

Mr Ian Kelcey
Environment Agency
Sentinel House
Wellington Crescent
Fradley Park
Lichfield
Staffs WS13 8RR

27th January 2016

Dear Mr Kelcey

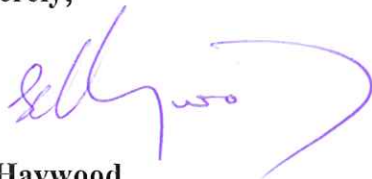
**Tyseley Energy Recovery Facility
Environmental Permit WP3239SJ**

In accordance with the Environmental Permit WP3239SJ, Veolia ES Birmingham Ltd. I enclose the following reports:

- Report on the 2 extractive monitoring campaigns carried out during the last six months (A1 and A2)
- Report on ash composition for the last six months (Ash 1)
- Report on ash composition for the last six months (Ash 2)
- Report on the annual production and treatment and on the environmental performance indicators (PP1)
- Report on the periodically monitored emissions to water (W1)
- Report on the waste disposal and recovery for the year (DR1)
- Report on the water usage (WU1)
- Report on the Energy usage (EU1)

I hope you find this in order. Please can you confirm receipt of these documents.

Yours sincerely,



Mr. Steve Haywood
Facility Manager
For and on behalf of Veolia ES Birmingham Ltd

Veolia Environmental Services Birmingham Ltd
James Road, Tyseley, Birmingham B11 2BA
tel: 0203 567 3740 • fax: 0203 567 3741 • www.veolia.co.uk

A member of Veolia Environmental Services (UK) Plc
Registered office: Veolia Environmental Services (UK) plc, 8th Floor, 210 Pentonville Road, London N1 9JY
Registered in England 2692681

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PER / A1

Reporting of Periodic Monitoring of Emissions to Air for the period from 1st July to 30th September 2015

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A1	Particulate Matter	30 mg/m ³ over minimum 1 hour period	1,42mg/m ³	BS EN 13284-1	16/07/2015 9:10 – 10:19	UKAS/MCERTS	19%
A1	VOC as Total Organic Carbon (TOC)	20 mg/m ³ over minimum 1 hour period	1,58mg/m ³	BS EN 12619:2013	16/07/2015 15:00 – 15:59	UKAS/MCERTS	4%
A1	Hydrogen chloride	60 mg/m ³ over minimum 1 hour period	7,84mg/m ³	BS EN 1911	16/07/2015 9:10 – 10:19	UKAS/MCERTS	15%
A1	Hydrogen fluoride	2 mg/m ³ over minimum 1 hour period	0,05mg/m ³	BS ISO 15713 & MID	21/07/2015 10:35 – 11:35	UKAS/MCERTS	15%
A1	Carbon monoxide	100 mg/m ³ over minimum 4 hour period	9,39mg/m ³	EA TGN M22	16/07/2015 11:00 – 14:59	UKAS/MCERTS	4%
A1	Sulphur dioxide	200 mg/m ³ over minimum 4 hour period	8,81mg/m ³	EA TGN M22	16/07/2015 11:00 – 14:59	UKAS/MCERTS	6%
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg/m ³ over minimum 4 hour period	120,79mg/m ³	EA TGN M22	16/07/2015 11:00 – 14:59	UKAS/MCERTS	4%
A1	Ammonia (NH ₃)	No limit applies	0,90mg/m ³	EA TGN M22	16/07/2015 11:00 – 14:59	UKAS/MCERTS	9%
A1	Nitrous oxide (N ₂ O)	No limit applies	0,29mg/m ³	EA TGN M22	16/07/2015 11:00 – 14:59	UKAS/MCERTS	8%
A1	Cadmium & thallium and their compounds (total)	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0022mg/m ³	BS EN 14385 & MID	21/07/2015 8:15 – 10:20	UKAS/MCERTS	9%
A1	Mercury and its compounds	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,00095mg/m ³	BS EN 14385 & MID	21/07/2015 8:15 – 10:20	UKAS/MCERTS	14%
A1	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	0,019mg/m ³	BS EN 14385 & MID	21/07/2015 8:15 – 10:20	UKAS/MCERTS	5%
A1	Dioxins / furans (I-TEQ) ⁶	0.1 ng/m ³ over minimum 6 hour, maximum 8 hour period	0,010ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	11%
A1	Dioxin-like PCBs (WHO-TEQ Humans / Mammals) ⁶	No limit applies	0,0016ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	20%

