CERTIFICATE OF ANALYSIS

CLIENT:

Department of Environment and
Heritage Protection
PO Box 731
TOOWOOMBA QLD 4350

ATTN: Tim Reid

Laboratory Reference : 12120140
Client Order Number : N/A
Quote Number : N/A
Client Project : N/A
Client Batch Reference: N/A
Date Received : 11-Dec-2012
Date Commenced : 12-Dec-2012
Laboratory Number/s : 12PW313-316

Submitting Authority : Department of Environment and Heritage Protection

Number of Samples : Air sampled into four (4) - 6L canisters

Reason for Analysis : Identification and Quantitation of Volatile Organic Compounds (VOCs)

Method/s of Analysis : 13028V5 & 28237V1 – Gas Chromatography - Mass Spectrometry (GCMS) analysis by USEPA Method TO-15

Remarks : Sample details and results are summarised in Table 1.

.....
Steve Tapper
Supervising Chemist
20 December 2012

Enquiries Steve Tapper | 39 Kessels Road | PO Box 594 | Phone (+61 7) 3274 9111
Phone | Coopers Plains QLD 4108 | Archerfield QLD 4108 | Fax (+61 7) 3000 9628
Email | AUSTRALIA | AUSTRALIA | Email FSS@health.qld.gov.au

Table 1: TO15 Results for 12PW313-316

Sample Number	12PW313	12PW314	12PW315	12PW316
Sample Description	221 Happiness Rd.	40 Robbos Rd.	Rhyme Pond	Barabala State forest
Sampling Date	1 Dec.	25 Nov.	6 Dec.	4 Dec.
Canister Number	1736	1722	1729	1744
Compound List	Amount (ppbv)	Amount (ppbv)	Amount (ppbv)	Amount (ppbv)
Propene	**7.7**	< LOR	< LOR	< LOR
Hexane	< LOR	< LOR	< LOR	< LOR
Heptane	< LOR	< LOR	< LOR	< LOR
Cyclohexane	< LOR	< LOR	< LOR	< LOR
1,3-Butadiene	< LOR	< LOR	< LOR	< LOR
Benzene	< LOR	< LOR	< LOR	< LOR
Toluene	< LOR	< LOR	< LOR	< LOR
Ethylbenzene	< LOR	< LOR	< LOR	< LOR
m- & p-Xylene	< LOR	< LOR	< LOR	< LOR
o-Xylene	< LOR	< LOR	< LOR	< LOR
Styrene	< LOR	< LOR	< LOR	< LOR
4-Ethyltoluene	< LOR	< LOR	< LOR	< LOR
1,3,5-Trimethylbenzene	< LOR	< LOR	< LOR	< LOR
1,2,4-Trimethylbenzene	< LOR	< LOR	< LOR	< LOR
Naphthalene	< LOR	< LOR	< LOR	< LOR
Carbon disulfide	< LOR	< LOR	< LOR	< LOR
Ethanol	**5.5**	**1.6**	**1.2**	**1.5**

