3.6	25	12.06
11:51:20	3.9	25	13.02
11:51:40	3.7	25	12.57
11:52:00	3.5	25	11.61
11:52:20	3.5	25	11.61
11:52:40	3.5	25	11.61
11:53:00	3.6	25	12.06
11:53:20	3.5	25	11.61
11:53:40	3.2	25	10.65
11:54:00	3.7	25	12.57
11:54:20	3.5	25	11.61
11:54:40	3.3	25	11.10
11:55:00	3.5	25	11.61
11:55:20	3.5	25	11.61
11:55:40	3.5	25	11.61
11:56:00	3.5	25	11.61

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**IAPC Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6507/8**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
11:56:20	3.5	25	11.61
11:56:40	3.5	25	11.61
11:57:00	14.5	25	48.74
11:57:20	9.3	25	31.36
11:57:40	9.1	25	30.40
11:58:00	10.2	25	34.25
11:58:20	10.8	25	36.24
11:58:40	9.5	25	31.87
11:59:00	9.9	25	33.29
11:59:20	8.8	25	29.44
11:59:40	10.2	25	34.25
12:00:00	9.2	25	30.91
12:00:20	8.9	25	29.95
12:00:40	8.5	25	28.48
12:01:00	9.5	25	31.87
12:01:20	8.8	25	29.44
12:01:40	9.1	25	30.40
12:02:00	8.5	25	28.48
12:02:20	7.9	25	26.55
12:02:40	7.9	25	26.55
12:03:00	7.6	25	25.59
12:03:20	8.0	25	27.00
12:03:40	8.0	25	27.00
12:04:00	7.5	25	25.08
12:04:20	7.9	25	26.55
12:04:40	8.3	25	28.03
12:05:00	7.9	25	26.55
12:05:20	8.5	25	28.48
12:05:40	8.6	25	28.99
12:06:00	8.3	25	28.03
12:06:20	8.6	25	28.99
12:06:40	8.2	25	27.51
12:07:00	9.8	25	32.84
12:07:20	9.5	25	31.87
12:07:40	7.8	25	26.04
12:08:00	7.5	25	25.08
12:08:20	8.3	25	28.03
12:08:40	7.9	25	26.55
12:09:00	23.9	25	80.17
12:09:20	12.6	25	42.46
12:09:40	8.9	25	29.95
12:10:00	10.5	25	35.21
12:10:20	9.1	25	30.40
12:10:40	3.7	25	12.57

