

6 RESULTS

Table 13: Results Summary

RESULTS			
Source Data			
Client			Capral
Site			Smithfield
Sample Point			Oven 3 (Log Oven)
Reference Method			USEPA M7E, M6C, M10 - CONSTANT FLOW
Test Parameters			Gases & Flow
Process conditions			Normal
Historical Data & Hardware Information - Manual Sample			
Run Start Date		dd-mm-yyyy	30/10/2023
Project ID			15238
Run ID			-1
Run Start Time	Ti	hh:mm	12:02
Run Stop Time	Tf	hh:mm	13:01
Positioning compliance check with AS4323.1			Ideal
Flow & temperature compliance check with AS4323.1			Yes
Traverse pt factors; up, down, total & trav pts			1, 1, 1, 4
Console Serial Number			SN715
Meter Calibration Factor	(Y)		1028
Pitot Tube Coefficient	(Cp)		0.84
Stack Test Data			
Actual Sampling Time	(Q)	minutes	60
Average Stack Temperature	(ts)avg	°C	285.00
Barometric Pressure	(Pb)	mb	1016
Stack Static Pressure	(Pstatic)	mm H2O	8.50
Absolute Stack Pressure	(Ps)	mb	1016
Moisture Content Data			
Water vapour concentration	(Bws(calc))	%	9.68
Stack Gas Density Analysis Data			
Carbon Dioxide Percentage	(%CO2)	%	4.59
Oxygen Percentage	(%O2)	%	13.37
Carbon Monoxide Percentage	(%CO)	%	0.01
Nitrogen Percentage	(%N2)	%	82.03
Dry Gas Molecular Weight	(Md)	kg/Nm³	131
Dry Gas Molecular Weight	(Md)	g/g-mole	29.27
Wet Stack Gas Molecular Weight	(Ms)	g/g-mole	28.18
Volumetric Flow Rate Data (at Sample Plane)			
Average Stack Gas Velocity	(vs)	m/sec	20.5
Stack Diameter	Ds	m	0.30
Stack Cross-Sectional Area	(As)	m²	0.071
Upstream distance (from disturbance)	B	m	13
Downstream distance (from disturbance)	A	m	6.0
Actual Stack Flow Rate	(Qaw)	m³/min	86.9
Wet Standard Stack Flow Rate	(Qsw)	Nm³/min-wet	42.7
Dry Standard Stack Flow Rate	(Qsd)	Nm³/min-dry	38.5
Instrumental Analyser - Historical Data & Hardware Information			
Analyser serial number, make & model		value	SN830
Analyser Run Start Time	Ti	hh:mm	12:02
Analyser Run Stop Time	Tf	hh:mm	13:02
Analyser Total Sampling Time	(Q)	hh:min	100
Instrumental Analyser Raw Data Averages			
Oxides of Nitrogen	(NOx)	ppm	115
Carbon Monoxide	(CO)	ppm	117.4
Average Oxides of Nitrogen (USEPA Method 7E - instrumental analyser)			
Oxides of Nitrogen (NOx as NO2)	(Conc)	mg/Nm³	23.55
Oxides of Nitrogen at 7 %O2	(Conc)	mg/Nm³	43.49
Oxides of Nitrogen (NOx as NO2)	(E)	g/min	0.91
Average Carbon Monoxide (USEPA Method 10 - instrumental analyser)			
Carbon Monoxide (CO)	(Conc)	mg/Nm³	146.82
Carbon Monoxide at 7 %O2	(Conc)	mg/Nm³	271.13
Carbon Monoxide (CO)	(E)	g/min	5.66