12PW313-316

Enquiries Steve Tapper
Phone
Email

39 Kessels Road
Coopers Plains QLD 4108
AUSTRALIA

PO Box 594
Archerfield QLD 4108
AUSTRALIA

Phone (+61 7) 3274 9111
Fax (+61 7) 3000 9628
Email FSS@health.qld.gov.au

Isopropyl Alcohol	< LOR	< LOR	< LOR	< LOR
Acetone	**10**	**5.6**	**2.0**	**6.7**
Methyl tert-butyl ether	< LOR	< LOR	< LOR	< LOR
Methyl ethyl ketone	< LOR	< LOR	< LOR	< LOR
Ethyl acetate	< LOR	< LOR	< LOR	< LOR
Vinyl acetate	**0.6**	**1.0**	< LOR	**0.7**
Tetrahydrofuran	< LOR	< LOR	< LOR	< LOR
Methyl isobutyl ketone	< LOR	< LOR	< LOR	< LOR
Methyl butyl ketone	< LOR	< LOR	< LOR	< LOR
Acrolein	**0.6**	**0.5**	< LOR	**0.5**
1,4-Dioxane	< LOR	< LOR	< LOR	< LOR
Methyl methacrylate	< LOR	< LOR	< LOR	< LOR
Dichlorodifluoromethane	< LOR	< LOR	**0.6**	< LOR
Dichlorotetrafluoroethane	< LOR	< LOR	< LOR	< LOR
Trichlorofluoromethane	< LOR	< LOR	< LOR	< LOR
1,1,2-Trichloro-1,2,2-trifluoroethane	< LOR	< LOR	< LOR	< LOR
Bromomethane	< LOR	< LOR	< LOR	< LOR
Bromodichloromethane	< LOR	< LOR	< LOR	< LOR
Dibromochloromethane	< LOR	< LOR	< LOR	< LOR
1,2-Dibromoethane	< LOR	< LOR	< LOR	< LOR
Bromoform	< LOR	< LOR	< LOR	< LOR
Chloromethane	**0.6**	**0.6**	**0.7**	**0.6**
Chloroethane	< LOR	< LOR	< LOR	< LOR
1,1-Dichloroethane	< LOR	< LOR	< LOR	< LOR
1,2-Dichloroethane	< LOR	< LOR	< LOR	< LOR
1,1,1-Trichloroethane	< LOR	< LOR	< LOR	< LOR

Enquiries Steve Tapper | 39 Kessels Road, Coopers Plains QLD 4108, AUSTRALIA | PO Box 594, Archerfield QLD 4108, AUSTRALIA | Phone (+61 7) 3274 9111
Phone | Fax (+61 7) 3000 9628
Email | Email FSS@health.qld.gov.au

1,2-Dichloropropane	< LOR	< LOR	< LOR	< LOR
1,1,2-Trichloroethane	< LOR	< LOR	< LOR	< LOR
1,1,2,2-Tetrachloroethane	< LOR	< LOR	< LOR	< LOR
Hexachlorobutadiene	< LOR	< LOR	< LOR	< LOR
Methylene Chloride	**5.2**	< LOR	**0.7**	**0.7**
Chloroform	< LOR	< LOR	< LOR	< LOR
Carbon tetrachloride	< LOR	< LOR	< LOR	< LOR
Vinyl chloride	< LOR	< LOR	< LOR	< LOR
1,1-Dichloroethylene	< LOR	< LOR	< LOR	< LOR
trans-1,2-Dichloroethylene	< LOR	< LOR	< LOR	< LOR
cis-1,2-Dichloroethylene	< LOR	< LOR	< LOR	< LOR
Trichloroethylene	< LOR	< LOR	< LOR	< LOR
cis-1,3-dichloropropene	< LOR	< LOR	< LOR	< LOR
trans-1,3-dichloropropene	< LOR	< LOR	< LOR	< LOR
Tetrachloroethylene	< LOR	< LOR	< LOR	< LOR
Chlorobenzene	< LOR	< LOR	< LOR	< LOR
Benzyl chloride	< LOR	< LOR	< LOR	< LOR
1,3-Dichlorobenzene	< LOR	< LOR	< LOR	< LOR
1,4-Dichlorobenzene	< LOR	< LOR	< LOR	< LOR
1,2-Dichlorobenzene	< LOR	< LOR	< LOR	< LOR
1,2,4-Trichlorobenzene	< LOR	< LOR	< LOR	< LOR

Limit of Reporting (LOR) is 0.5 ppbv

Enquiries Steve Tapper | 39 Kessels Road | PO Box 594 | Phone | (+61 7) 3274 9111
Phone | Coopers Plains QLD 4108 | Archerfield QLD 4108 | Fax | (+61 7) 3000 9628
Email | AUSTRALIA | AUSTRALIA | Email | FSS@health.qld.gov.au

Queensland Government

Forensic and Scientific Services
HSSA | Health Services Support Agency

CERTIFICATE OF ANALYSIS

CLIENT:

