Warwick Chemicals

TO: Mr I. Oakes / Miss J. Bradley

FROM: Mrs K. Cunning

DATE: 1st October 2013

Total no. of sheets: 24

Please find attached the emission results for the third quarter 2013:

RCF49 (Reporting Quarterly Emissions for Acetic Acid from A2-A23)
RCF66 (Fly Ash composition 3rd quarter 2013),
RCF50 (Annual Boiler Emissions from A17-A19 and A21)
RCF52 (Six Monthly Reporting of Emissions from A14)
x 3 (CEM's Emissions of Particulate from A14)
x 3 (CEM's Emissions of TOC from A14)
x 3 (CEM's Emissions of Carbon Monoxide from A14)
x 3 (CEM's Emissions of Oxides of Nitrogen from A14)
x 6 (Summary of Data for July, August and September 2013)
in accordance with the requirements of our PPC Permit BU2357

Thank you

Regards

K Cunning

Karen Cunning
HSE Systems Specialist

eareturn/3qu13letter (1/10/13)

TITLE :	Annual Reporting of Emissions to Air			**ISSUE NO.**	4.0
REF :	RCF50	**AREA:**	Site	**DATE OF ISSUE:**	16.06.11
RELATED DOCUMENT:		Last printed 09/09/2013 15:09:00		**PAGE:**	1 of 2
FILENAME:	502013				

Permit Reference Number	BU2357 / AP363455
Installation :	Mostyn, Flintshire

Operator:	Warwick Chemicals
Form Number :	A2 / (Combustion process)

Reporting of Emissions to Air for the period:	**From**	January 2013	**To:**	December 2013

Emission Point	Substance/Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
A16	Oxides of Nitrogen	NO LONGER	IN USE	-	-	-	-
A17	Oxides of Nitrogen	170mg/m^3 [6]	151	BS EN 14792:2005	10/7/13 09:35-10:35	MCERTS	5.90
A18	Oxides of Nitrogen	170mg/m^3 [6]	164	"	24/4/13 09:30-10:30	"	5.95
A19	Oxides of Nitrogen	170mg/m^3 [6]	135	"	24/4/13 10:50-11:50	"	5.36
A21	Oxides of Nitrogen	170mg/m^3 [6]	149,151,157	"	(24/4/13)12:55-13:55 (24/4/13)14:02-15:02 (24/4/13)15:06-16:06	"	6.11,6.07,6.07
A16	Carbon Monoxide	NO LONGER	IN USE	-	-	-	-
A17	Carbon Monoxide	70mg/m^3 [6]	2.3	BS EN 15058:2006	10/7/13 09:35-10:35	"	4.32
A18	Carbon Monoxide	70mg/m^3 [6]	17.6	"	24/4/13 09:30-10:30	"	4.32
A19	Carbon Monoxide	70mg/m^3 [6]	85	"	24/4/13 10:50-11:50	"	4.35
A21	Carbon Monoxide	70mg/m^3 [6]	4.6,4.9,5.8	"	(24/4/13)12:55-13:55 (24/4/13)14:02-15:02 (24/4/13)15:06-16:06	"	4.32,4.32,4.32

[1] The result given is the maximum value (or the 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 emission limit values for oxides of nitrogen and carbon monoxide are expressed as a maximum individual hourly average value and corrected to 273K, 101.3kPa, 3% oxygen, dry.

Signed:	K Cunney
	(Authorised to sign as representative of Warwick Chemicals)

Date:	29th August 2013

TITLE :	Reporting of Emissions to Air			**ISSUE NO.**	4.0
REF :	RCF49	**AREA:**	Responsible Care	**DATE OF ISSUE:**	16.06.11
RELATED DOCUMENT:	AS4362-S2/A/2	Last printed 11/07/2013 11:34:00		**PAGE:**	1 of 2
FILENAME:	493qu13				

Permit Reference Number	BU2357/AP3338MA
Installation :	Mostyn, Flintshire

Operator:	Warwick Chemicals
Form Number :	AI (TAED & Sodium Acetate Processes)

Annual Reporting of Emissions to Air for the period:	**From**	1st July	**To:**	30th September 2013

Emission Point	Substance/Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
A2	Acetic acid	50mg/m^3 [6]	25.0	SOP5100 CD/FID/GC	10/7/13 09:00-16:15	Validation Report No. MV1ES586	+/- 10%
A3	Acetic acid	50mg/m^3 [6]	46.8	"	10/7/13 09:09-16:07	"	"
A5	Acetic acid	50mg/m^3 [6]	22.4	"	9/7/13 10:01-16:12	"	"
A6	Acetic acid	50mg/m^3 [6]	13.4	"	9/7/13 10:15-16:23	"	"
A7	Acetic acid	50mg/m^3 [6]	0.33	"	9/7/13 10:08-16:18	"	"
A20	Acetic acid	50mg/m^3 [6]	0.28	"	10/7/13 08:52-16:22	"	"
A22	Acetic acid	50mg/m^3 [6]	1.64	"	10/7/13 08:52-16:22	"	"
A23	Acetic acid	50mg/m^3 [6]	0.52	"	10/7/13 08:52-16:22	"	"
A24	Acetic acid	50mg/m^3 [6]	#	#	#	#	#

Emission point no longer monitored – plant decommissioned

[1] The result given is the maximum value (or the 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 emission limit value for acetic acid is expressed as total acetic acid and acetic anhydride (as acetic acid) as a maximum individual value, and corrected to 273K, 101.3kPa

Signed:	K Cunning (Authorised to sign as representative of Warwick Chemicals)	**Date:**	11th July 2013

TITLE :	Reporting of Emissions to Air			**ISSUE NO.**	3.0
REF :	RCF66	**AREA:**	Responsible Care	**DATE OF ISSUE:**	16.06.11
RELATED DOCUMENT:	AS4362 – S2/A/2	Last printed 27/08/2013 13:33:00		**PAGE:**	1 of 1
FILENAME:	663qu13				

Permit Reference Number	BU2357/AP3634SJ	**Operator**	Warwick Chemicals
Installation	Mostyn, Flintshire	**Form Number**	Ash1 / Ash Disposal Change

Reporting of Fly Ash Composition for the period	from	1st July	to	30th September 2013

Ash Composition (Metals, Dioxins, etc.)

	Cd %	Tl %	Hg %	Pb %	Cr %	Cu %	Mn %	Ni %	As %	Co %	V %	Zn %	DIOXIN I-TEQ ng/kg	DIOXIN WHO-TEQ ng/kg		
														Humans/ mammals	Birds	Fish
Fly Ash	1.0	10.0	1.0	6.0	290	45	47	210	1.0	10.0	10.0	170	108.66	120.215	233.585	117.085

Signed	K Cunning	**Date**	27th August 2013
(Authorised to sign as representative of Warwick Chemicals)			

Permit Reference Number : BU2357/AP3634SJ	Operator : Warwick International Limited
Installation : Mostyn, Flintshire	Form Number : A3 / (Incinerator Periodic Monitoring)

Six Monthly Reporting of Emissions to Air for the period:	From	1st July	To	31st December 2013

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
A14	Hydrogen chloride	10 mg/m^3 over minimum 1 hour period	1.01mg/m^3	BS EN 1911	8/7/13 13:50-15:56	UKAS/MCERTS	0.13
A14	Hydrogen fluoride	1 mg/m^3 over minimum 1 hour period	0.09mg/m^3	BS ISO 15713	1/7/13 14:18-15:18	UKAS/MCERTS	0.01
A14	Sulphur dioxide	50 mg/m^3 (average of ½-hour averages) over minimum 4 hour period	0.29mg/m^3	BS EN 14791	9/7/13 09:32-11:39	UKAS/MCERTS	0.04
A14	Cadmium & thallium and their compounds (total)	0.05 mg/m^3 over minimum 30 minute, maximum 8 hour period	<0.001mg/m^3	BS EN 14385	5/7/13 08:55-11:02	UKAS/MCERTS	-
A14	Mercury and its compounds	0.05 mg/m^3 over minimum 30 minute, maximum 8 hour period	<0.0005mg/m^3	BS EN 13211	5/7/13 08:55-11:02	UKAS/MCERTS	-
A14	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.5 mg/m^3 over minimum 30 minute, maximum 8 hour period	0.004mg/m^3	BS EN 14385	5/7/13 08:55-11:02	UKAS/MCERTS	0.002
A14	Dioxins / furans (I-TEQ)[6]	0.1 ng/m^3 over minimum 6 hour, maximum 8 hour period	0.003ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.001
A14	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)[6]	No limit applies	0.005ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.002
A14	Dioxin-like PCBs (WHO-TEQ Fish)[6]	No limit applies	0.0002ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.0001
A14	Dioxin-like PCBs (WHO-TEQ Birds)[6]	No limit applies	0.007ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.002
A14	Dioxins / furans (WHO-TEQ Humans / Mammals)[6]	No limit applies	0.003ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.001
A14	Dioxins / furans (WHO-TEQ Fish)[6]	No limit applies	0.003ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.001
A14	Dioxins / furans (WHO-TEQ Birds)[6]	No limit applies	0.011ng/m^3	BS EN 1948	2/7/13 09:55-16:06	UKAS/MCERTS	0.003

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
A14	Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies	0.656ug/m^3	ISO 113381	4/7/13 10:12-16:20	UKAS/MCERTS	0.586
A14	Anthanthrene	No limit applies (all results ug/m^3)	0.024	"	"	"	0.022
A14	Benzo[a]anthracene	No limit applies	0.024	"	"	"	0.021
A14	Benzo[b]fluoranthene	No limit applies	0.024	"	"	"	0.021
A14	Benzo[k]fluoranthene	No limit applies	0.024	"	"	"	0.022
A14	Benzo[b]naph(2,1-d]thiophene	No limit applies	0.024	"	"	"	0.022
A14	Benzo[c]phenanthrene	No limit applies	0.024	"	"	"	0.022
A14	Benzo[ghi]perylene	No limit applies	0.024	"	"	"	0.021
A14	Benzo[a]pyrene	No limit applies	0.024	"	"	"	0.021
A14	Cholanthrene	No limit applies	0.024	"	"	"	0.022
A14	Chrysene	No limit applies	0.024	"	"	"	0.021
A14	Cyclopenta[c,d]pyrene	No limit applies	0.024	"	"	"	0.022
A14	Dibenzo[ah]anthracene	No limit applies	0.024	"	"	"	0.021
A14	Dibenzo[a,i]pyrene	No limit applies	0.024	"	"	"	0.022
A14	Fluoranthene	No limit applies	0.024	"	"	"	0.021
A14	Indo[1,2,3-cd]pyrene	No limit applies	0.024	"	"	"	0.021
A14	Naphthalene	No limit applies	0.292	"	"	"	0.264

[1] The result given is the maximum value (or the 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	K Cunning (authorised to sign as representative of Warwick International Limited)	Date	29th August 2013.