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A1	Dioxin-like PCBs (WHO-TEQ Fish) ⁶	No limit applies	0,00081ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	20%
A1	Dioxin-like PCBs (WHO-TEQ Birds) ⁶	No limit applies	0,0037ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	13%
A1	Dioxins / furans (WHO-TEQ Humans / Mammals) ⁶	No limit applies	0,011ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	12%
A1	Dioxins / furans (WHO-TEQ Fish) ⁶	No limit applies	0,0087ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	13%
A1	Dioxins / furans (WHO-TEQ Birds) ⁶	No limit applies	0,011ng/m ³	BS EN 1948	15/07/2015 10:15 – 16:30	UKAS/MCERTS	16%
A1	Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies	0,73ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	13%
A1	Anthracene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Benzo[a]anthracene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Benzo[b]fluoranthene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	19%
A1	Benzo[k]fluoranthene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Benzo[b]naph (2,1-d)thiophene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Benzo[c]phenanthrene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Benzo[ghi]perylene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Benzo[a]pyrene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Cholanthrene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Chrysene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Cyclopenta(c,d)pyrene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Dibenzo[ah]anthracene	No limit applies	0,015ug/m ³	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A1	Dibenzo[a,i]pyrene	No limit applies	0,015ug/m3	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Fluoranthene	No limit applies	0,073ug/m3	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	19%
A1	Indo[1,2,3-cd]pyrene	No limit applies	0,015ug/m3	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	>100%
A1	Naphthalene	No limit applies	0,45ug/m3	BS ISO 11338	22/07/2015 8:25 – 14:30	UKAS/MCERTS	19%

[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.

[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
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PER / A2

Reporting of Periodic Monitoring of Emissions to Air for the period from 1st July to 30th September 2015

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A2	Particulate Matter	30 mg/m ³ over minimum 1 hour period	1,34mg/m ³	BS EN 13284-1	17/07/2015 9:00 – 10:09	UKAS/MCERTS	20%
A2	VOC as Total Organic Carbon (TOC)	20 mg/m ³ over minimum 1 hour period	0,90mg/m ³	BS EN 12619:2013	17/07/2015 12:00 – 12:59	UKAS/MCERTS	4%
A2	Hydrogen chloride	60 mg/m ³ over minimum 1 hour period	15,23mg/m ³	BS EN 1911	9/07/2015 9:00 – 10:09	UKAS/MCERTS	15%
A2	Hydrogen fluoride	2 mg/m ³ over minimum 1 hour period	0,03mg/m ³	BS ISO 15713 & MID	21/07/2015 13:30 – 14:30	UKAS/MCERTS	15%
A2	Carbon monoxide	100 mg/m ³ over minimum 4 hour period	5,40mg/m ³	EA TGN M22	17/07/2015 11:00 – 14:59	UKAS/MCERTS	4%
A2	Sulphur dioxide	200 mg/m ³ over minimum 4 hour period	9,02mg/m ³	EA TGN M22	17/07/2015 11:00 – 14:59	UKAS/MCERTS	6%
A2	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg/m ³ over minimum 4 hour period	136,37mg/m ³	EA TGN M22	17/07/2015 11:00 – 14:59	UKAS/MCERTS	4%
A2	Ammonia (NH ₃)	No limit applies	0,74mg/m ³	EA TGN M22	17/07/2015 11:00 – 14:59	UKAS/MCERTS	9%
A2	Nitrous oxide (N ₂ O)	No limit applies	0,23mg/m ³	EA TGN M22	17/07/2015 11:00 – 14:59	UKAS/MCERTS	8%
A2	Cadmium & thallium and their compounds (total)	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0012mg/m ³	BS EN 14385 & MID	20/07/2015 11:55 – 14:03	UKAS/MCERTS	9%
A2	Mercury and its compounds	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0029mg/m ³	BS EN 14385 & MID	20/07/2015 11:55 – 14:03	UKAS/MCERTS	14%
A2	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	0,011mg/m ³	BS EN 14385 & MID	20/07/2015 11:55 – 14:03	UKAS/MCERTS	4%
A2	Dioxins / furans (I-TEQ) ⁶	0.1 ng/m ³ over minimum 6 hour, maximum 8 hour period	0,011ng/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	12%