Dept Environment & Heritage Protection
PO Box 731
TOOWOOMBA QLD

ATTN: Tim Reid

Laboratory Reference	: 12110071
Client ID Number	: N/A
Quote Number	: N/A
Client Project	: N/A
Client Batch Reference	: N/A
Date Received	: 08/11/2012
Date Commenced	: 12/11/2012
Laboratory Number/s	: 12PW248

Submitting Authority : Department of Environment & Heritage Protection

Number of Samples : Air sampled into one (1) 6L summa canister

Reason for Analysis : Identification of Volatile Organic Compounds (VOCs)

Method/s of Analysis : 13028V5 & 28237V1 – Gas chromatography-mass spectrometry (GC-MS) analysis by USEPA method TO-15

Remarks : Sample details and results are summarised in Table 1

Results are reported in parts per billion by volume (ppbv)

Daphne S-H Huang
Chemist, Investigative Chemistry
16th November 2012

12PW248

Enquiries Daphne S-H Huang
Phone
Email

39 Kessels Road
Coopers Plains QLD 4108
AUSTRALIA

PO Box 594
Archerfield QLD 4108
AUSTRALIA

Phone (+61 7) 3274 9111
Fax (+61 7) 3000 9628
Email FSS@health.qld.gov.au

Table 1: Results summary of 12PW248

Sample Number	12PW248
Sample Description	**888 Lucky Rd, Verandah**
Sampling Date	**1/11/2012**
Canister Number	**1742**
Sorted Compound List	**Amount (ppbv)**
Hexane	< LOR
Heptane	< LOR
Cyclohexane	< LOR
1,3-Butadiene	< LOR
Benzene	< LOR
Toluene	**1.5**
Ethylbenzene	< LOR
m- & p-Xylene	< LOR
o-Xylene	< LOR
Styrene	< LOR
4-Ethyltoluene	< LOR
1,3,5-Trimethylbenzene	< LOR
1,2,4-Trimethylbenzene	**0.7**
Naphthalene	< LOR
Carbon disulfide	< LOR
Ethanol	**1.5**
Isopropyl Alcohol	< LOR
Acetone	**1.5**
Methyl tert-butyl ether	< LOR
Methyl ethyl ketone	< LOR
Ethyl acetate	< LOR
Vinyl acetate	< LOR
Tetrahydrofuran	< LOR
Methyl isobutyl ketone	< LOR
Methyl butyl ketone	< LOR
Acrolein	< LOR
1,4-Dioxane	< LOR
Methyl methacrylate	< LOR
Dichlorodifluoromethane	**0.6**
Dichlorotetrafluoroethane	< LOR
Trichlorofluoromethane	< LOR
1,1,2-Trichloro-1,2,2-trifluoroethane	< LOR
Bromomethane	< LOR

Enquiries Daphne S-H Huang
Phone
Email

39 Kessels Road
Coopers Plains QLD 4108
AUSTRALIA

PO Box 594
Archerfield QLD 4108
AUSTRALIA

Phone (+61 7) 3274 9111
Fax (+61 7) 3000 9628
Email FSS@health.qld.gov.au

CERTIFICATE OF ANALYSIS

Laboratory Reference : 12110071
Laboratory Number/s : 12PW248

Sample Number	12PW248
Sample Description	888 Lucky Rd, Verandah
Sampling Date	1/11/2012
Canister Number	1742
Sorted Compound List	Amount (ppbv)
Bromodichloromethane	< LOR
Dibromochloromethane	< LOR
1,2-Dibromoethane	< LOR
Bromoform	< LOR
Chloromethane	0.7
Chloroethane	< LOR
1,1-Dichloroethane	< LOR
1,2-Dichloroethane	< LOR
1,1,1-Trichloroethane	< LOR
1,2-Dichloropropane	< LOR
1,1,2-Trichloroethane	< LOR
1,1,2,2-Tetrachloroethane	< LOR
Hexachlorobutadiene	< LOR
Methylene Chloride	< LOR
Chloroform	< LOR
Carbon tetrachloride	< LOR
Vinyl chloride	< LOR
1,1-Dichloroethylene	< LOR
trans-1,2-Dichloroethylene	< LOR
cis-1,2-Dichloroethylene	< LOR
Trichloroethylene	< LOR
cis-1,3-dichloropropene	< LOR
trans-1,3-dichloropropene	< LOR
Tetrachloroethylene	< LOR
Chlorobenzene	< LOR
Benzyl chloride	< LOR
1,3-Dichlorobenzene	< LOR
1,4-Dichlorobenzene	< LOR
1,2-Dichlorobenzene	< LOR
1,2,4-Trichlorobenzene	< LOR

