Permit Number: EPR/BL3986ID

Operator: Lafarge Tarmac Cement & Lime Ltd

Installation: Aberthaw Works

Form number: Air 1 / 31 August 2010

Reporting of Emissions to Air from Emission Point A1 for the six-month period from Jan to Jun 2015

Substance/ Parameter	Emission Limit Value	Result[1]		Test Method[2]	Sample Date and Times[3]			Accreditation/ Certification[4]	Uncertainty[5] ±mg/m3
Hydrogen fluoride	1 mg/m3 over minimum 1 hour period	0.039	mg/m3	BS ISO 15713	07/05/2015	13:00	14:00	UKAS & MCERTS	0.003
Cadmium & thallium and their compounds (total)	0.05mg/m3 over minimum 30 minute, maximum 8 hour period	0.0011	mg/m3	BS EN 14385	06/05/2015	12:05	13:17		0.001
Mercury and its compounds	0.05mg/m3 over minimum 30 minute, maximum 8 hour period	0.014	mg/m3	BS EN 13211	06/05/2015	12:05	13:17		0.002
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.5mg/m3 over minimum 30 minute, maximum 8 hour period	0.015	mg/m3	BS EN 14385	06/05/2015	12:05	13:17		0.0024
Dioxins/furans (I-TEQ)[6]	0.1ng/m3 over minimum 6 hour, maximum 8 hour period	0.0014	ng/m3	BS EN 1948	07/05/2015	08:23	14:31		0.0003
Dioxins/furans (WHO-TEQ Humans/Mammals)[6]	No limit applies	0.0015	ng/m3						0.0003
Dioxins/furans (WHO-TEQ Fish)[6]		0.0015	ng/m3						0.0004
Dioxins/furans (WHO-TEQ Brids)[6]		0.0038	ng/m3						0.0009
Dioxin-like PCBs (WHO-TEQ Humans/Mammals)[6]	No limit applies	0.00227	ng/m3	BS EN 1948					0.000524
Dioxin-like PCBs (WHO-TEQ Fish)[6]		0.000104	ng/m3						0.000024
Dioxin-like PCBs (WHO-TEQ Birds)[6]		0.005395	ng/m3						0.001245

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Substance/ Parameter	Emission Limit Value	Result[1]		Test Method[2]	Sample Date and Times[3]			Accreditation/ Certification[4]	Uncertainty[5] ±mg/m3
Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies	273.10	ug/m3	BS ISO 11338	06/05/2015	09:15	11:30	UKAS & MCERTS	62.1
Anthanthrene		0.05	ug/m3						0.0100
Benzo(a)anthracene		0.090	ug/m3						0.0210
Benzo(b)fluoranthene		0.045	ug/m3						0.0100
Benzo(k)fluoranthene		0.045	ug/m3						0.0100
Benzo(b)naph(2,1-d)thiophene		0.045	ug/m3						0.0100
Benzo(c)phenanthrene		0.045	ug/m3						0.0100
Benzo(ghi)perylene		0.045	ug/m3						0.0100
Benzo(a)pyrene		0.045	ug/m3						0.0100
Cholanthrene		0.045	ug/m3						0.0100
Chrysene		0.045	ug/m3						0.0100
Cyclopenta(c,d)pyrene		0.045	ug/m3						0.0100
Dibenzo(ah)anthracene		0.045	ug/m3						0.0100
Dibenzo(ai)pyrene		0.045	ug/m3						0.0100
Fluoranthrene		1.400	ug/m3						0.3100
Indeo(123-cd)pyrene		0.045	ug/m3						0.0100
Naphthalene		271.0	ug/m3						61.7

[1] The result given is the maximum value (or minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the "minimum - maximum" measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated , e.g. gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[6] The result to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limt as a maximum

Signed: Kara Bennett
(authorised to sign as representative of Lafarge Tarmac Cement and Lime Ltd)

Date: 22/01/2016

Permit Number: EPR/BL3986ID

Operator: Tarmac Cement & Lime Ltd

Installation: Aberthaw Works

Form number: Air 1 / 31 August 2010

Reporting of Emissions to Air from Emission Point A1 for the six-month period from Jul to Dec 2015