Incinerator Summary Report - July 2013

Day			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Running time	Residue	h	24	24	24	20.5	22.5	21	20.5	24	24	21.5	24	22.5	13.5	11.5	14.5	22	18	19
	Gas	h	0	0	0	5	1.5	3	5	0	0	3	0	1.5	13	16	14.5	3	6.5	6.5
	Residue & gas	h	0	0	0	1.5	0.5	0	1.5	0	0	0.5	0	0	2.5	3.5	5	1	0.5	1.5
	Idle	h	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0
Total flow	Residue	kg	10894.8	10800	10799.8	8780.5	10062.2	9332.2	8738.2	10800	10800	9401.3	10799.7	10127.2	5422.7	3753.3	5308.2	12420.3	9801.3	9743.2
	Gas	m3	0	0	0	727.2	222.7	529.3	737.3	0	0	465.5	0	236.7	1901.8	2434.7	2095.8	439.3	950	968.2
	Air	m3	142572	140587	144827	143172	139850	140295	143023	147449	149426	145846	141968	145217	134561	129065	136679	173891	162930	160654
NOx (normalised)	Min	mg/m3	309.7	257.3	212.3	67.3	204	111.7	52.7	198.3	241.3	90.3	193	127.7	114	112.3	65	49	67.7	74.3
	Ave	mg/m3	361.1	336.9	257	237	290.8	218.8	244.7	271.8	320.4	272.6	293	237.9	305.6	416.2	322	130.5	209.2	217
	Max	mg/m3	392	391.3	292.3	736	698.7	886.3	546	332	369.7	492.3	437.3	715.3	590	737.7	723.7	563.3	744.7	687.3
	Exceeds daily ELV ?	[400 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	
CO (normalised)	Min	mg/m3	-5.4	-5.5	-5.5	-5.4	-5.5	-5.5	-5.5	-5.5	-5.1	-4.4	-4.2	-4.4	-4.5	-4.4	-4.3	-4.5	-4.5	-4.4
	Ave	mg/m3	-4.6	-4.9	-5.1	-4.3	-4.7	-4.9	-4.6	-4.7	-4.1	-3.8	-4	-3.9	-3.3	-2	-2.5	-3.8	-3.9	-3.4
	Max	mg/m3	0	0	0	0.8	0	1.2	1	0	0	2	0	0	0.6	1.1	2.3	0.6	1.1	1.1
	30m ELV exceedances	[100 mg/m3]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[50 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Particulates (normalised)	Min	mg/m3	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.7	0.7	0.3	0.7	0.7	0.8	0.6	0.2	0.3	0.3	0.4
	Ave	mg/m3	0.6	0.8	0.5	0.7	0.6	0.6	0.7	0.8	0.8	0.9	0.7	0.8	1.1	0.8	0.8	0.5	0.5	0.6
	Max	mg/m3	1	1.2	0.7	0.9	0.8	0.8	0.8	1	0.9	1.1	0.9	1.1	1.2	1.1	1.2	0.7	0.7	0.8
	30m ELV exceedances	[30 mg/m3]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
VOC (normalised)	Min	mg/m3	0.5	0.5	0.5	0	0	1	0.7	1	1	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
	Ave	mg/m3	0.5	0.5	0.5	0.3	0.2	1	1	1	1	1	0.7	0.5	0.7	0.9	0.8	0.5	0.6	0.6
	Max	mg/m3	0.5	0.5	0.5	0.7	1	1.4	1.3	1.4	1	1.1	1	1	1.1	1.4	1.4	0.8	1.1	0.9
	30m ELV exceedances	[20 mg/m3]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

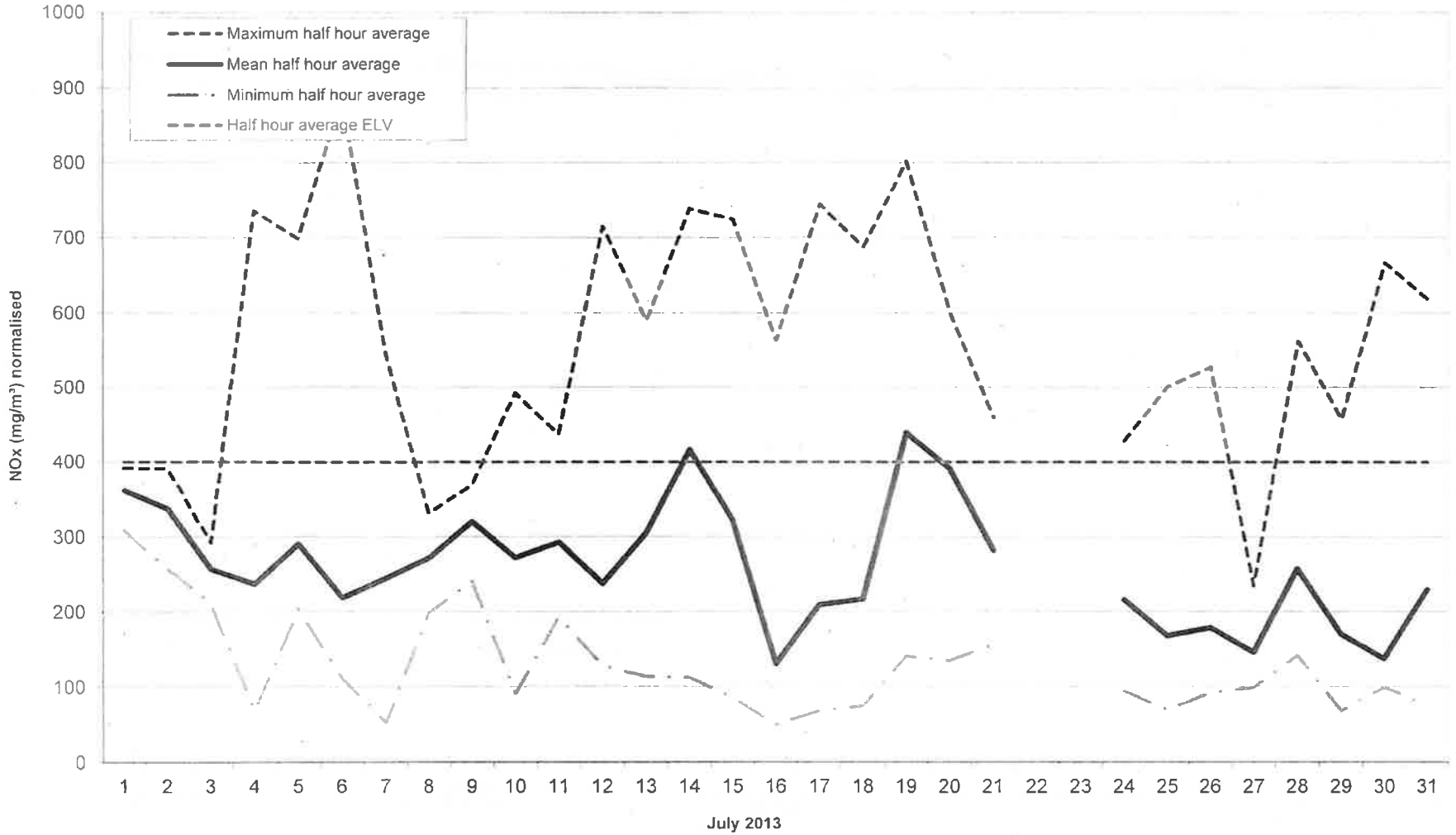
NOTES
Invalid data points are not reported because the incinerator is not operated at any time whilst CEM equipment is being maintained or calibrated