Limit of Reporting (LOR) is 0.5 ppbv

Enquiries Daphne S-H Huang
Phone
Email

39 Kessels Road
Coopers Plains QLD 4108
AUSTRALIA

PO Box 594
Archerfield QLD 4108
AUSTRALIA

Phone (+61 7) 3274 9111
Fax (+61 7) 3000 9628
Email FSS@health.qld.gov.au

gradko environmental
(A division of Gradko International Ltd.)
St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH
tel.: 01962 860331 fax: 01962 841339 e-mail:diffusion@gradko.co.uk

UKAS TESTING 2187

LABORATORY ANALYSIS REPORT

REPORT NUMBER	**F6187R2**
CUSTOMER	**c/Department of Environment and Heritage Protection**
	PO BOX 731
	Toowoomba QLD 4350
GRADKO LAB REFERENCE	**GMSG 1587**
DATE SAMPLES RECEIVED	**29.10.12**
BOOKING IN REF.	**F6187**

IDENTIFICATION AND ESTIMATION (SEMI-QUANTITATIVE ANALYSIS) OF TOP 10 VOC ON TENAX DIFFUSION TUBES BY GC/MS

Analysis has been carried out in accordance with in-house method GLM 13

Tube Number	**GRA 02826**
Exposure Time(mins)	**28800**
Sample ID	**Lauren Wienibilla Rd**

Top 10 VOC	**ng on tube**	**ppb in air***
Phenylmaleic anhydride +	23.65	0.41
1-Hexanol, 2-ethyl-	14.98	0.26
alpha-Pinene	13.16	0.23
Phenol	6.75	0.12
Benzothiazole +	6.65	0.12
Pentane	<5.0	<0.09

6 Compounds detected

Semi-quantitative results for ng on tube are calculated by reference to toluene and toluene-d8 Internal standard.
+ These compounds are not covered by our flexible scope.

		Date of Analysis	**02.11.12**
Analysts Name	**Mariella Angelova**	**Date of Report**	**06.11.12**

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results

Signed.....
L. Gates, Laboratory Supervisor

Test Safe AUSTRALIA
Safety is no Accident

CHEMICAL ANALYSIS BRANCH

WorkCover NEW SOUTH WALES

Lab. Reference: 2012-2978-B

Referral Department
Sullivan Nicolaides Pathology
PO Box 344
INDOOROOPILLY QLD 4068

Your Reference: 590046419

REPORT OF ANALYSIS

EMPLOYEE'S NAME:	PALMER, Jackson	DATE OF BIRTH:	05/05/2009
NAME OF EMPLOYER:	Not Stated	DATE OF COLLECTION:	12/12/2012
TYPE OF SAMPLE:	1-Urine	DATE OF RECEIPT:	14/12/12

Samples Analysed as Received.

Toluene/Xylene Exposure	Result	BOEL	Units	D.L.E
Hippuric Acid in Urine	**749**	1010	mmol/mol creatinine	
Toluric Acid in Urine	**ND**	650	mmol/mol creatinine	

Urinary Creatinine	Result	Units
Creatinine	**0.78**	g/L
Creatinine (SI Units)	**0.0069**	mol/L

590046419
PALMER, JACKSON
05/05/2009

[ND]: Not Detected
D.L.E: Date of Last Exposure
Date of Last Exposure is reported above only when stated on the request form.
BOEL: Biological Occupational Exposure Limit. Almost all workers exposed on a daily basis would not experience adverse health effects if kept under this advisory guideline value. The BOEL does not represent a sharp distinction between hazardous and nonhazardous exposures. **If a worker's result significantly or persistently exceeds the BOEL there is an increased risk of adverse health effects.** High results indicate that workplace procedures should be reviewed with the aim of decreasing worker's exposures. **Where the hazardous substance is a carcinogen exposures should be kept as low as achievable with best working practices.**

See page 2 for additional information about the above test(s).

