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Stack Emissions Testing Report Commissioned by
 Waldens Waste & Clearance Services Ltd

Installation Name & Address
 Waldens Waste & Clearance Services Ltd
 Pytchley Lodge Road
 Kettering
 NN15 6JQ

PPC Permit: TBC

Stack Reference
 Incinerator Stack

Dates of the Monitoring Campaign
 26th May, 8th June, 22nd June 2016

Job Reference Number
 CSW-2262

Report Written by
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Version
Version 2

Signature of Report Approver


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Executive Summary

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MONITORING OBJECTIVES

Waldens Waste & Clearance Services Ltd, Kettering
Incinerator Stack
26th May, 8th June, 22nd June 2016

Overall Aim of the Monitoring Campaign

Exova Catalyst were commissioned by Waldens Waste & Clearance Services Ltd to carry out stack emissions testing on the Incinerator Stack at Kettering.

The aim of the monitoring campaign was to demonstrate compliance with a set of emission limit values (ELVs) as specified in the Site's Permit.

Special Requirements

There were no special requirements.

Target Parameters

Total Particulate Matter, Sulphur Dioxide, Cadmium & Thallium, Heavy Metals, Mercury, Dioxins & Furans, Hydrogen Chloride, Hydrogen Fluoride, Total VOCs (as Carbon), Oxides of Nitrogen (as NO₂), Carbon Monoxide

Executive Summary

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MONITORING RESULTS

Waldens Waste & Clearance Services Ltd, Kettering
Incinerator Stack
26th May, 8th June, 22nd June 2016

where MU = Measurement Uncertainty associated with the Result

Parameter	Concentration				Mass Emission			
	Units	Result	MU +/-	Limit	Units	Result	MU +/-	Limit
Total Particulate Matter	¹ mg/m ³	4.1	0.58	10	g/hr	3.3	0.50	-
Sulphur Dioxide	¹ mg/m ³	5.7	0.56	200	g/hr	4.6	0.52	-
Cadmium & Thallium	¹ mg/m ³	0.0021	0.0004	0.05	g/hr	0.0017	0.0003	-
Heavy Metals	¹ mg/m ³	0.23	0.04	0.5	g/hr	0.18	0.03	-
Mercury	¹ mg/m ³	<0.00071	0.00010	0.05	g/hr	<0.00057	0.00009	-
Dioxins & Furans Upper Limit (worst case where <LOD = LOD)								
Dioxins & Furans (NATO I-TEQ)	¹ ng/m ³	0.067	0.017	0.1	µg/hr	0.054	0.014	-
Dioxins & Furans (WHO TEQ Humans / Mammals)	¹ ng/m ³	0.065	0.017	-	µg/hr	0.052	0.014	-
Dioxins & Furans (WHO TEQ Fish)	¹ ng/m ³	0.074	0.019	-	µg/hr	0.060	0.016	-
Dioxins & Furans (WHO TEQ Birds)	¹ ng/m ³	0.15	0.04	-	µg/hr	0.12	0.03	-
Dioxins & Furans Lower Limit (best case where <LOD = 0)								
Dioxins & Furans (NATO I-TEQ)	¹ ng/m ³	0.067	0.017	-	µg/hr	0.054	0.014	-
Dioxins & Furans (WHO TEQ Humans / Mammals)	¹ ng/m ³	0.065	0.017	-	µg/hr	0.052	0.014	-
Dioxins & Furans (WHO TEQ Fish)	¹ ng/m ³	0.074	0.019	-	µg/hr	0.060	0.016	-
Dioxins & Furans (WHO TEQ Birds)	¹ ng/m ³	0.15	0.04	-	µg/hr	0.12	0.03	-
Hydrogen Chloride	¹ mg/m ³	0.19	0.02	10	g/hr	0.33	0.11	-
Hydrogen Fluoride	¹ mg/m ³	0.074	0.007	1	g/hr	0.060	0.006	-
Total VOCs (as Carbon)	¹ mg/m ³	0.60	1.5	10	g/hr	0.48	1.2	-
Oxides of Nitrogen (as NO ₂)	¹ mg/m ³	128	5.5	200	g/hr	103	7.4	-
Carbon Monoxide	¹ mg/m ³	8.1	1.6	50	g/hr	6.5	1.3	-
Oxygen	% v/v	Dry 13.2	0.40					
Water Vapour	% v/v	6.4	0.34					
Stack Gas Temperature	°C	766						
Stack Gas Velocity	m/s	16.4	0.57					
Volumetric Flow Rate (ACTUAL)	m ³ /hr	4162	238					
Volumetric Flow Rate (REF)	¹ m ³ /hr	804	46					

NOTE: VOLUMETRIC FLOW RATE & VELOCITY DATA TAKEN FROM THE PRELIMINARY VELOCITY TRAVERSE.

¹ Reference Conditions (REF) are: 273K, 101.3kPa, dry gas, 11% oxygen.

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PLANT PHOTOS

Photo 1



Photo 2



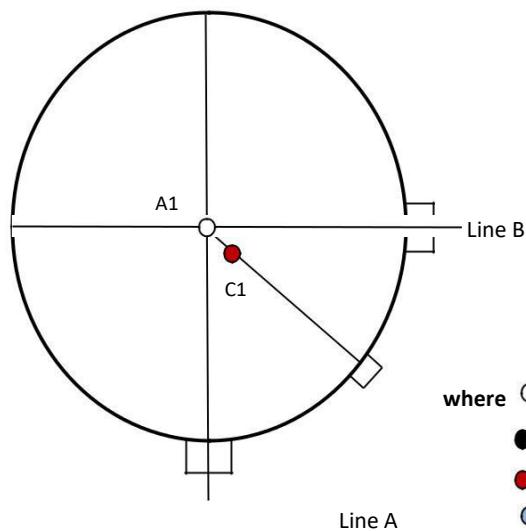
Photo 3



Photo 4



SAMPLE POINTS



- where
- = isokinetic point sampled at
 - = isokinetic point not sampled at
 - = combustion gases sample point
 - = non-isokinetic sample point