Incinerator Summary Report - July 2013

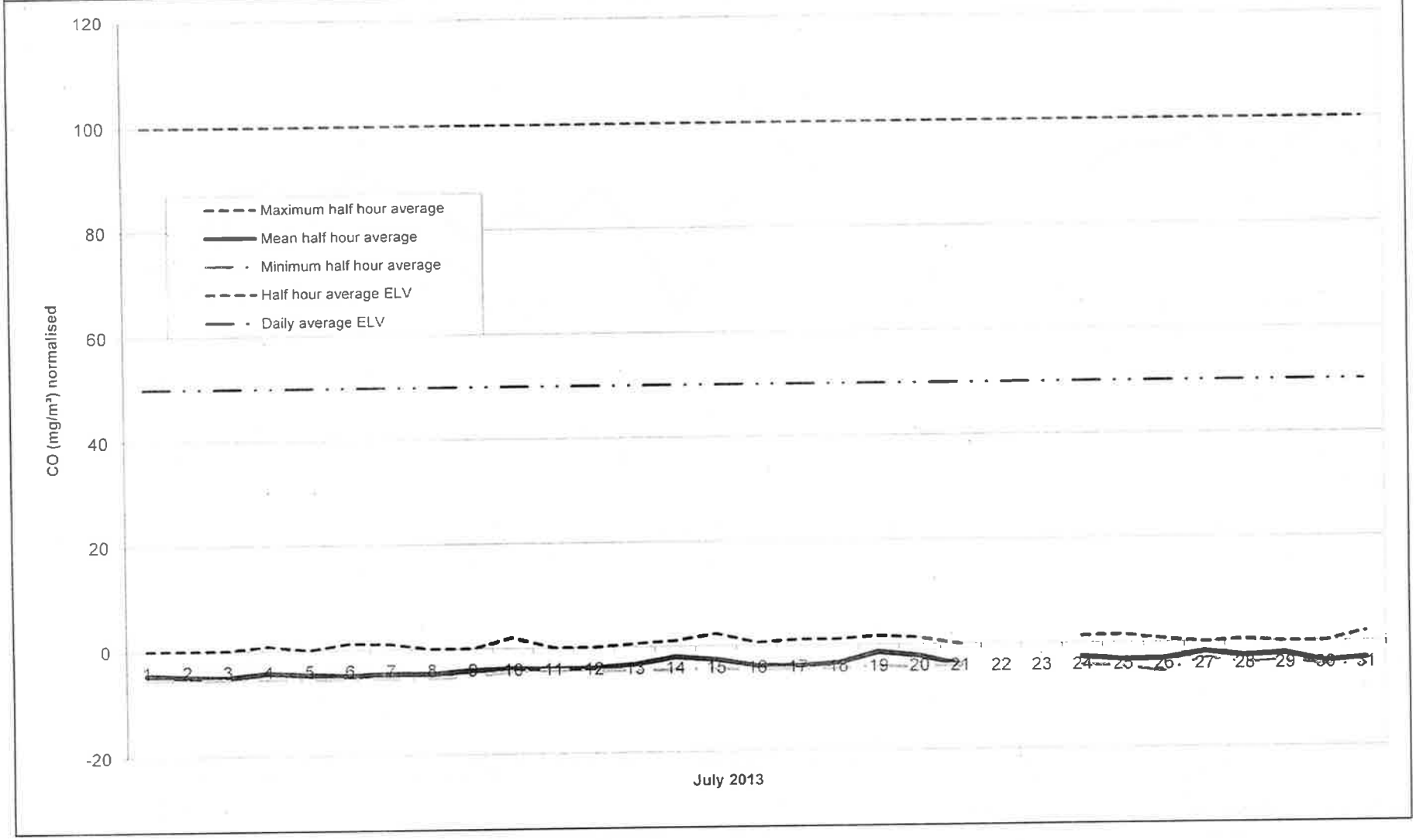
Day			19	20	21	22	23	24	25	26	27	28	29	30	31	TOTALS
Running time	Residue	h	8.5	8	23.5	0	0	5	16	21	24	22.5	21.5	23	18	562
	Gas	h	20	20	0.5	2	7	20	9.5	3.5	0	2	3.5	1	8.5	176
	Residue & gas	h	4.5	4	0	0	0	1	2.5	0.5	0	0.5	1	0	2.5	34.5
	Idle	h	0	0	0	22	17	0	1	0	0	0	0	0	0	40.5
Total flow	Residue	kg	2524.5	3107.2	13534.2	0	0	2382.3	8278.5	13151	16800	15452.3	14618.2	14443	9163.7	281.2 tonnes
	Gas	m3	3004.5	3023.7	39.5	288.2	944.2	2811.7	1418.3	523.3	0	249.2	474.2	187.2	1122.8	25795 m3
	Air	m3	129918	129249	169968	130525	216816	119422	160762	191783	230313	218234	211824	201677	160944	4893456 m3
NOx (normalised)	Min	mg/m3	140.7	134.7	156.3			94	69	92	98.7	141.7	68	98.7	75.3	
	Ave	mg/m3	439.2	391.7	282.6			216	167.6	178.5	145.5	257.4	170.1	137.4	229.4	
	Max	mg/m3	801.7	599.7	459.7			428.7	501	527.3	234.7	562	457	666	618	
	Exceeds daily ELV ?	[400 mg/m3]	Y	N	N			N	N	N	N	N	N	N	N	2 exceedances
CO (normalised)	Min	mg/m3	-4.1	-4.4	-4			-4.1	-4.5	-5.5	-3	-4	-3.5	-4.5	-4.5	
	Ave	mg/m3	-1.4	-2.2	-4			-2.6	-3.2	-3.1	1.8	-2.6	-2.2	-3.8	-3.2	
	Max	mg/m3	1.6	1.2	0			1.3	1.5	0.7	0	0.5	0	0	1.8	
	30m ELV exceedances	[100 mg/m3]	0	0	0			0	0	0	0	0	0	0	0	0 exceedances
	Exceeds daily ELV ?	[50 mg/m3]	N	N	N			N	N	N	N	N	N	N	N	0 exceedances
Particulates (normalised)	Min	mg/m3	0.5	0.4	0.4			0.6	0.3	0.4	0.7	0.6	0.7	0.5	0.4	
	Ave	mg/m3	0.8	0.6	0.5			0.7	0.6	0.7	0.8	0.7	0.7	0.7	0.7	
	Max	mg/m3	1	0.8	0.6			0.8	0.8	0.9	0.8	0.9	0.9	0.8	0.9	
	30m ELV exceedances	[30 mg/m3]	0	0	0			0	0	0	0	0	0	0	0	0 exceedances
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N			N	N	N	N	N	N	N	N	0 exceedances
VOC (normalised)	Min	mg/m3	0.5	0.4	0.4			1.5	0	0	0	0	0	0	0	
	Ave	mg/m3	1	0.8	0.5			1.7	0.8	0.3	0.3	0.2	0.3	0.1	0.2	
	Max	mg/m3	1.3	1.3	0.5			2.3	1.6	0.9	0.5	0.5	0.5	0.7	1	
	30m ELV exceedances	[20 mg/m3]	0	0	0			0	0	0	0	0	0	0	0	0 exceedances
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N			N	N	N	N	N	N	N	N	0 exceedances

NOTES
Invalid data points are not reported because the incinerator is not operated at any time whilst CEM equipment is being maintained or calibrated

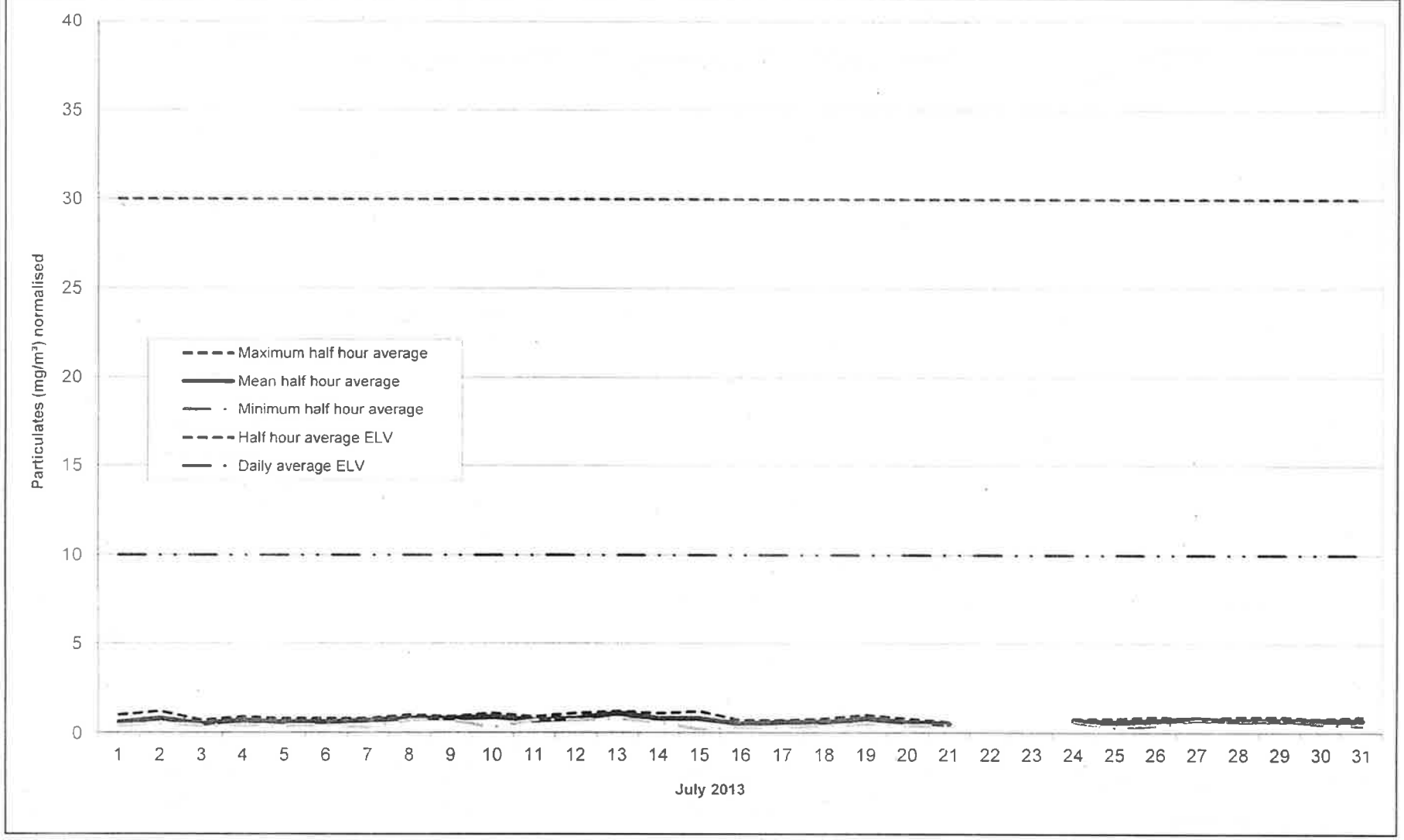
	Title:	Reporting Incinerator **CEM Oxides of Nitrogen**	Area:	Manufacturing	Issue No.:	1
	Ref:		Last printed:	12/08/2013	Date of Issue:	21/12/2006
	Related Document:	BU2357/AP3634 **A7**	Created on:	21-12-2006	Page:	1 of 1