TestSafe Australia – *Chemical Analysis Branch*
ABN 21/12/122 966 5A Pioneer Avenue Thornleigh NSW 2120 AUSTRALIA
Telephone: 61 2 9473 4000 Facsimile: 61 2 9980 6849 Email: lab@workcover.nsw.gov.au
WorkCover Assistance Service **13 10 50** Website: www.workcover.nsw.gov.au

ilac-MRA NATA
Accreditation No. 3726
This document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025

ADDITIONAL INFORMATION ABOUT THE HIPPURIC ACID IN URINE TEST (Toluene Exposure)

Method Number: WCA.131
Technique: High Performance Liquid Chromatography with Ultra-Violet Detection
Limit of Quantitation: 0.5 mmol/L
Biological Half-Life: 1 - 3 hours
Document Control: LIMS32 5th Edition - LIMS131B Issue 1 4/1/10

590046419
PALMER, JACKSON
05/05/2009

This test measures exposure to toluene as approximately 64% of an absorbed dose of toluene is excreted in the urine as hippuric acid. Persons whose diets are rich in fruit and vegetables may have increased levels of hippuric acid in urine (ACGIH).

ADDITIONAL INFORMALTION ABOUT THE TOLURIC ACID IN URINE TEST (Xylene Exposure)

Method Number: WCA.131
Technique: High Performance Liquid Chromatography with Ultra-Violet Detection
Detection Limit: 0.5 mmol/L
Biological Half-Life: Biphasic: 3-6 Hours, 30 Hours
Documentational Control: LIMS131B Issue 2 8/2/08

Toluric Acid (Methyl Hippuric Acid) is the major urinary metabolite of Xylene.

In order to compensate for fluctuations in excreted urine volume and concentration, urinary analytes are reported as corrected to the creatinine content. Urine specimens having creatinine concentrations less than 3 g/L (0.0265 mol/L) or greater than 0.3 g/L (0.0027 mol/L) are creatinine corrected. Urine specimens with creatinine concentrations outside this range are not creatinine corrected as less confidence can be placed on corrected values for either very concentrated or very dilute urines (ACGIH). To convert a creatinine corrected result to an uncorrected result multiply the corrected result by the creatinine result (using the same units). Creatinine assays are performed using the Jaffe reaction and measurements are done at 500 nm using Spectrophotometry. The detection limit for the creatinine assay (WCA.128) is 0.0005 mol/L.

The above results have been approved by the NATA signatory whose signature appears below.

For all administrative or account enquiries please contact Sue Northover or Jeanine Wells.

Greg O'Donnell
Manager

ilac-MRA NATA
Accreditation No. 3726

This document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025

Test Safe AUSTRALIA
'Safety is no Accident'

CHEMICAL ANALYSIS BRANCH

WorkCover NEW SOUTH WALES

Referral Department
Sullivan Nicolaides Pathology
PO Box 344
INDOOROOPILLY QLD 4068

Lab. Reference: **2012-2978-A**

Your Reference: 590046419

REPORT OF ANALYSIS

EMPLOYEE'S NAME:	PALMER, Jackson	DATE OF BIRTH:	05/05/2009
NAME OF EMPLOYER:	Not Stated	DATE OF COLLECTION:	12/12/2012
TYPE OF SAMPLE:	1-Urine	DATE OF RECEIPT:	17/12/12

Samples Analysed as Received.

Solvents in Urine Screen	Result	BOEL	Units	D.L.E
Ethanol	**ND**		mg/L	
Acetone	**ND**	50	mg/L	
Methylethylketone	**ND**	2	mg/L	
Ethyl Acetate	**ND**		mg/L	
Methylisobutylketone	**ND**	2	mg/L	
Cyclohexanol	**ND**		mg/L	
Methylene Chloride	**ND**		mg/L	
Tetrahydrofuran	**ND**	2	mg/L	
1,1,1 Trichloroethane	**ND**		mg/L	

Urinary Creatinine	Result	Units
Creatinine	**0.78**	g/L
Creatinine (SI Units)	**0.0069**	mol/L

[ND]: Not Detected D.L.E: Date of Last Exposure

Date of Last Exposure is reported above only when stated on the request form.