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A2	Dioxin-like PCBs (WHO-TEQ Humans / Mammals) ⁶	No limit applies	0,0016ng/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	20%
A2	Dioxin-like PCBs (WHO-TEQ Fish) ⁶	No limit applies	0,000082g/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	19%
A2	Dioxin-like PCBs (WHO-TEQ Birds) ⁶	No limit applies	0,0041ng/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	13%
A2	Dioxins / furans (WHO-TEQ Humans / Mammals) ⁶	No limit applies	0,012ng/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	12%
A2	Dioxins / furans (WHO-TEQ Fish) ⁶	No limit applies	0,010ng/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	14%
A2	Dioxins / furans (WHO-TEQ Birds) ⁶	No limit applies	0,014ng/m ³	BS EN 1948	14/07/2015 8:54 – 15:08	UKAS/MCERTS	17%
A2	Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies	0,80ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	13%
A2	Anthanthrene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Benzo[a]anthracene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Benzo[b]fluoranthene	No limit applies	0,026ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	19%
A2	Benzo[k]fluoranthene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Benzo[b]naph (2,1-d')thiophene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Benzo[c]phenanthrene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Benzo[ghi]perylene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Benzo[a]pyrene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Cholanthrene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Chrysene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Cyclopenta(c,d)pyrene	No limit applies	0,013ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A2	Dibenzo[ah]anthracene	No limit applies	0,013ug/m ³ m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Dibenzo[a,i]pyrene	No limit applies	0,013ug/m ³ m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Fluoranthene	No limit applies	0,12ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	19%
A2	Indo[1,2,3-cd]pyrene	No limit applies	0,013ug/m ³ m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	>100%
A2	Naphthalene	No limit applies	0,49ug/m ³	BS ISO 11338	23/07/2015 8:25 – 14:35	UKAS/MCERTS	19%

[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.

[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
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / ASH1

Reporting of Ash Composition for the period from 1st July to 30th September 2015

Ash Composition (LOI)	
Parameter	(%)
Bottom Ash Loss on Ignition (LOI)	0,90

Ash Composition (Metals, Dioxins, etc.)																
	Cd mg/ kg	Tl mg/ kg	Hg mg/ kg	Pb mg /kg	Cr mg/ kg	Cu mg/ kg	Mn mg/ kg	Ni mg/ kg	As mg/ kg	Co mg/ kg	V mg/ kg	Zn mg/ kg	DIOXI	DIOXIN		
													N I-TEQ ng/kg	WHO-TEQ ng/kg		
																Humans/ mammals
Bottom Ash	7,86	<1	<1	792	101	1865	554	54,6	4,63	22,2	15,5	2563	3,31	5,67	10,3	6,07
APC Residues Line 1	269	<1	6,72	3390	71,7	712	384	22,4	37,6	12,1	11,6	15200	260	433	867	480
APC Residues Line 2	282	<1	9,36	3000	74	752	339	24,1	40.8	11,2	10.7	15200	384	599	1058	644

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PER / A1

Reporting of Periodic Monitoring of Emissions to Air for the period from 1st October to 31st December 2015

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A1	Particulate Matter	30 mg/m ³ over minimum 1 hour period					
A1	VOC as Total Organic Carbon (TOC)	20 mg/m ³ over minimum 1 hour period					
A1	Hydrogen chloride	60 mg/m ³ over minimum 1 hour period					
A1	Hydrogen fluoride	2 mg/m ³ over minimum 1 hour period					
A1	Carbon monoxide	100 mg/m ³ over minimum 4 hour period					
A1	Sulphur dioxide	200 mg/m ³ over minimum 4 hour period					
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg/m ³ over minimum 4 hour period					
A1	Ammonia (NH ₃)	No limit applies					
A1	Nitrous oxide (N ₂ O)	No limit applies					
A1	Cadmium & thallium and their compounds (total)	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0018mg/m3	BS EN 14385 & MID	6/10/15 9:00 – 11:08	UKAS/MCERTS	9%
A1	Mercury and its compounds	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0014mg/m3	BS EN 14385 & MID	6/10/15 9:00 – 11:08	UKAS/MCERTS	14%
A1	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	0,051mg/m3	BS EN 14385 & MID	6/10/15 9:00 – 11:08	UKAS/MCERTS	6%
A1	Dioxins / furans (I-TEQ) ⁶	0.1 ng/m ³ over minimum 6 hour, maximum 8 hour period					