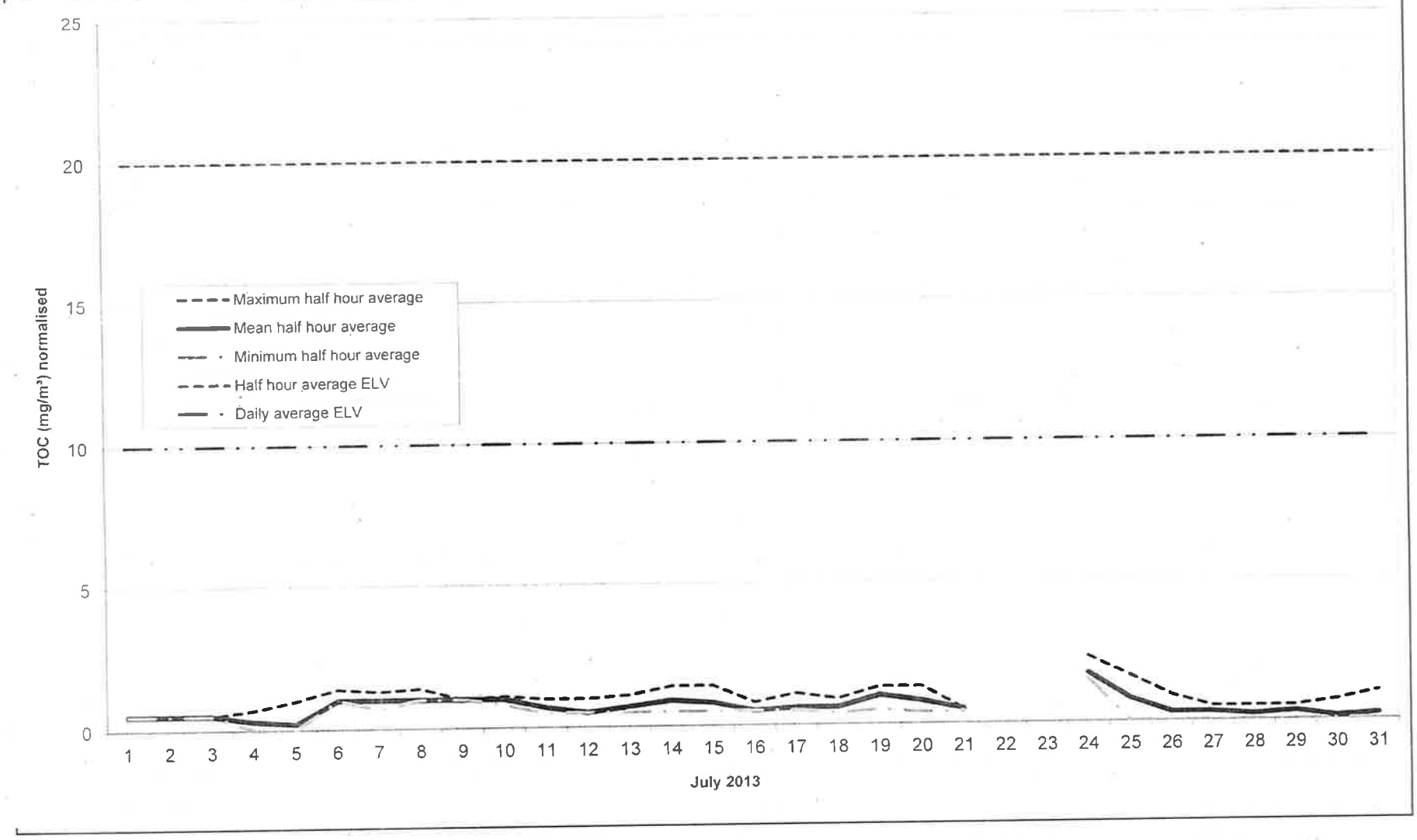
Title:	Reporting Incinerator **CEM Carbon Monoxide**	Area:	Manufacturing	Issue No.:	1
Ref:		Last printed:	12/08/2013	Date of Issue:	21/12/2006
Related Document:	BU2357/AP3634 **A6**	Created on:	21-12-2006	Page:	1 of 1



Title:	Reporting Incinerator **CEM Particulates**	**Area:**	Manufacturing	**Issue No.:**	1
Ref:		**Last printed:**	12/08/2013	**Date of Issue:**	21/12/2006
Related Document:	BU2357/AP3634 A4	**Created on:**	21-12-2006	**Page:**	1 of 1



	Title:	Reporting Incinerator CEM TOC	Area:	Manufacturing	Issue No.:	1
	Ref:		Last printed:	12/08/2013	Date of Issue:	21/12/2006
	Related Document:	BU2357/AP3634 A5	Created on:	21-12-2006	Page:	1 of 1



	Title: Reporting Incinerator **CEM**	**Area:** Manufacturing	**Issue No.:** 1
	Ref:	**Last printed:** 03/09/2013	**Date of Issue:** 21/12/2006
	Related Document: BU2357/AP3634	**Created on:** 21-12-2006	**Page:** 1 of 2

Incinerator Summary Report - August 2013

Day				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Running time	Residue	h		15	23	24	22	21	24	24	24	24	21.5	24	24	24	24	24	24	24	24
	Gas	h		10	1.5	0	5	3.5	0	0	0	0	3.5	0	0	0	0	0	0	0	0
	Residue & gas	h		2.5	0.5	0	3	1	0	0	0	0	1.5	0	0	0	0	0	0	0	0
	Idle	h		1.5	0	0	0	0.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0
Total flow	Residue	kg		8083.2	14765.5	14508.2	11679.5	11007.2	9027.8	8991.8	8458.3	8399.7	7246.2	8795	8999.8	9000	9000	8999.7	9000	9000.2	9000.2
	Gas	m3		1419.2	209.7	0	521.8	448	0	0	0	0	426.2	0	0	0	0	0	0	0	0
	Air	m3		168918	209778	195771	162176	152316	104496	105343	102325	102271	105668	108967	109350	110324	115513	117675	113381	115671	117417
NOx (normalised)	Min	mg/m3		35.3	163.3	176.3	79	167.3	289	203	255	229.3	142.7	198	198.7	182.3	145.7	131.7	92	138.7	184
	Ave	mg/m3		349.4	225.4	280.8	285.9	263	346	262.7	319.4	309.6	300	270.5	236.9	230.8	196.2	153.7	136.3	189.1	240.4
	Max	mg/m3		934.7	561.3	421	615	488.7	383.7	295.3	369.3	376.7	676.3	355.3	258	252	249.3	184.3	156	222.3	287.7
	Exceeds daily ELV ?	[400 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
CO (normalised)	Min	mg/m3		-4	-4.3	-4.5	-4.5	-4.1	-4	-4	-4.1	-4	-4.1	-4	-4	-4	-4	-4	-4	-4	-4
	Ave	mg/m3		-2.7	-3.5	-4.2	-3.8	-3.8	-4	-4	-4	-4	-3.7	-4	-4	-4	-4	-4	-4	-4	-4
	Max	mg/m3		1	0	0	1.1	1	0	0	0	0	0.9	0	0	0	0	0	0	0	0
	30m ELV exceedances	[100 mg/m3]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[50 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Particulates (normalised)	Min	mg/m3		0.5	0.8	0.7	0.5	0.6	0.5	0.6	0.6	0.6	0.4	0.5	0.4	0.4	0.4	0.7	0.7	0.7	0.5
	Ave	mg/m3		0.8	0.9	0.8	0.8	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.6
	Max	mg/m3		1	0.9	0.8	0.9	0.9	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7
	30m ELV exceedances	[30 mg/m3]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOC (normalised)	Min	mg/m3		0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0	0	0	0	0	0	0.1
	Ave	mg/m3		0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.1	0.2	0.5
	Max	mg/m3		1.1	0.8	0.5	0.9	0.9	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	30m ELV exceedances	[20 mg/m3]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