BOEL: Biological Occupational Exposure Limit. Almost all workers exposed on a daily basis would not experience adverse health effects if kept under this advisory guideline value. The BOEL does not represent a sharp distinction between hazardous and nonhazardous exposures. **If a worker's result significantly or persistently exceeds the BOEL there is an increased risk of adverse health effects.** High results indicate that workplace procedures should be reviewed with the aim of decreasing worker's exposures. **Where the hazardous substance is a carcinogen exposures should be kept as low as achievable with best working practices.**

(Where a BOEL is not stated it has not been set)

See page 2 for additional information about the above test(s).

ilac-MRA NATA
Accreditation No. 3726
This document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025

Lab. Reference: 2012-2978-A

ADDITIONAL INFORMATION ABOUT THE SOLVENTS IN URINE TEST

Method No: WCA.163
Limit of Quantitation: 0.05 mg/L except Acetone & Ethanol which are 2.0 mg/L
Technique: Headspace Gas Chromatography with Flame Ionisation Detection
Biological Half-Life: Hours
Documentation Control: LIMS32 5th Edition - LIMS163 Issue 1 4/1/10

The recommended sample for exposure to solvents is urine. Knowledge of the particular solvent being used is necessary to be able to select the appropriate urine test. Only after the following guidelines are met is it of any use to do blood monitoring and a special request will have to be made to the laboratory for this blood test to be carried out. Particular attention must be given to the timing and method of collection of blood specimens in order for the results to be valid. Blood specimens must be collected during the shift due to the very short half life in blood of most solvents. **Important: completely fill the specimen tube** and keep the sample refrigerated until analysis. In practice these requirements have been found to be difficult to achieve in routine biological monitoring situations. Therefore, solvent in blood determinations are not recommended.

To express the result in terms of cretinine correction divide the result by the g/L creatinine result. Creatinine assays are performed using the Jaffe reaction and measurements are done at 500 nm using Spectrophotometry. The detection limit for the creatinine assay (WCA.128) is 0.0005 mol/L.

The above results have been approved by the NATA signatory whose signature appears below.

For all administrative or account enquiries please contact Sue Northover or Jeanine Wells.

Greg O'Donnell
Manager

19/12/12

TestSafe Australia – *Chemical Analysis Branch*
ABN 77 682 742 966 5A Pioneer Avenue Thornleigh NSW 2120 AUSTRALIA
Telephone: 61 2 9473 4000 Facsimile: 61 2 9980 6849 Email: lab@workcover.nsw.gov.au
WorkCover Assistance Service **13 10 50** Website: www.workcover.nsw.gov.au

gradko environmental
(A division of Gradko International Ltd.)

St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH
tel.: 01962 860331 fax: 01962 841339 e-mail:diffusion@gradko.co.uk

UKAS TESTING
2187

LABORATORY ANALYSIS REPORT

REPORT NUMBER	**F6187R1**
CUSTOMER	**c/Department of Environment and Heritage Protection**
	PO BOX 731
	Toowoomba QLD 4350
GRADKO LAB REFERENCE	**GMSG 1585-1586**
DATE SAMPLES RECEIVED	**29.10.12**
BOOKING IN REF.	**F6187**

IDENTIFICATION AND ESTIMATION (SEMI-QUANTITATIVE ANALYSIS) OF TOP 5 VOC ON TENAX DIFFUSION TUBES BY GC/MS

Analysis has been carried out in accordance with in-house method GLM 13

Tube Number	**GRA 11919**		
Exposure Time(mins)	**28800**		
Sample ID	**Bretherick Happiness Rd**		
Top 5 VOC		**ng on tube**	**ppb in air***
Heptane, 2,2,4,6,6-pentamethyl- +		67.61	1.17
Phenylmaleic anhydride +		32.66	0.57
Naphthalene		20.09	0.35
Hexadecane		11.95	0.21
1-Hexanol, 2-ethyl-		11.56	0.20