VOC Emission Data

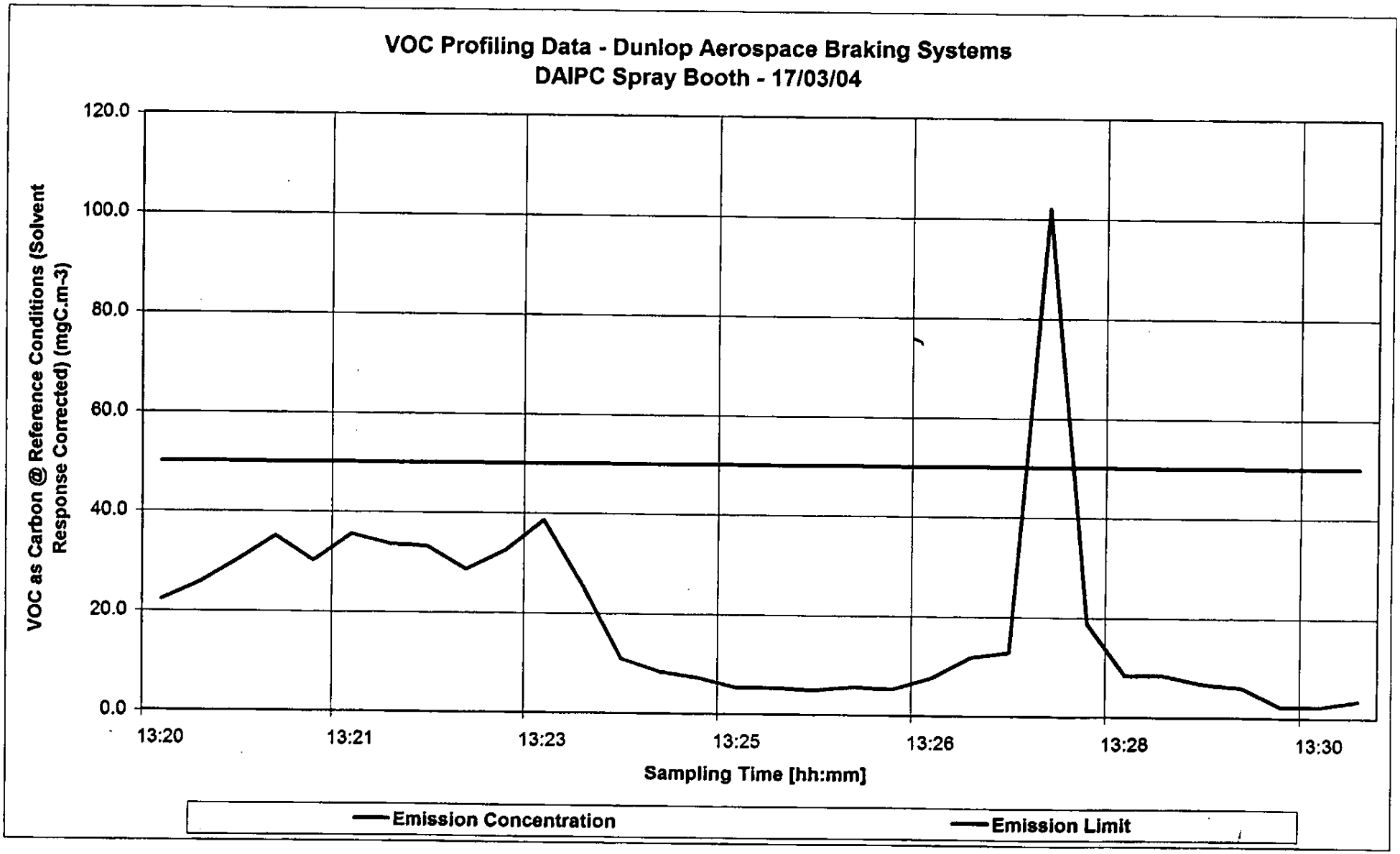
Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**IAPC Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6507/8**
		Instrument Ran	**357**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
12:11:00	3.6	25	12.06
12:11:20	3.3	25	11.10
12:11:40	3.2	25	10.65
12:12:00	3.2	25	10.65
12:12:20	3.0	25	10.13
12:12:40	3.2	25	10.65
12:13:00	3.2	25	10.65
12:13:20	3.0	25	10.13
12:13:40	2.9	25	9.62
12:14:00	2.9	25	9.62
12:14:20	2.9	25	9.62
12:14:40	3.2	25	10.65
12:15:00	3.0	25	10.13
12:15:20	3.2	25	10.65
12:15:40	3.0	25	10.13
12:16:00	2.9	25	9.62
12:16:20	3.0	25	10.13
12:16:40	3.0	25	10.13
12:17:00	3.0	25	10.13
12:17:20	2.9	25	9.62
12:17:40	2.9	25	9.62
12:18:00	3.0	25	10.13
12:18:20	2.7	25	9.17
12:18:40	3.0	25	10.13
12:19:00	2.9	25	9.62
12:19:20	3.3	25	11.10
12:19:40	2.9	25	9.62
12:20:00	3.2	25	10.65
12:20:20	2.7	25	9.17
12:20:40	2.9	25	9.62
12:21:00	3.2	25	10.65
12:21:20	2.9	25	9.62
12:21:40	3.2	25	10.65
12:22:00	3.0	25	10.13
12:22:20	3.0	25	10.13
12:22:40	2.9	25	9.62
12:23:00	3.0	25	10.13
12:23:20	3.5	25	11.61
12:23:40	3.7	25	12.57
12:24:00	3.2	25	10.65
12:24:20	3.0	25	10.13
12:24:40	3.0	25	10.13
12:25:00	3.0	25	10.13
12:25:20	2.9	25	9.62

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**IAPC Paint Kitchen**	**Calibration Gas**	**Methane**
Date:	**18-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6507/8**
		Instrument Ran	**357**
		Emission Limit:	**50**