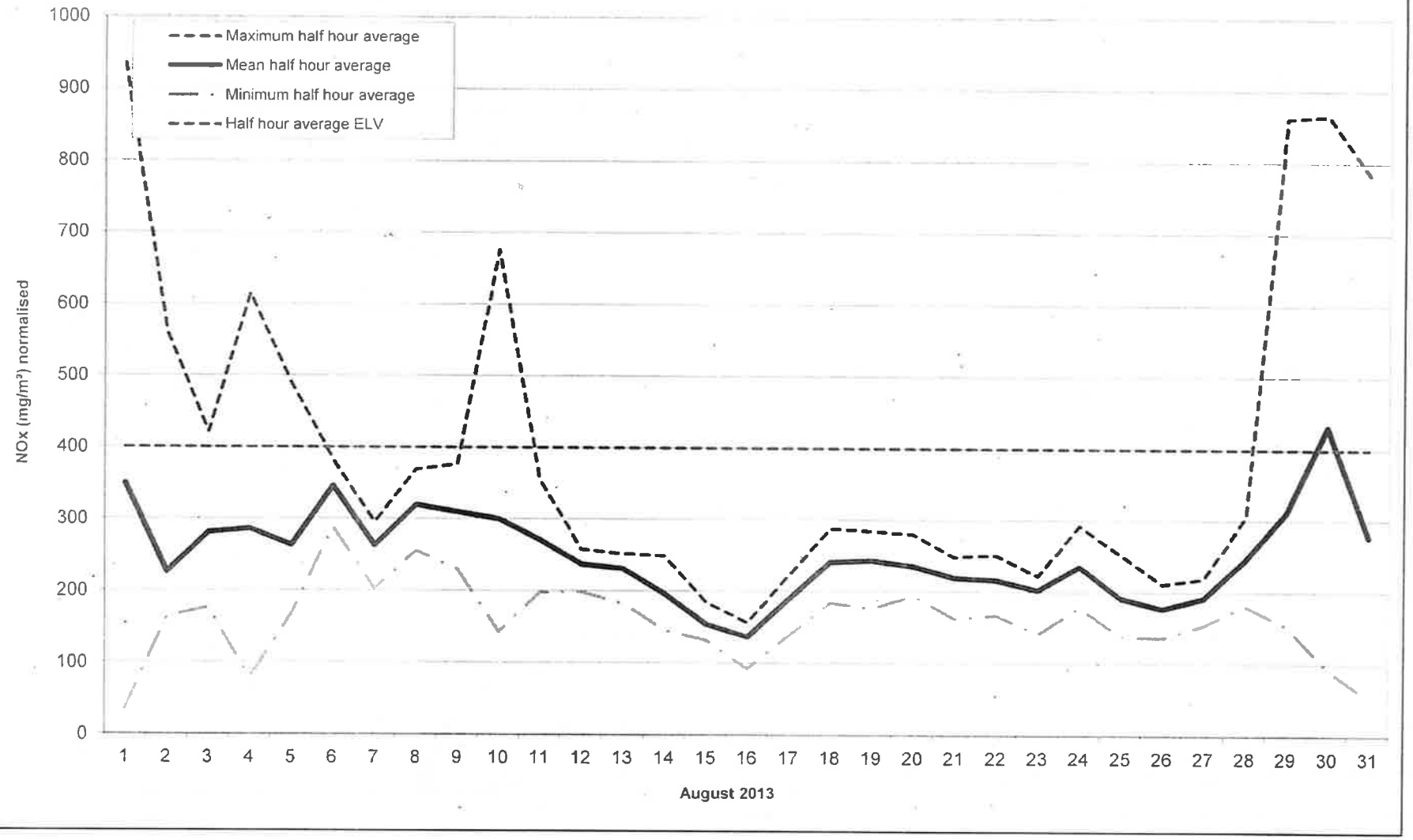
NOTES
Invalid data points are not reported because the incinerator is not operated at any time whilst CEM equipment is being maintained or calibrated

Incinerator Summary Report - August 2013

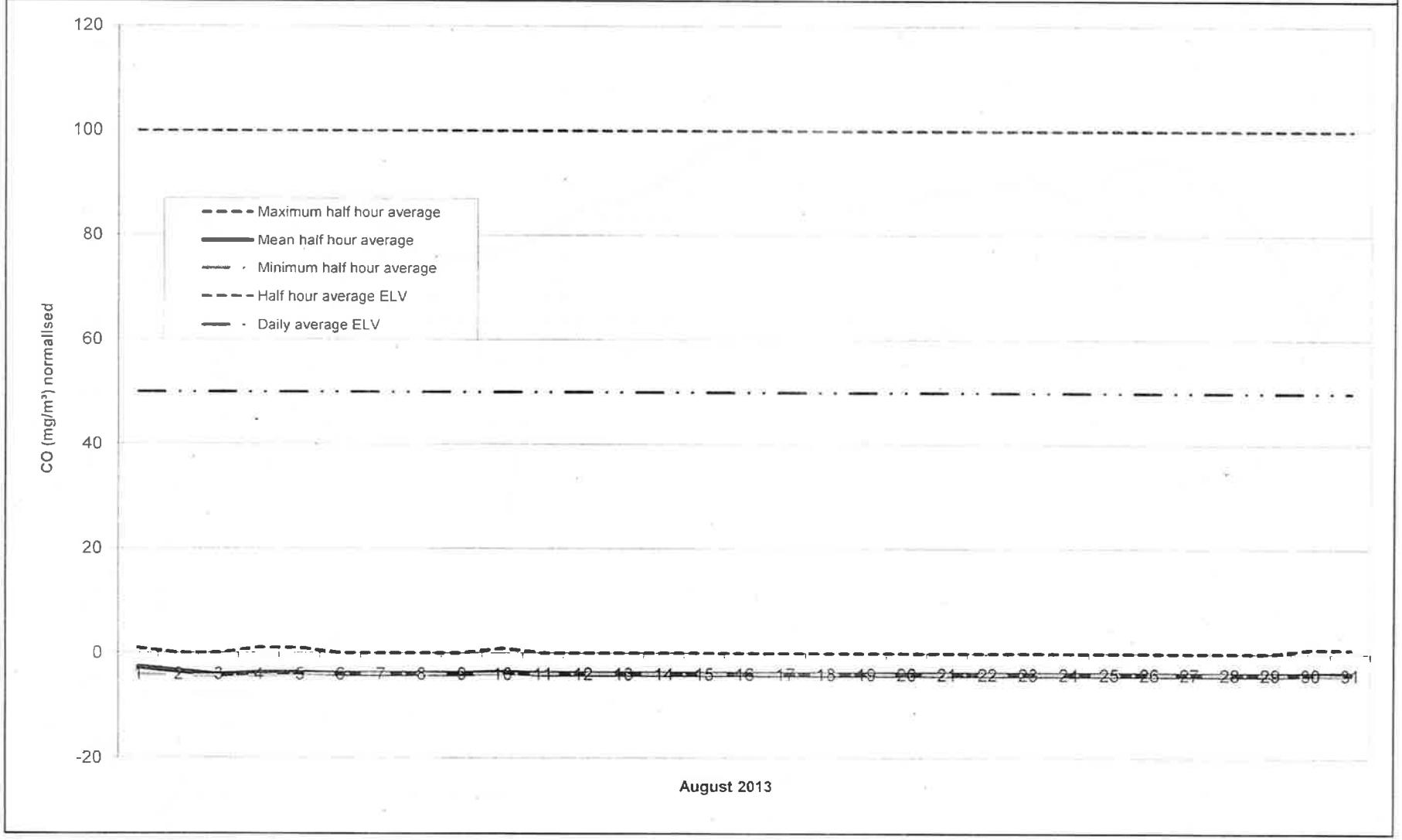
Day			19	20	21	22	23	24	25	26	27	28	29	30	31	TOTALS
Running time	Residue	h	24	24	24	24	24	24	24	24	24	24	24	20	21	719.5
	Gas	h	0	0	0	0	0	0	0	0	0	0	0	2.5	3	29
	Residue & gas	h	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	9.5
	Idle	h	0	0	0	0	0	0	0	0	0	0	0	2	0.5	5
Total flow	Residue	kg	9000	9000.3	9000.8	9001.7	9000.7	9360.3	9600	9600.7	9600	9599.2	9600.3	7845.7	8250.7	292.4 tonnes
	Gas	m3	0	0	0	0	0	0	0	0	0	0	0	373.7	462.7	3861 m3
	Air	m3	116422	116947	116604	116996	113059	117824	125315	126783	125680	127321	126482	135216	122630	3904639 m3
NOx (normalised)	Min	mg/m3	176	194.3	162.3	166.7	141.7	178	138.3	136.7	154	181	153.3	93.3	53	
	Ave	mg/m3	242.9	235.2	218.9	216.1	202.1	234.7	191.5	176.7	191.5	244.4	311.6	432	277	
	Max	mg/m3	284.3	280.3	248.3	251	222	292.3	252	211.3	218	303.7	861	864.7	783.7	
	Exceeds daily ELV ?	[400 mg/m3]	N	N	N	N	N	N	N	N	N	N	Y	N		1 exceedances
CO (normalised)	Min	mg/m3	-4	-4.1	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4.1	-4.2	
	Ave	mg/m3	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3.9	-3.6	
	Max	mg/m3	0	0	0	0	0	0	0	0	0	0	0	0.9	0.8	
	30m ELV exceedances	[100 mg/m3]	0	0	0	0	0	0	0	0	0	0	0	0	0	0 exceedances
	Exceeds daily ELV ?	[50 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N		0 exceedances
Particulates (normalised)	Min	mg/m3	0.4	0.6	0.7	0.7	0.7	0.5	0.4	0.7	0.6	0.6	0.6	0.5	0.3	
	Ave	mg/m3	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.6	
	Max	mg/m3	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	
	30m ELV exceedances	[30 mg/m3]	0	0	0	0	0	0	0	0	0	0	0	0	0	0 exceedances
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N		0 exceedances
VOC (normalised)	Min	mg/m3	0.4	0.2	0.1	0.2	0.4	0.4	0.2	0.4	0.4	0.5	0.1	0.2	0.5	
	Ave	mg/m3	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.9	
	Max	mg/m3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	2.2	
	30m ELV exceedances	[20 mg/m3]	0	0	0	0	0	0	0	0	0	0	0	0	0	0 exceedances
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N		0 exceedances