Tube Number	**GRA 03371**		
Exposure Time(mins)	**28800**		
Sample ID	**Kate#2**		
Top 5 VOC		**ng on tube**	**ppb in air***
Toluene		379.98	6.60
m/p-Xylene		73.24	1.27
Ethylbenzene		46.67	0.81
Cyclohexane		34.99	0.61
o-Xylene		33.07	0.57

Semi-quantitative results for ng on tube are calculated by reference to toluene and toluene-d8 Internal standard.
+ These compounds are not covered by our flexible scope.

		Date of Analysis	**02.11.12**
Analysts Name	**Mariella Angelova**	**Date of Report**	**06.11.12**

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results

Signed.....
L. Gates, Laboratory Supervisor

gradko environmental
(A division of Gradko International Ltd.)

St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH
tel.: 01962 860331 fax: 01962 841339 e-mail:diffusion@gradko.co.uk

UKAS TESTING
2187

LABORATORY ANALYSIS REPORT

REPORT NUMBER	**F6187R**
CUSTOMER	**c/Department of Environment and Heritage Protection**
	PO BOX 731
	Toowoomba QLD 4350
GRADKO LAB REFERENCE	**GMSG 1583-1584**
DATE SAMPLES RECEIVED	**29.10.12**
BOOKING IN REF.	**F6187**

IDENTIFICATION AND ESTIMATION (SEMI-QUANTITATIVE ANALYSIS) OF FULL SCAN VOC ON TENAX DIFFUSION TUBES BY GC/MS

Analysis has been carried out in accordance with in-house method GLM 13

Tube Number	**GRA 02024**
Exposure Time(mins)	**28800**
Sample ID	**Orv Residence**

Compounds	**ng on tube**	**ppb in air***
Toluene	401.43	6.97
m/p-Xylene	56.04	0.97
Benzene	35.39	0.61
Phenylmaleic anhydride +	29.47	0.51
Hexane	29.04	0.50
o-Xylene	21.05	0.37
Heptadecane	21.01	0.36
Tetrachloroethylene	20.89	0.36
Butane, 2-methyl- +	19.95	0.35
Pentane	19.86	0.34
Hexane, 3-methyl- +	17.90	0.31
Heptane	17.16	0.30
Pentane, 3-methyl- +	16.41	0.28
Phenol	16.12	0.28
Ethylbenzene	14.10	0.24
Heptane, 2,2,4,6,6-pentamethyl- +	12.02	0.21
1,2,4-Trimethylbenzene	11.49	0.20
Ethyl Acetate	11.38	0.20
Methylcyclohexane	10.87	0.19

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results

Signed.....
L. Gates, Laboratory Supervisor

gradko environmental
(A division of Gradko International Ltd.)
St. Martins House, 77 Wales Street Winchester, Hampshire SO23 0RH
tel.: 01962 860331 fax: 01962 841339 e-mail:diffusion@gradko.co.uk

UKAS TESTING
2187

LABORATORY ANALYSIS REPORT

Tube Number	**GRA 011818**
Exposure Time(mins)	**28800**
Sample ID	**Chuichlla Control**

Compounds	ng on tube	ppb in air*
Ethylbenzene	33.90	0.59
Toluene	29.78	0.52
m/p-Xylene	27.46	0.48
Phenylmaleic anhydride +	22.85	0.40
o-Xylene	15.88	0.28
Tetradecane	13.30	0.23

Semi-quantitative results for ng on tube are calculated by reference to toluene and toluene-d8 Internal standard.
+ These compounds are not covered by our flexible scope.

		Date of Analysis	**02.11.12**
Analysts Name	**Mariella Angelova**	**Date of Report**	**06.11.12**

REPORT OFFICIALLY CHECKED

Gradko International Ltd
This signature confirms the authenticity of these results

Signed.....
L. Gates, Laboratory Supervisor