Substance/ Parameter	Emission Limit Value	Result[1]		Test Method[2]	Sample Date and Times[3]	Accreditation/ Certification[4]	Uncertainty[5] ±mg/m3
Hydrogen fluoride	1 mg/m3 over minimum 1 hour period	0.039	mg/m3	BS ISO 15713	11/11/2015 13:32 14:32	UKAS & MCERTS	0.003
Cadmium & thallium and their compounds (total)	0.05mg/m3 over minimum 30 minute, maximum 8 hour period	0.0019	mg/m3	BS EN 14385	10/11/2015 13:15 14:19		0.0003
Mercury and its compounds	0.05mg/m3 over minimum 30 minute, maximum 8 hour period	0.001	mg/m3	BS EN 13211	10/11/2015 13:15 14:19		0.0001
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.5mg/m3 over minimum 30 minute, maximum 8 hour period	0.016	mg/m3	BS EN 14385	10/11/2015 13:15 14:19		0.003
Dioxins/furans (I-TEQ)[6]	0.1ng/m3 over minimum 6 hour, maximum 8 hour period	0.002	ng/m3	BS EN 1948	11/11/2015 08:21 14:27		0.0004
Dioxins/furans (WHO-TEQ Humans/Mammals)[6]	No limit applies	0.002	ng/m3				0.0004
Dioxins/furans (WHO-TEQ Fish)[6]		0.0019	ng/m3				0.0004
Dioxins/furans (WHO-TEQ Birds)[6]		0.0066	ng/m3				0.0014
Dioxin-like PCBs (WHO-TEQ Humans/Mammals)[6]	No limit applies	0.00037	ng/m3	BS EN 1948			0.00008
Dioxin-like PCBs (WHO-TEQ Fish)[6]		0.000022	ng/m3				0.000005
Dioxin-like PCBs (WHO-TEQ Birds)[6]		0.0026	ng/m3				0.0005

Substance/ Parameter	Emission Limit Value	Result[1]		Test Method[2]	Sample Date and Times[3]	Accreditation/ Certification[4]	Uncertainty[5] ±mg/m3
Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies	168.00	ug/m3	BS ISO 11338	10/11/2015 10:00 12:04	UKAS & MCERTS	35.20
Anthanthrene		0.05	ug/m3				0.0110
Benzo(a)anthracene		0.05	ug/m3				0.0110
Benzo(b)fluoranthene		0.05	ug/m3				0.0110
Benzo(k)fluoranthene		0.05	ug/m3				0.0110
Benzo(b)naph(2,1-d)thiophene		0.05	ug/m3				0.0110
Benzo(c)phenanthrene		0.05	ug/m3				0.0110
Benzo(ghi)perylene		0.05	ug/m3				0.0110
Benzo(a)pyrene		0.05	ug/m3				0.0110
Cholanthrene		0.05	ug/m3				0.0110
Chrysene		0.05	ug/m3				0.0110
Cyclopenta(c,d)pyrene		0.05	ug/m3				0.0110
Dibenzo(ah)anthracene		0.05	ug/m3				0.0110
Dibenzo(ai)pyrene		0.05	ug/m3				0.0110
Fluoranthrene		0.22	ug/m3				0.05
Indeo(123-cd)pyrene		0.05	ug/m3				0.0110
Naphthalene		167.00	ug/m3				35.00

[1] The result given is the maximum value (or minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the "minimum - maximum" measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated , e.g. gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[6] The result to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum

Signed: Kara Bennett

(authorised to sign as representative of Lafarge Tarmac Cememt and Lime Ltd)

Date: 22/01/2016

Permit Number: EPR/BL3986ID **Operator: Tarmac Cement & Lime Ltd**

Installation: Aberthaw Works **Form number: Air 9 / 31 August 2010**

Annual reporting of non-kiln Particulate Matter Emissions to Air for 2015

Release point	Emission Limit Value mg/m3	Results mg/m3 Continuous Monitor	Results mg/m3 Extractive Test	Test Method	Sample Date and Times	Accreditation/ Certification	Uncertainty Method Continuous Monitor	Uncertainty Method Extractive Test
A2	30	5.74	4.08	BS EN 13284-1	12/05/2015 13:56 - 17:08	UKAS & MCERTS	30%	0.67
		4.69	4.34		23/11/2015 14:09 - 16:15		30%	0.46
A3	30	10.97	14.97	BS EN 13284-1	12/05/2015 09:17 - 13:40	UKAS & MCERTS	30%	0.73
		17.18	23.13		23/11/2015 10:39 - 13:51		30%	1.08

Operator's comments:

Signed: K. Bennett Date: 22/01/2016

(authorised to sign as representative of Lafarge Tarmac Cement & Lime Ltd)

25 JAN 2016