NOTES
Invalid data points are not reported because the incinerator is not operated at any time whilst CEM equipment is being maintained or calibrated

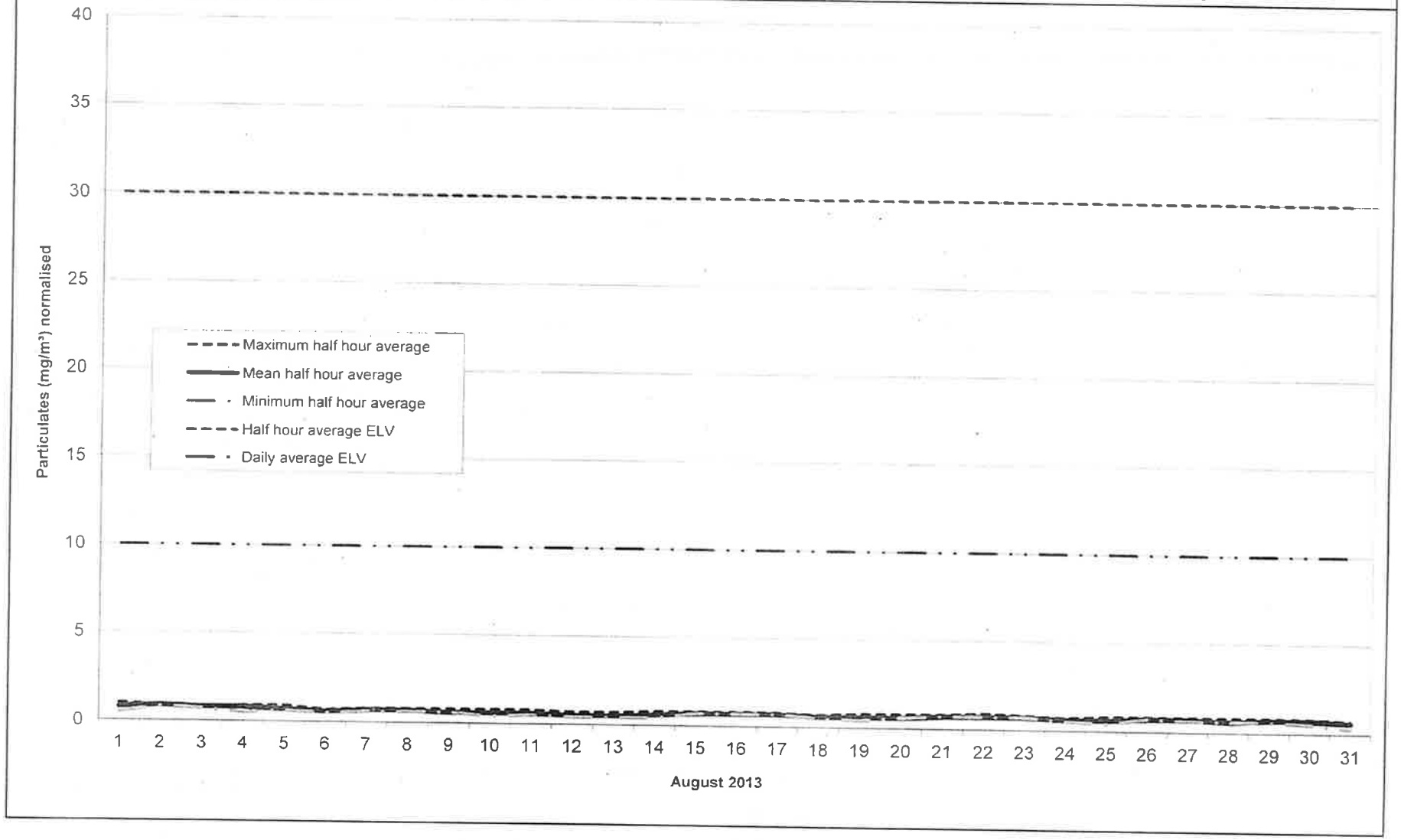
	Title:	Reporting Incinerator **CEM Oxides of Nitrogen**	Area:	Manufacturing	Issue No.:	1
	Ref:		Last printed:	03/09/2013	Date of Issue:	21/12/2006
	Related Document:	BU2357/AP3634 **A7**	Created on:	21-12-2006	Page:	1 of 1



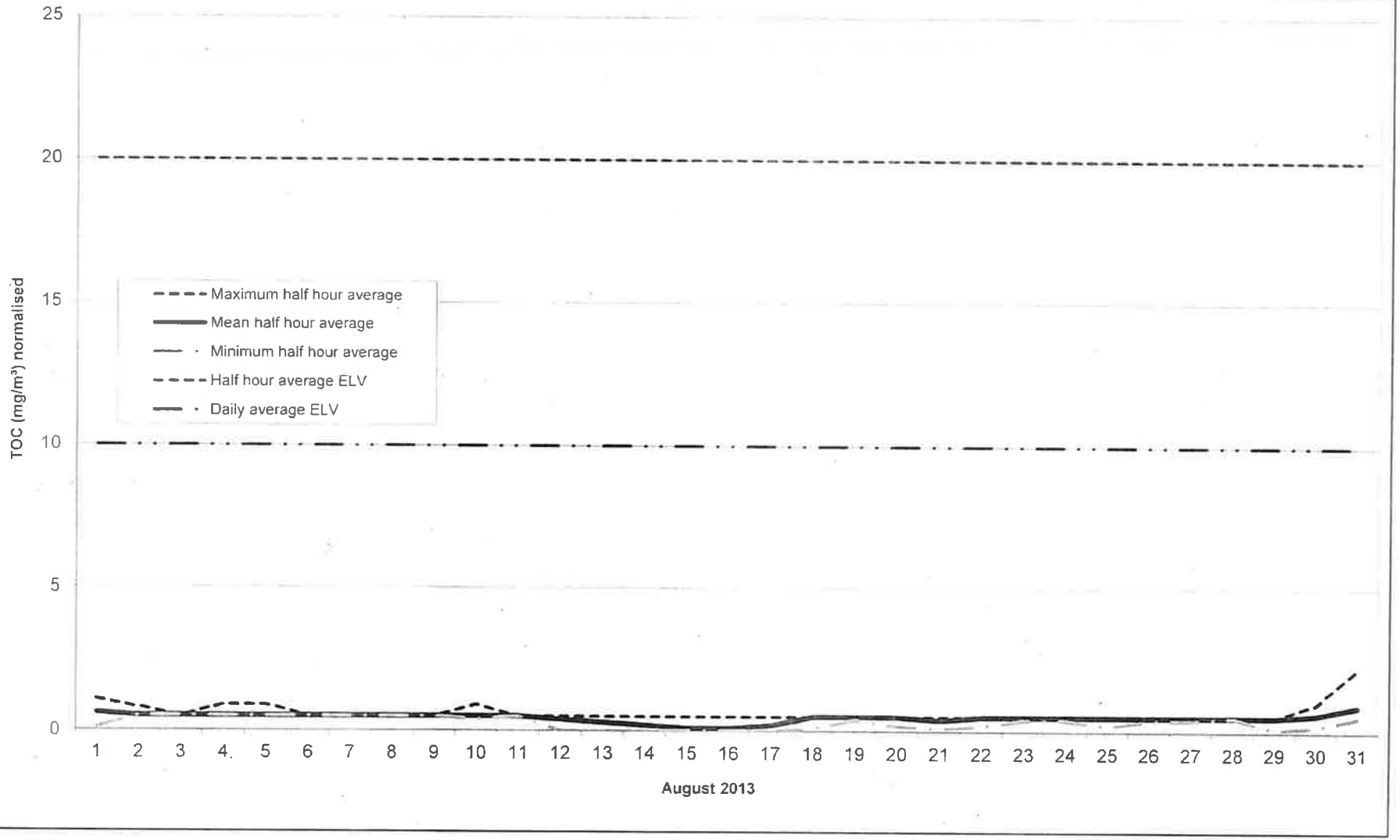
	Title:	Reporting Incinerator **CEM Carbon Monoxide**	Area:	Manufacturing	**Issue No.:**	1
	Ref:		Last printed:	03/09/2013	**Date of Issue:**	21/12/2006
	Related Document:	BU2357/AP3634 **A6**	Created on:	21-12-2006	**Page:**	1 of 1



Title:	Reporting Incinerator **CEM Particulates**	**Area:**	Manufacturing	**Issue No.:**	1
Ref:		**Last printed:**	03/09/2013	**Date of Issue:**	21/12/2006
Related Document:	BU2357/AP3634 A4	**Created on:**	21-12-2006	**Page:**	1 of 1



	Title:	Reporting Incinerator CEM TOC	Area:	Manufacturing	Issue No.:	1
	Ref:		Last printed:	03/09/2013	Date of Issue:	21/12/2006
	Related Document:	BU2357/AP3634 A5	Created on:	21-12-2006	Page:	1 of 1



	Title: Reporting Incinerator CEM	Area: Manufacturing	Issue No.: 1
	Ref:	Last printed: 01/10/2013	Date of Issue: 21/12/2006
	Related Document: BU2357/AP3634	Created on: 21-12-2006	Page: 1 of 2