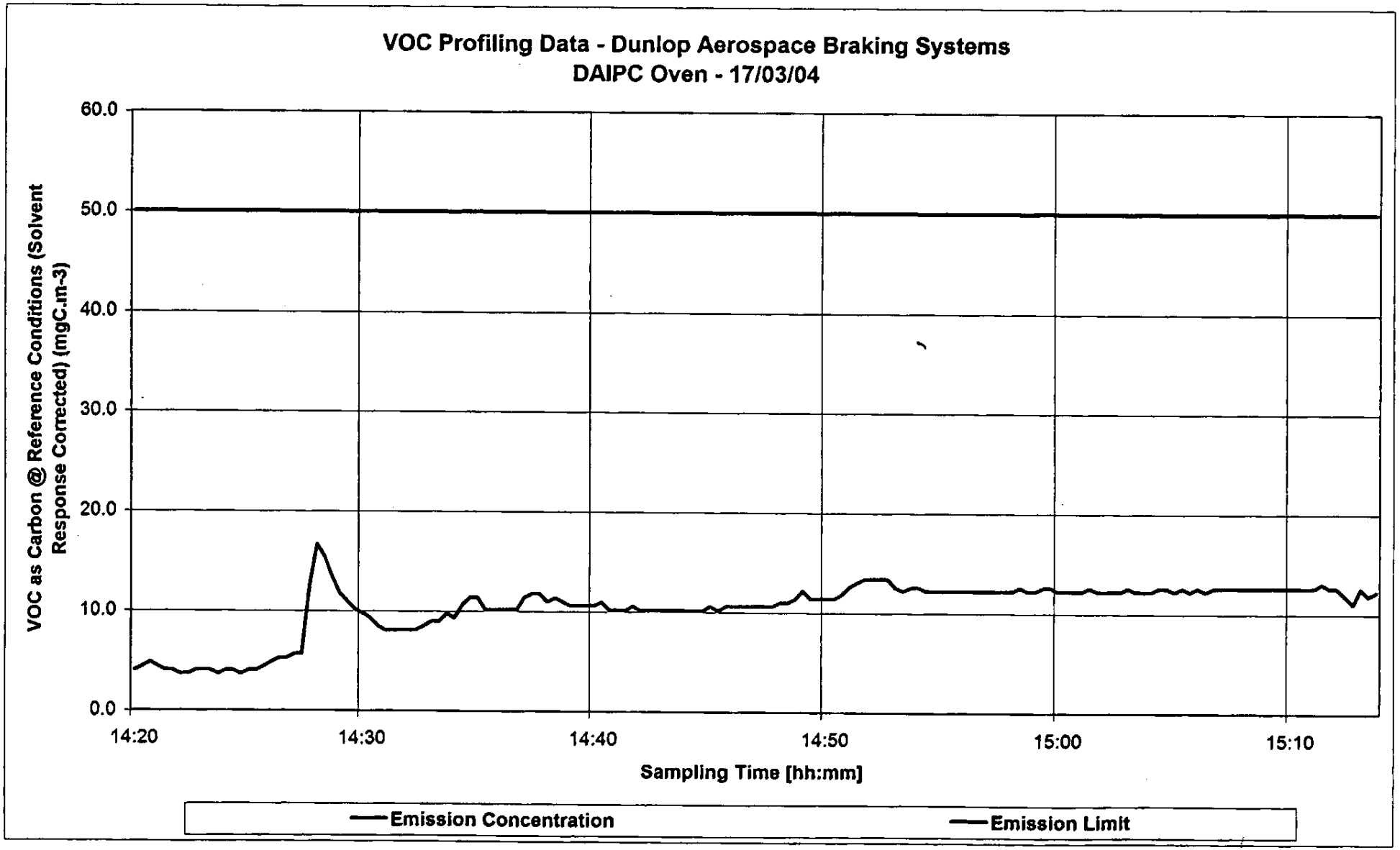
Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
12:25:40	3.2	25	10.65
12:26:00	2.9	25	9.62
12:26:20	3.0	25	10.13
12:26:40	2.7	25	9.17
12:27:00	2.9	25	9.62
12:27:20	2.7	25	9.17
12:27:40	2.6	25	8.66
12:28:00	2.7	25	9.17
12:28:20	2.7	25	9.17
12:28:40	2.9	25	9.62
12:29:00	2.7	25	9.17
12:29:20	2.7	25	9.17
12:29:40	3.0	25	10.13
12:30:00	2.6	25	8.66
12:30:20	2.6	25	8.66
12:30:40	2.6	25	8.66
12:31:00	2.7	25	9.17
12:31:20	2.7	25	9.17
12:31:40	2.7	25	9.17
12:32:00	2.7	25	9.17
12:32:20	2.0	25	6.73
Average	**4.6**		**15.5**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAIPC Spray Booth - 17/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
13:20
13:21
13:23
13:25
13:26
13:28
13:30
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAIPC Spray Booth**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**6503/4**
		Instrument Ran	**514**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions (mgC.m^{-3})	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m^{-3})
13:20:00	12.2	21	22.28
13:20:20	14.1	21	25.69
13:20:40	16.6	21	30.21
13:21:00	19.3	21	35.13
13:21:20	16.6	21	30.21
13:21:40	19.5	21	35.53
13:22:00	18.4	21	33.62
13:22:20	18.2	21	33.22
13:22:40	15.7	21	28.70
13:23:00	17.8	21	32.47
13:23:20	21.1	21	38.54
13:23:40	14.1	21	25.69
13:24:00	6.0	21	10.94
13:24:20	4.6	21	8.33
13:24:40	3.9	21	7.18
13:25:00	2.9	21	5.27
13:25:20	2.9	21	5.27
13:25:40	2.7	21	4.92
13:26:00	3.1	21	5.67
13:26:20	2.9	21	5.27
13:26:40	4.1	21	7.53
13:27:00	6.4	21	11.69
13:27:20	7.0	21	12.85
13:27:40	55.9	21	101.97
13:28:00	10.4	21	18.87
13:28:20	4.6	21	8.33
13:28:40	4.6	21	8.33
13:29:00	3.7	21	6.77
13:29:20	3.3	21	6.02
13:29:40	1.2	21	2.26
13:30:00	1.2	21	2.26
13:30:20	1.9	21	3.41
Average	**10.5**		**19.2**