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A1	Dioxin-like PCBs (WHO-TEQ Humans / Mammals) ⁶	No limit applies					
A1	Dioxin-like PCBs (WHO-TEQ Fish) ⁶	No limit applies					
A1	Dioxin-like PCBs (WHO-TEQ Birds) ⁶	No limit applies					
A1	Dioxins / furans (WHO-TEQ Humans / Mammals) ⁶	No limit applies					
A1	Dioxins / furans (WHO-TEQ Fish) ⁶	No limit applies					
A1	Dioxins / furans (WHO-TEQ Birds) ⁶	No limit applies					
A1	Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies					
A1	Anthanthrene	No limit applies					
A1	Benzo[a]anthracene	No limit applies					
A1	Benzo[b]fluoranthene	No limit applies					
A1	Benzo[k]fluoranthene	No limit applies					
A1	Benzo[b]naph (2,1-d)thiophene	No limit applies					
A1	Benzo[c]phenanthrene	No limit applies					
A1	Benzo[ghi]perylene	No limit applies					
A1	Benzo[a]pyrene	No limit applies					
A1	Cholanthrene	No limit applies					
A1	Chrysene	No limit applies					
A1	Cyclopenta(c,d)pyrene	No limit applies					
A1	Dibenzo[ah]anthracene	No limit applies					
A1	Dibenzo[a,i]pyrene	No limit applies					
A1	Fluoranthene	No limit applies					
A1	Indo[1,2,3-cd]pyrene	No limit applies					
A1	Naphthalene	No limit applies					

- [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.
- [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
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PER / A2

Reporting of Periodic Monitoring of Emissions to Air for the period from 1st October to 31st December 2015

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A2	Particulate Matter	30 mg/m ³ over minimum 1 hour period					
A2	VOC as Total Organic Carbon (TOC)	20 mg/m ³ over minimum 1 hour period					
A2	Hydrogen chloride	60 mg/m ³ over minimum 1 hour period					
A2	Hydrogen fluoride	2 mg/m ³ over minimum 1 hour period					
A2	Carbon monoxide	100 mg/m ³ over minimum 4 hour period					
A2	Sulphur dioxide	200 mg/m ³ over minimum 4 hour period					
A2	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	400 mg/m ³ over minimum 4 hour period					
A2	Ammonia (NH ₃)	No limit applies					
A2	Nitrous oxide (N ₂ O)	No limit applies					
A2	Cadmium & thallium and their compounds (total)	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0014mg/m ³	BS EN 14385 & MID	7/10/15 8:50 – 11:12	UKAS/MCERTS	9%
A2	Mercury and its compounds	0.05 mg/m ³ over minimum 30 minute, maximum 8 hour period	0,0011mg/m ³	BS EN 14385 & MID	7/10/15 8:50 – 11:12	UKAS/MCERTS	14%
A2	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	0,027mg/m ³	BS EN 14385 & MID	7/10/15 8:50 – 11:12	UKAS/MCERTS	7%
A2	Dioxins / furans (I-TEQ) ⁶	0.1 ng/m ³ over minimum 6 hour, maximum 8 hour period					
A2	Dioxin-like PCBs (WHO-TEQ Humans / Mammals) ⁶	No limit applies					

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A2	Dioxin-like PCBs (WHO-TEQ Fish) ⁶	No limit applies					
A2	Dioxin-like PCBs (WHO-TEQ Birds) ⁶	No limit applies					
A2	Dioxins / furans (WHO-TEQ Humans / Mammals) ⁶	No limit applies					
A2	Dioxins / furans (WHO-TEQ Fish) ⁶	No limit applies					
A2	Dioxins / furans (WHO-TEQ Birds) ⁶	No limit applies					
A2	Poly-cyclic aromatic hydrocarbons (PAHs) Total	No limit applies					
A2	Anthracene	No limit applies					
A2	Benzo[a]anthracene	No limit applies					
A2	Benzo[b]fluoranthene	No limit applies					
A2	Benzo[k]fluoranthene	No limit applies					
A2	Benzo[b]naph (2,1-d)thiophene	No limit applies					
A2	Benzo[c]phenanthrene	No limit applies					
A2	Benzo[ghi]perylene	No limit applies					
A2	Benzo[a]pyrene	No limit applies					
A2	Cholanthrene	No limit applies					
A2	Chrysene	No limit applies					
A2	Cyclopenta(c,d)pyrene	No limit applies					
A2	Dibenzo[ah]anthracene	No limit applies					
A2	Dibenzo[fa,i]pyrene	No limit applies					
A2	Fluoranthene	No limit applies					
A2	Indo[1,2,3-cd]pyrene	No limit applies					
A2	Naphthalene	No limit applies					

- [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.
- [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
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / ASH1

Reporting of Ash Composition for the period from 1st October to 31st December 2015