Incinerator Summary Report - September 2013

Day				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Running time	Residue	h		17	24	24	24	18	21	24	17	9	23.5	24	24	24	24	24	24	24	24
	Gas	h		7.5	0	0	0	6	3	0	3.5	3.5	1	0	0	0	0	0	0	0	0
	Residue & gas	h		0.5	0	0	0	0	0	0	1	0.5	0.5	0	0	0	0	0	0	0	0
	Idle	h		0	0	0	0	0	0	0	4.5	12	0	0	0	0	0	0	0	0	0
Total flow	Residue	kg		6393.7	8975.5	9000.7	8999.7	6817.8	8101.5	9598.8	6618.5	3880.3	10455.2	10801.2	9461.5	8400.2	8400.2	9139.2	9600.5	9600.8	9600.5
	Gas	m3		1232.2	12.8	0	0	880.2	436.3	0	501.2	581.2	112.7	0	0	0	0	0	0	0	0
	Air	m3		116407	119482	118241	117936	117236	112343	113443	93504	62971	137836	136569	122561	103899	105028	113816	119256	118060	119948
NOx (normalised)	Min	mg/m3		101	119	101.7	134.3	89.7	68.3	71.3	0	123.3	55	126.3	108.7	93.7	88	77.3	71.3	91.7	120.3
	Ave	mg/m3		205.9	163.8	122	206	195.4	78	78.5	39	259.1	176.8	214.6	133.5	120.7	113.3	93.9	90.8	114	148.9
	Max	mg/m3		516.7	534	138	263.3	686	134	87.7	85.7	794	631.3	320	170.3	137.3	133	110.3	99.3	130.3	178.7
	Exceeds daily ELV ?	[400 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
CO (normalised)	Min	mg/m3		-4.3	-4.1	-4	-4	-4	-4	-4	-4.3	-7.5	-7.3	-7	-7	-7	-7	-7	-7	-7	-7
	Ave	mg/m3		-3.9	-4	-4	-4	-3.9	-3.7	-4	-3.8	-7	-6.9	-7	-6.8	-6.8	-6.9	-6.8	-7	-6.9	-7
	Max	mg/m3		0	0	0	0	0	0	0	0.9	0	0	0	0	0	0	0	0	0	0
	30m ELV exceedances	[100 mg/m3]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[50 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Particulates (normalised)	Min	mg/m3		0.3	0.4	0.7	0.4	0.5	0.4	0.4	0.3	0.4	0.5	0.9	1	1.1	0.9	0.8	0.7	0.8	0.8
	Ave	mg/m3		0.5	0.6	0.7	0.6	0.6	0.5	0.4	0.4	0.6	0.8	0.9	1.1	1.1	1	0.9	0.8	0.8	0.8
	Max	mg/m3		0.6	0.8	0.8	0.8	0.7	0.6	0.4	0.5	0.7	0.9	1	1.2	1.2	1.1	1	0.9	0.8	0.9
	30m ELV exceedances	[30 mg/m3]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
VOC (normalised)	Min	mg/m3		0.7	0.7	0.7	0.7	0.5	0.2	0	0	0.3	0	0.5	0.3	0.4	0.2	0	0	0	0
	Ave	mg/m3		1.1	0.9	0.9	0.9	0.8	0.5	0.3	0.3	0.5	0.3	0.5	0.5	0.5	0.4	0.1	0	0	0
	Max	mg/m3		1.8	1.5	1	1	1.5	1.9	0.5	0.7	1.1	0.7	0.5	0.5	0.5	0.5	0.5	0	0	0
	30m ELV exceedances	[20 mg/m3]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exceeds daily ELV ?	[10 mg/m3]	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	

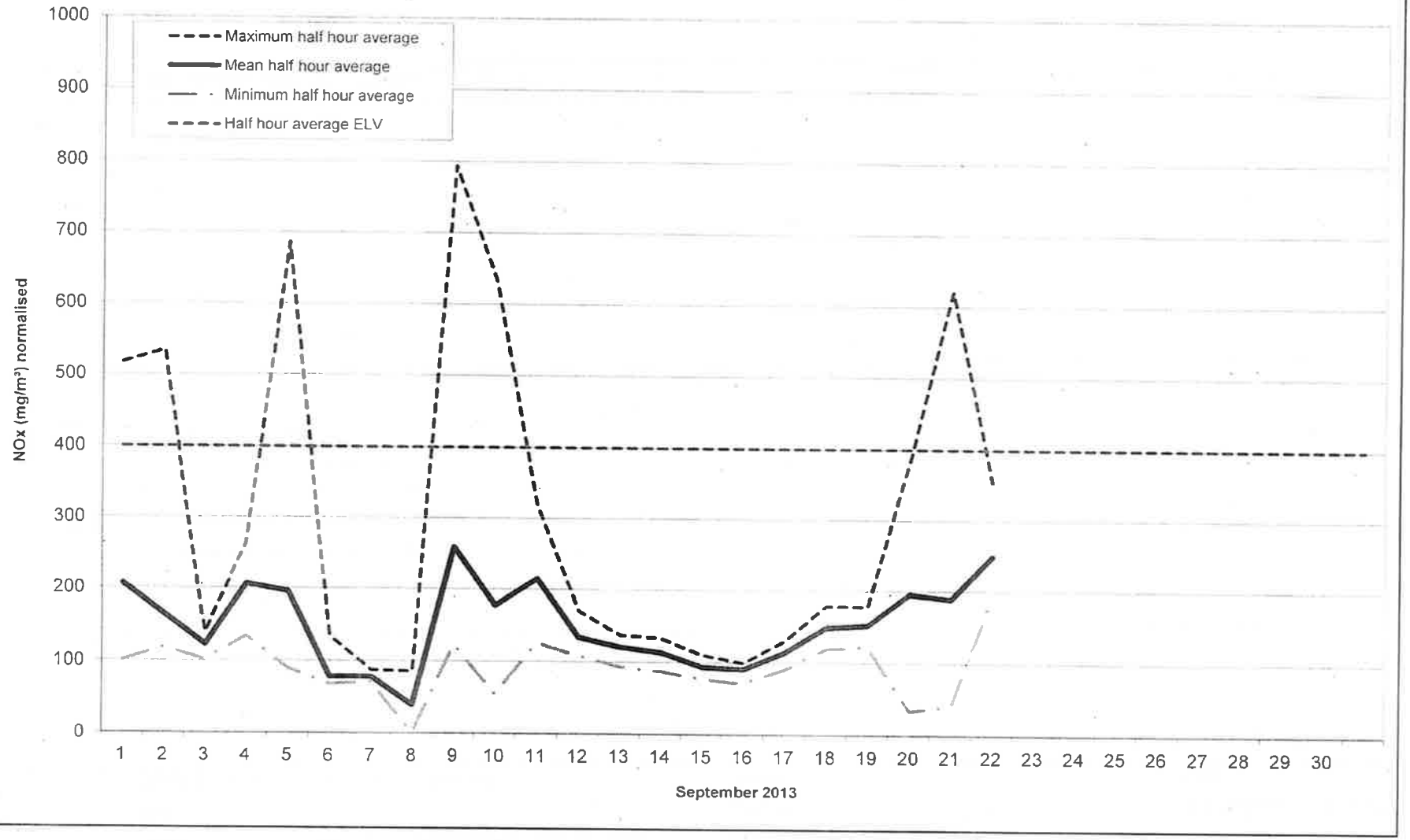
NOTES
Invalid data points are not reported because the incinerator is not operated at any time whilst CEM equipment is being maintained or calibrated