VOC Profiling Data - Dunlop Aerospace Braking Systems
DAIPC Oven - 17/03/04
VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m-3)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
14:20
14:30
14:40
14:50
15:00
15:10
Sampling Time [hh:mm]
Emission Concentration
Emission Limit

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**DAIPC Oven**
Date:	**17-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions (mgC.m^{-3})	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m^{-3})
14:20:00	2.1	97	4.05
14:20:20	2.3	97	4.48
14:20:40	2.5	97	4.86
14:21:00	2.3	97	4.48
14:21:20	2.1	97	4.05
14:21:40	2.1	97	4.05
14:22:00	1.9	97	3.67
14:22:20	1.9	97	3.67
14:22:40	2.1	97	4.05
14:23:00	2.1	97	4.05
14:23:20	2.1	97	4.05
14:23:40	1.9	97	3.67
14:24:00	2.1	97	4.05
14:24:20	2.1	97	4.05
14:24:40	1.9	97	3.67
14:25:00	2.1	97	4.05
14:25:20	2.1	97	4.05
14:25:40	2.3	97	4.48
14:26:00	2.5	97	4.86
14:26:20	2.7	97	5.29
14:26:40	2.7	97	5.29
14:27:00	2.9	97	5.67
14:27:20	2.9	97	5.67
14:27:40	6.4	97	12.57
14:28:00	8.5	97	16.68
14:28:20	7.9	97	15.43
14:28:40	6.8	97	13.38
14:29:00	6.0	97	11.76
14:29:20	5.6	97	10.96
14:29:40	5.2	97	10.15
14:30:00	5.0	97	9.77
14:30:20	4.8	97	9.34
14:30:40	4.4	97	8.53
14:31:00	4.1	97	8.09
14:31:20	4.1	97	8.09
14:31:40	4.1	97	8.09
14:32:00	4.1	97	8.09
14:32:20	4.1	97	8.09
14:32:40	4.4	97	8.53
14:33:00	4.6	97	8.96
14:33:20	4.6	97	8.96
14:33:40	5.0	97	9.77
14:34:00	4.8	97	9.34
14:34:20	5.4	97	10.58

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**DAIPC Oven**
Date:	**17-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions (mgC.m^{-3})	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m^{-3})
14:34:40	5.8	97	11.39
14:35:00	5.8	97	11.39
14:35:20	5.2	97	10.15
14:35:40	5.2	97	10.15
14:36:00	5.2	97	10.15
14:36:20	5.2	97	10.15
14:36:40	5.2	97	10.15
14:37:00	5.8	97	11.39
14:37:20	6.0	97	11.76
14:37:40	6.0	97	11.76
14:38:00	5.6	97	10.96
14:38:20	5.8	97	11.39
14:38:40	5.6	97	10.96
14:39:00	5.4	97	10.58
14:39:20	5.4	97	10.58
14:39:40	5.4	97	10.58
14:40:00	5.4	97	10.58
14:40:20	5.6	97	10.96
14:40:40	5.2	97	10.15
14:41:00	5.2	97	10.15
14:41:20	5.2	97	10.15
14:41:40	5.4	97	10.58
14:42:00	5.2	97	10.15
14:42:20	5.2	97	10.15
14:42:40	5.2	97	10.15
14:43:00	5.2	97	10.15
14:43:20	5.2	97	10.15
14:43:40	5.2	97	10.15
14:44:00	5.2	97	10.15
14:44:20	5.2	97	10.15
14:44:40	5.2	97	10.15
14:45:00	5.4	97	10.58
14:45:20	5.2	97	10.15
14:45:40	5.4	97	10.58
14:46:00	5.4	97	10.58
14:46:20	5.4	97	10.58
14:46:40	5.4	97	10.58
14:47:00	5.4	97	10.58
14:47:20	5.4	97	10.58
14:47:40	5.4	97	10.58
14:48:00	5.6	97	10.96
14:48:20	5.6	97	10.96
14:48:40	5.8	97	11.39
14:49:00	6.2	97	12.20