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RESULTS						
Source Data						
Client			Capral	Capral	Capral	
Site			Smithfield	Smithfield	Smithfield	
Sample Point			Oven 1	Oven 2	Oven 3 (Log Oven)	
Reference Method			USEPA M7E, M6C, M10 - CONST	USEPA M7E, M6C, M10 - CONSTANT FLOW	USEPA M18 - CONSTANT FLOW	
Test Parameters			Gases & Flow	Gases & Flow	Gases & VOC & Flow	
Process conditions			Normal	Normal	Normal	
Historical Data & Hardware Information - Manual Sample						
Run Start Date		dd-mm-yyyy	4/09/2023	4/09/2023	4/09/2023	
Project ID			15179	15179	15179	
Run ID			-1	-2	-3	
Run Start Time	Ti	hh:mm	10:00	11:15	12:51	
Run Stop Time	Tf	hh:mm	11:00	12:15	13:50	
Positioning compliance check with AS4323.1			Non-conforming	Non-ideal	Ideal	
Flow & temperature compliance check with AS4323.1			Yes	Yes	Yes	
Traverse pt factors; up, down, total & trav pts			1.2 , 1 , 1.2 , 1	1.15 , 1 , 1.15 , 6	1 , 1 , 1 , 4	
Console Serial Number			NA	NA	SN715	
Meter Calibration Factor	(Y)		1.028	1.028	1.028	
Orifice Coefficient		(DH@)	N/A	N/A	N/A	
Pitot Tube Coefficient	(Cp)		0.84	0.84	0.84	
Actual Nozzle Diameter	(Dna)	mm	N/A	N/A	N/A	
Stack Test Data						
Initial Meter Volume	(Vm)i	m ³	NA	NA	0.00	
Final Meter Volume	(Vm)f	m ³	NA	NA	0.06	
Actual Sampling Time	(Q)	minutes	60	60	60	
Average Meter Temperature	(tm)avg	°C	NA	NA	28.00	
Average Stack Temperature	(ts)avg	°C	167.00	152.00	321.75	
Barometric Pressure	(Pb)	mb	1015	1015	1015	
Stack Static Pressure	(Pstatic)	mm H2O	2.80	-1.20	12.50	
Absolute Stack Pressure	(Ps)	mb	1015	1015	1016	
Sample Volumes						
Actual Meter Volume	(Vm)	m ³	NA	NA	0.0617	
Standard Meter Volume	(Vm)std	Nm ³	NA	NA	0.0560	
Moisture Content Data						
Water vapour concentration	(Bws(calc))	%	7.35	7.28	7.08	
Stack Gas Density Analysis Data						
Carbon Dioxide Percentage	(%CO2)	%	2.92	2.14	3.67	
Oxygen Percentage	(%O2)	%	16.59	17.35	14.93	
Carbon Monoxide Percentage	(%CO)	%	0.00	0.00	0.01	
Nitrogen Percentage	(%N2)	%	80.49	80.51	81.39	
Dry Gas Molecular Weight	(Md)	kg/Nm ³	1.30	1.30	1.30	
Dry Gas Molecular Weight	(Md)	g/g-mole	29.13	29.04	29.18	
Wet Stack Gas Molecular Weight	(Ms)	g/g-mole	28.31	28.23	28.39	
Volumetric Flow Rate Data (at Sample Plane)						
Average Stack Gas Velocity	(vs)	m/sec	12.00	10.75	22.84	
Stack Diameter	Ds	m	0.46	0.46	0.30	
Stack Cross-Sectional Area	(As)	m ²	0.166	0.166	0.071	
Upstream distance (from disturbance)	B	m	1.20	1.10	1.30	
Downstream distance (from disturbance)	A	m	0.73	1.00	6.00	
Actual Stack Flow Rate	(Qaw)	m ³ /min	120	107	97	
Wet Standard Stack Flow Rate	(Qsw)	Nm ³ /min-wet	74	69	45	
Dry Standard Stack Flow Rate	(Qsd)	Nm ³ /min-dry	68.9	63.9	41.4	
Percent of Isokinetic Rate	(I)	%	N/A	N/A	N/A	
Instrumental Analyser - Historical Data & Hardware Information						
Analyser serial number, make & model		value	SN830	SN830	SN830	
Analyser Run Start Time	Ti	hh:mm	10:00	11:15	12:51	
Analyser Run Stop Time	Tf	hh:mm	11:00	12:15	13:50	
Analyser Total Sampling Time	(Q)	hh:min	1:00	1:00	0:59	
Instrumental Analyser Raw Data Averages						
Oxides of Nitrogen	(NOx)	ppm	14.5	13.9	23.8	
Carbon Monoxide	(CO)	ppm	43.0	27.5	126.4	
Average Oxides of Nitrogen (USEPA Method 7E - instrumental analyser)						
Nitrogen Oxides (NOx as NO2)	(Conc)	mg/Nm ³	29.7	28.6	48.9	
Nitrogen Oxides (NOx as NO2)	(E)	g/min	2.0	1.8	2.0	
Average Carbon Monoxide (USEPA Method 10 - instrumental analyser)						
Carbon Monoxide (CO)	(Conc)	mg/Nm ³	53.8	34.4	158.1	
Carbon Monoxide (CO)	(E)	g/min	3.71	2.20	6.55	
OTHER ANALYTES (PLEASE SPECIFY)						
TVOC (as propane)	(Conc)	mg/Nm ³	NA	NA	< 0.457	
TVOC (as propane) emission rate	(E)	g/min	NA	NA	< 0.0189	