Incinerator Summary Report - September 2013

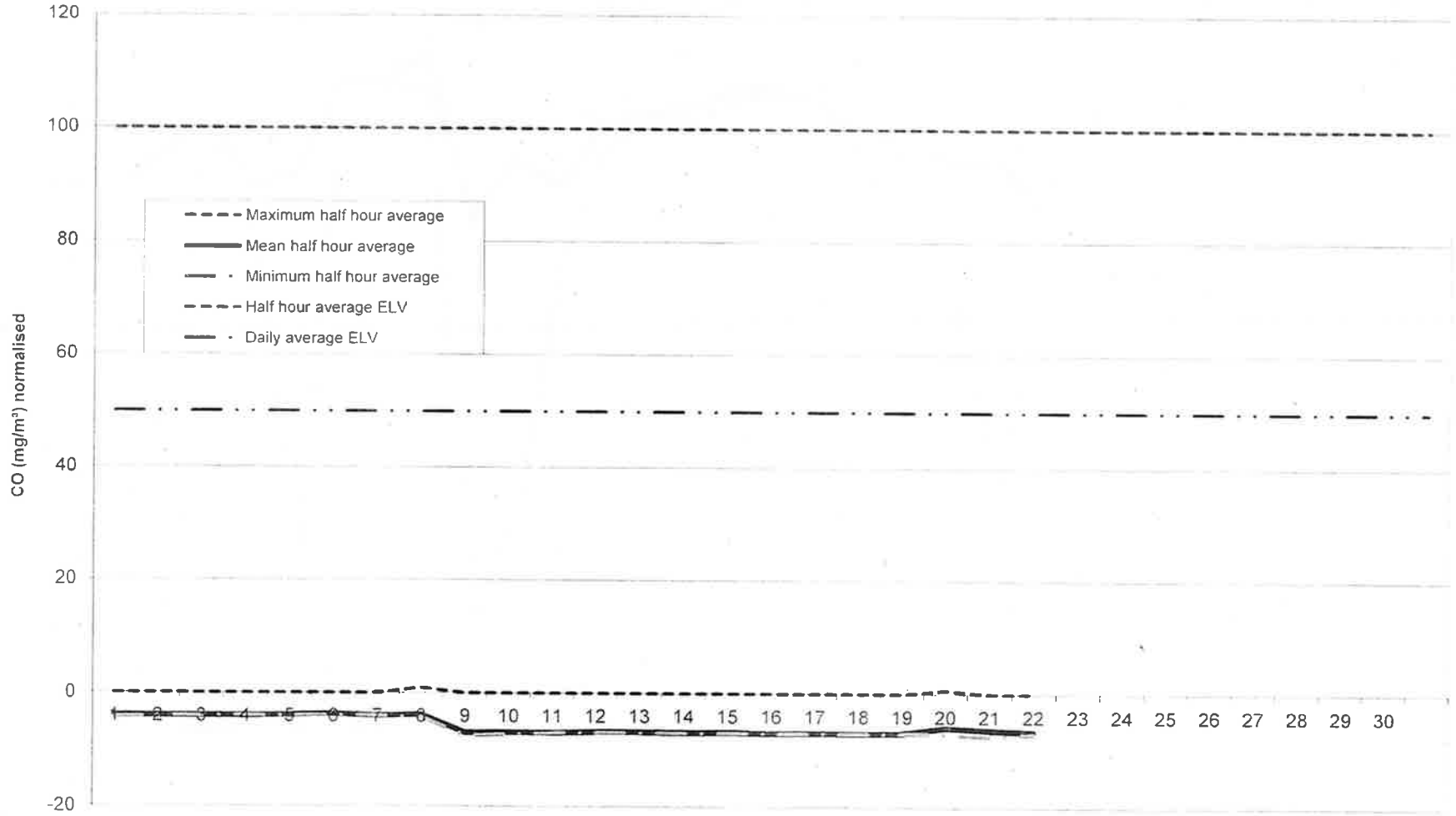
Day				19	20	21	22	23	24	25	26	27	28	29	30	TOTALS
Running time	Residue	h		24	9	17.5	9	0	0	0	0	0	0	0	0	45.3
	Gas	h		0	12.5	3.5	1	0	0	0	0	0	0	0	0	41.5
	Residue & gas	h		0	2	0	0	0	0	0	0	0	0	0	0	4.5
	Idle	h		0	4.5	3	14	24	24	24	24	24	24	24	24	230
Total flow	Residue	kg		9601.7	3020.7	7577.7	4067.7	0.3	4.5	1	2.7	0.3	1.7	1.2	0.5	178.1 tonnes
	Gas	m3		0	1878.2	600.5	119.7	0	0	0	0	0	0	0	0	6355 m3
	Air	m3		120244	148323	110639	136519	6739	12013	13716	6473	20933	16466	10210	15431	2666241 m3
NOx (normalised)	Min	mg/m3		123	34.3	41	192.7									
	Ave	mg/m3		152.1	195.4	189	249.2									
	Max	mg/m3		176	382.7	621.7	355									
	Exceeds daily ELV ?	[400 mg/m3]	N	- N		N		N								0 exceedances
CO (normalised)	Min	mg/m3		-7	-7	-7.4	-7									
	Ave	mg/m3		-6.9	-5.9	-6.3	-6.6									
	Max	mg/m3		0	0.7	0	0									
	30m ELV exceedances	[100 mg/m3]		0	0	0	0									0 exceedances
	Exceeds daily ELV ?	[50 mg/m3]	N	N		N		N								0 exceedances
Particulates (normalised)	Min	mg/m3		0.8	0.3	0.1	0.7									
	Ave	mg/m3		0.9	0.7	0.5	0.7									
	Max	mg/m3		1	0.9	0.7	0.7									
	30m ELV exceedances	[30 mg/m3]		0	0	0	0									0 exceedances
	Exceeds daily ELV ?	[10 mg/m3]	N	N		N		N								0 exceedances
VOC (normalised)	Min	mg/m3		0	0.2	0.1	0.5									
	Ave	mg/m3		0.2	0.5	0.5	0.5									
	Max	mg/m3		0.5	0.9	1	0.5									
	30m ELV exceedances	[20 mg/m3]		0	0	0	0									0 exceedances
	Exceeds daily ELV ?	[10 mg/m3]	N	N		N		N								0 exceedances

NOTES
Invalid data points are not reported because the incinerator is not operated at any time whilst CEM equipment is being maintained or calibrated

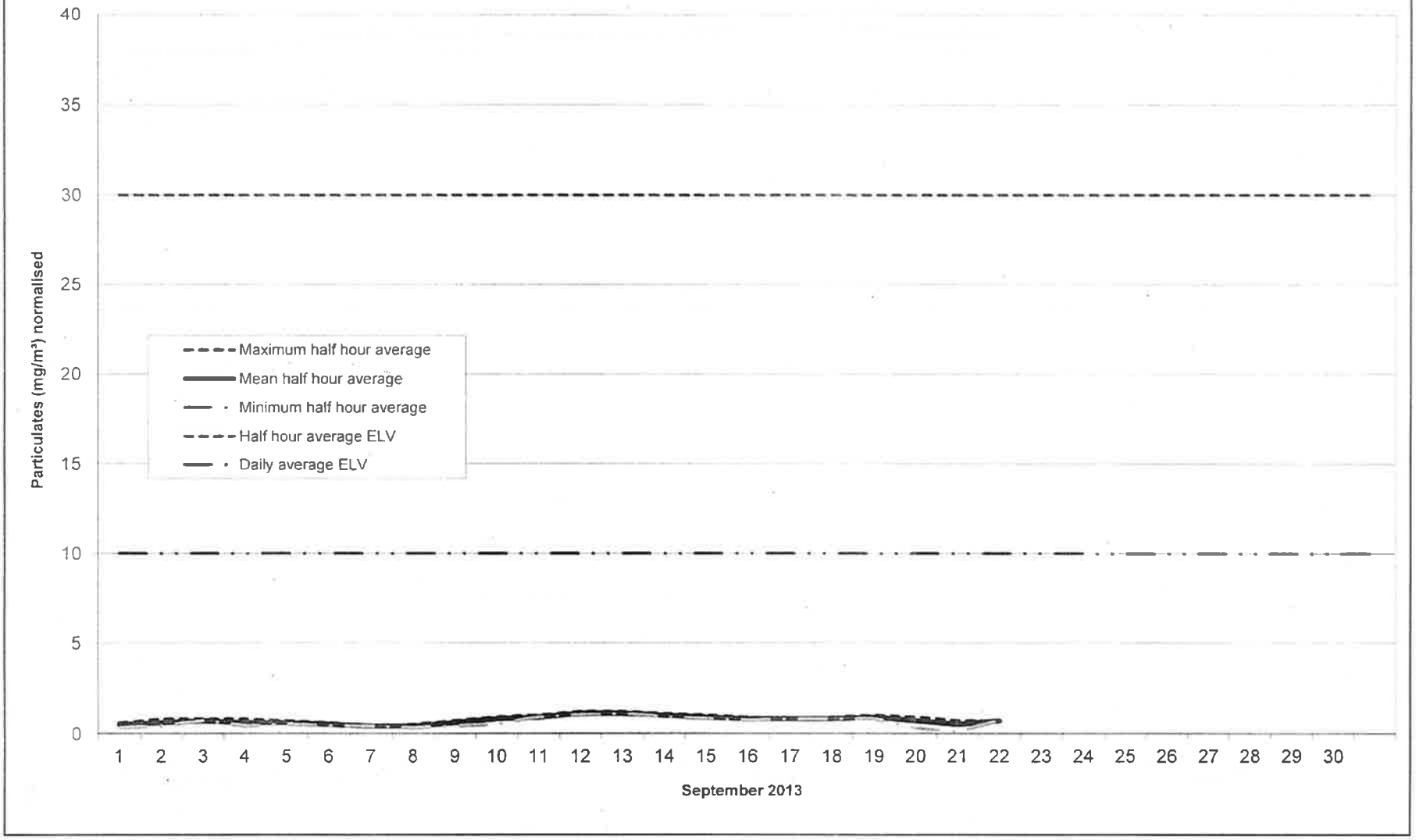
	Title:	Reporting Incinerator **CEM Oxides of Nitrogen**	Area:	Manufacturing	Issue No.:	1
	Ref:		Last printed:	01/10/2013	Date of Issue:	21/12/2006
	Related Document:	BU2357/AP3634 **A7**	Created on:	21-12-2006	Page:	1 of 1



	Title:	Reporting Incinerator **CEM Carbon Monoxide**	Area:	Manufacturing	Issue No.:	1
	Ref:		Last printed:	01/10/2013	Date of Issue:	21/12/2006
	Related Document:	BU2357/AP3634 **A6**	Created on:	21-12-2006	Page:	1 of 1



	Title:	Reporting Incinerator **CEM Particulates**	**Area:**	Manufacturing	**Issue No.:**	1
	Ref:		**Last printed:**	01/10/2013	**Date of Issue:**	21/12/2006
	Related Document:	BU2357/AP3634 A4	**Created on:**	21-12-2006	**Page:**	1 of 1



	Title:	Reporting Incinerator **CEM TOC**	**Area:**	Manufacturing	**Issue No.:**	1
	Ref:		**Last printed:**	01/10/2013	**Date of Issue:**	21/12/2006
	Related Document:	BU2357/AP3634 A5	**Created on:**	21-12-2006	**Page:**	1 of 1