VOC Emission Data

Job Ref:	**OEH31943**
Client Name:	**Dunlop ABS**
Location:	**DAIPC Oven**
Date:	**17-Mar-04**
Scientist:	**BR & JL**

Technical Details

Instrument Typ	**FID**
Calibration Gas	**Methane**
% Carbon:	**75%**
Sample Number	**n/a**
Instrument Ran	**514**
Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions ($mgC.m^{-3}$)	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) ($mgC.m^{-3}$)
14:49:20	5.8	97	11.39
14:49:40	5.8	97	11.39
14:50:00	5.8	97	11.39
14:50:20	5.8	97	11.39
14:50:40	6.0	97	11.76
14:51:00	6.4	97	12.57
14:51:20	6.6	97	13.01
14:51:40	6.8	97	13.38
14:52:00	6.8	97	13.38
14:52:20	6.8	97	13.38
14:52:40	6.8	97	13.38
14:53:00	6.4	97	12.57
14:53:20	6.2	97	12.20
14:53:40	6.4	97	12.57
14:54:00	6.4	97	12.57
14:54:20	6.2	97	12.20
14:54:40	6.2	97	12.20
14:55:00	6.2	97	12.20
14:55:20	6.2	97	12.20
14:55:40	6.2	97	12.20
14:56:00	6.2	97	12.20
14:56:20	6.2	97	12.20
14:56:40	6.2	97	12.20
14:57:00	6.2	97	12.20
14:57:20	6.2	97	12.20
14:57:40	6.2	97	12.20
14:58:00	6.2	97	12.20
14:58:20	6.4	97	12.57
14:58:40	6.2	97	12.20
14:59:00	6.2	97	12.20
14:59:20	6.4	97	12.57
14:59:40	6.4	97	12.57
15:00:00	6.2	97	12.20
15:00:20	6.2	97	12.20
15:00:40	6.2	97	12.20
15:01:00	6.2	97	12.20
15:01:20	6.4	97	12.57
15:01:40	6.2	97	12.20
15:02:00	6.2	97	12.20
15:02:20	6.2	97	12.20
15:02:40	6.2	97	12.20
15:03:00	6.4	97	12.57
15:03:20	6.2	97	12.20
15:03:40	6.2	97	12.20

VOC Emission Data

Job Ref:	**OEH31943**	**Technical Details**	
Client Name:	**Dunlop ABS**	**Instrument Typ**	**FID**
Location:	**DAIPC Oven**	**Calibration Gas**	**Methane**
Date:	**17-Mar-04**	**% Carbon:**	**75%**
Scientist:	**BR & JL**	**Sample Number**	**n/a**
		Instrument Ran	**514**
		Emission Limit:	**50**

Sampling Time [hh:mm]	VOC as Methane Equivalent@ Reference Conditions (mgC.m^{-3})	Stack Temp (°C)	VOC as Carbon @ Reference Conditions (Solvent Response Corrected) (mgC.m^{-3})
15:04:00	6.2	97	12.20
15:04:20	6.4	97	12.57
15:04:40	6.4	97	12.57
15:05:00	6.2	97	12.20
15:05:20	6.4	97	12.57
15:05:40	6.2	97	12.20
15:06:00	6.4	97	12.57
15:06:20	6.2	97	12.20
15:06:40	6.4	97	12.57
15:07:00	6.4	97	12.57
15:07:20	6.4	97	12.57
15:07:40	6.4	97	12.57
15:08:00	6.4	97	12.57
15:08:20	6.4	97	12.57
15:08:40	6.4	97	12.57
15:09:00	6.4	97	12.57
15:09:20	6.4	97	12.57
15:09:40	6.4	97	12.57
15:10:00	6.4	97	12.57
15:10:20	6.4	97	12.57
15:10:40	6.4	97	12.57
15:11:00	6.4	97	12.57
15:11:20	6.6	97	13.01
15:11:40	6.4	97	12.57
15:12:00	6.4	97	12.57
15:12:20	6.0	97	11.76
15:12:40	5.6	97	10.96
15:13:00	6.4	97	12.57
15:13:20	6.0	97	11.76
15:13:40	6.2	97	12.20
Average	**5.3**		**10.5**