Ash Composition (LOI)	
Parameter	(%)
Bottom Ash Loss on Ignition (LOI)	0,70

Ash Composition (Metals, Dioxins, etc.)																
	Cd mg/ kg	Ti mg/ kg	Hg mg/ kg	Pb mg /kg	Cr mg/k g	Cu mg/ kg	Mn mg/ kg	Ni mg/ kg	As mg/ kg	Co mg/ kg	V mg/ kg	Zn mg/ kg	DIOXIN	WHO-TEQ ng/kg		
													DIOXIN I-TEQ	Humans/ mammals	Birds	Fish
													Q ng/ kg			
Bottom Ash	4,48	<1	<1	106 9	132	2622	917	96,6	4,78	76	17	2901	3,93	4,15	8,01	4,36
APC Residues Line 1	As per report ASH2															
APC Residues Line 2	As per report ASH2															

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Tyseley Waste Disposal Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / ASH2

Reporting of Ash Composition for the period from 1st October to 31st December 2015

Ash Composition (LOI)	
Parameter	(%)
Bottom Ash Loss on Ignition (LOI) (1)	1,46
Bottom Ash Loss on Ignition (LOI) (2)	1,65

Ash Composition (Metals, Dioxins, etc.)																
	Cd mg/ kg	TI mg/ kg	Hg mg/ kg	Pb mg/ kg	Cr mg/ kg	Cu mg/ kg	Mn mg/ kg	Ni mg/ kg	As mg/ kg	Co mg/ kg	V mg/ kg	Zn mg/ kg	DIOXIN			
													I-TEQ ng/kg			
													WHO-TEQ ng/kg			
													Humans/ mammals	Birds	Fish	
Bottom Ash(1)	4,78	<1	<1	711	128	1208	533	224	6,35	32,5	16,3	2034	3,65	3,79	6,90	3,89
Bottom Ash(2)	3,24	<1	<1	261	125	2131	605	103	3,90	90,7	18,5	2009	4,49	4,80	9,39	5,08
APC Residues (1)	223	<1	4,55	2780	72,3	724	326	22,3	48,7	11,4	10,8	13200	340	344	714	390
APC Residues (2)	263	<1	7,91	2900	61,1	827	319	21,8	35,3	11,8	10,7	14800	710	731	1427	811

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PP1

Annual Production/Treatment	
Total municipal waste incinerated (excluding separately collected fractions)	343311 tonnes
Total other wastes Incinerated	7782 tonnes
Electrical energy exported	124050 MWhrs
Electrical energy used on installation	16872 MWhrs

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PP1

Reporting of Performance Indicators for the period January 2015 to March 2015

Environmental Performance Indicators

Parameter	Quarterly Average	Units
Electrical energy Imported to site	1,37	kWhrs/ tonne of waste incinerated
Fuel oil consumption	2,66	lts/ tonne of waste incinerated
Mass of bottom ash produced	213	kg/ tonne of waste incinerated
Mass of APC residues produced	25,8	kg/ tonne of waste incinerated
Mass of other solid residues produced (Metal)	10,92	kg/ tonne of waste incinerated
Ammonia consumption	1,07	kg/ tonne of waste incinerated
Activated carbon consumption	0,50	kg/ tonne of waste incinerated
Lime consumption	7,46	kg/ tonne of waste incinerated
Water consumption	0,45	m ³ / tonne of waste incinerated

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PP1

Reporting of Performance Indicators for the period April 2015 to June 2015

Environmental Performance Indicators

Parameter	Quarterly Average	Units
Electrical energy Imported to site	50	kWhrs/ tonne of waste incinerated
Fuel oil consumption	5,44	lts/ tonne of waste incinerated
Mass of bottom ash produced	241	kg/ tonne of waste incinerated
Mass of APC residues produced	29,1	kg/ tonne of waste incinerated
Mass of other solid residues produced (Metal)	10,01	kg/ tonne of waste incinerated
Ammonia consumption	1,36	kg/ tonne of waste incinerated
Activated carbon consumption	0,58	kg/ tonne of waste incinerated
Lime consumption	7,69	kg/ tonne of waste incinerated
Water consumption	0,49	m ³ / tonne of waste incinerated

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PP1

Reporting of Performance Indicators for the period July 2015 to September 2015

Environmental Performance Indicators

Parameter	Quarterly Average	Units
Electrical energy Imported to site	48,39	kWhrs/ tonne of waste incinerated
Fuel oil consumption	2,06	lts/ tonne of waste incinerated
Mass of bottom ash produced	208	kg/ tonne of waste incinerated
Mass of APC residues produced	23	kg/ tonne of waste incinerated
Mass of other solid residues produced (Metal)	10,96	kg/ tonne of waste incinerated
Ammonia consumption	1,99	kg/ tonne of waste incinerated
Activated carbon consumption	0,53	kg/ tonne of waste incinerated
Lime consumption	6,69	kg/ tonne of waste incinerated
Water consumption	0,42	m ³ / tonne of waste incinerated

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / PP1

Reporting of Performance Indicators for the period October 2015 to December 2015

Environmental Performance Indicators

Parameter	Quarterly Average	Units
Electrical energy Imported to site	0	kWhrs/ tonne of waste incinerated
Fuel oil consumption	2,67	lts/ tonne of waste incinerated
Mass of bottom ash produced	204	kg/ tonne of waste incinerated
Mass of APC residues produced	22,5	kg/ tonne of waste incinerated
Mass of other solid residues produced (Metal)	10,88	kg/ tonne of waste incinerated
Ammonia consumption	1,21	kg/ tonne of waste incinerated
Activated carbon consumption	0,59	kg/ tonne of waste incinerated
Lime consumption	6,80	kg/ tonne of waste incinerated
Water consumption	0,43	m ³ / tonne of waste incinerated

Operator's comments :

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / W1

Annual Reporting of Periodically Monitored Emissions to Water Emission Point W1 Year 2015

Periodic (Extractive) sampling results		
Parameter		Emission Point W1
Mineral oils and hydrocarbons	mg/l	0,44

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / DR1

Reporting of Waste Disposal and Recovery for the year 2015

Waste Description	Disposal Route	Tonnes	Recovery Tonnes
1) Hazardous Wastes			
APC residues	To treatment process	8680	0
Other hazardous wastes			
Total hazardous waste		8680	
2) Non-Hazardous Wastes			
Bottom ash	To processing	75208	
Ferrous metal recovery	To scrap industry	3775	
Total non-hazardous waste		78983	
TOTAL WASTE	-	87663	

Trends in Waste Disposal and Recovery Year	Parameter	Named Waste	Total Waste	Waste per unit output
2014	APC residues		9092	
	Bottom ash		80614	
	Ferrous metal recovery		3851	
2013	APC residues		8898	
	Bottom ash		81858	
	Ferrous metal recovery		3142	
2012	APC residues		8772	
	Bottom ash		78103	
	Ferrous metal recovery		3640	
2011	APC residues		9644	
	Bottom ash		79257	
	Ferrous metal recovery		3748	

Operator's comments :

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / WU1

Reporting of Water Usage for the year 2015

Water Source	Usage (m ³)	Specific Usage (m ³ /t)
Mains water	150623	0,43
Site borehole	4125	0,012
River abstraction	NA	
TOTAL WATER USAGE	154748	

Trends in Water Usage Year	Named Water source	Total Water usage	Water per unit output
2014	Mains water	162988	0,44
	Site borehole	2852	0,0077
2013	Mains water	168898	0,46
	Site borehole	5944	0,02
2012	Mains water	203081	0,56
	Site borehole	19379	0,05
2011	Mains water	157568	0,44
	Site borehole	8135	0,02
2010	Mains water	159535	0,44
	Site borehole	6421	0,02
2009	Mains water	146424	0,6
	Site borehole	14664	0,06

Operator's comments :

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016

Permit Reference Number : WP3239SJ

Operator : Veolia ES Birmingham Limited

Installation : Tyseley Energy from Waste Plant

Form Number : Agency Form / WP3239SJ / EU1

Reporting of Energy Usage for the year 2015

Energy Source	Energy Usage Quantity	Primary Energy (MWh)	CO ₂ Produced (tonnes)
Electricity	16872 MWh	43867	7282
Natural Gas	tonnes	NA	
Gas Oil	1059t		3304
Recovered Fuel Oil	tonnes	NA	
TOTAL	-		

Trends in Energy Usage Year	Primary Energy usage	CO ₂ produced	CO ₂ per unit output
2015	43867 MWh	10586t	0,030
2014	69477 MWh	14949t	0,040
2013	67727 MWh	14243t	0,039
2012	65437 MWh	11343t	0,031
2011	65400 MWh	15036t	0,042
2010	67000 MWh	11122t	0,030
2009	68229 MWh	11326t	0,033
2008	69696 MWh	11570t	0,048

Operator's comments :

Signed
(authorised to sign as representative of Operator)

Date 27/01/2016