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Source Data				Stack SDS version - 341		Stack SDS version - 341		Stack SDS version - 341	
Client				Capral		Capral		Capral	
Site				Smithfield		Smithfield		Smithfield	
Sample Point				Oven 1		Oven 2		Log Oven Stack	
Reference Method				USEPA Method 4 - CONSTANT FLOW		US EPA Method 4 - CONSTANT FLOW		USEPA Method 4 - CONSTANT FLOW	
Test Parameters				Moisture, Flow & Gases		Moisture, Flow & Gases		VOCs, Moisture, Flow & Gases	
Process conditions				Normal		Normal		Normal	
Historical Data & Hardware Information - Manual Sample									
Run Start Date			dd-mm-yyyy	20/06/2023		20/06/2023		20/06/2023	
Project ID				14938		14938		14938	
Run ID				-1		-2		-3	
Run Start Time		Ti	hh:mm	9:15		10:30		13:20	
Run Stop Time		Tf	hh:mm	10:15		1130		14:20	
Positioning compliance check with AS4323.1				Non-conforming		Non-ideal		Ideal	
Flow & temperature compliance check with AS4323.1				No		No		Yes	
Traverse pt factors; up, down, total & trav pts				12 , 1, 12 , 1		115 , 1, 115 , 12		1, 1, 1, 4	
Console Serial Number				SN715		SN715		SN715	
Meter Calibration Factor		(Y)		100.4		100.4		100.4	
Orifice Coefficient			(DH@)	N/A		N/A		N/A	
Pitot Tube Coefficient		(Cp)		0.84		0.84		0.84	
Actual Nozzle Diameter		(Dna)	mm	N/A		N/A		N/A	
Stack Test Data									
Initial Meter Volume		(Vm)i	m3	0.0000		0.0000		0.0000	
Final Meter Volume		(Vm)f	m3	0.0680		0.0630		0.3250	
Actual Sampling Time		(Q)	minutes	60		60		60	
Average Stack Temperature		(ts)avg	oC	150.0		117.0		308.0	
Barometric Pressure		(Pb)	mb	1011		1011		1011	
Stack Static Pressure		(Pstatic)	mm H2O	350		-250		1700	
Absolute Stack Pressure		(Ps)	mb	1011		1010		1012	
Sample Volumes									
Actual Meter Volume		(Vm)	m3	0.0683		0.0633		0.3263	
Moisture Content Data									
Water vapour concentration		(Bws(calc))	%	6.05		5.95		8.37	
Stack Gas Density Analysis Data									
Carbon Dioxide Percentage		(%CO2)	%	185		0.73		169	
Oxygen Percentage		(%O2)	%	17.40		17.72		17.48	
Carbon Monoxide Percentage		(%CO)	%	0.00		0.00		0.02	
Nitrogen Percentage		(%N2)	%	80.75		81.55		80.80	
Dry Gas Molecular Weight		(Md)	kg/ Nm3	129		129		129	
Dry Gas Molecular Weight		(Md)	g/ g-mole	28.99		28.83		28.97	
Wet Stack Gas Molecular Weight		(Ms)	g/ g-mole	28.33		28.18		28.05	
V olumetric Flow Rate Data (at Sample Plane)									
Average Stack Gas Velocity		(vs)	m/ sec	12.36		6.94		25.89	
Stack Diameter		Ds	m	0.460		0.460		0.300	
Stack Cross-Sectional Area		(As)	m2	0.166		0.166		0.071	
Upstream distance (from disturbance)		B	m	120		110		130	
Downstream distance (from disturbance)		A	m	0.73		100		600	
Actual Stack Flow Rate		(Qaw)	m3/ min	123.3		69.15		109.8	
Wet Standard Stack Flow Rate		(Qsw)	Nm3/ min-wet	79.40		48.28		51.56	
Dry Standard Stack Flow Rate		(Qsd)	Nm3/ min-dry	74.59		45.41		47.25	
Instrumental Analyser - Historical Data & Hardware Information									
Analyser serial number, make & model			value	SN830		SN830		SN830	
Analyser Run Start Time		Ti	hh:mm	9:15		10:30		13:20	
Analyser Run Stop Time		Tf	hh:mm	10:15		1130		14:20	
Analyser Total Sampling Time		(Q)	hh:min	100		100		100	
Instrumental Analyser Raw Data Averages									
Oxides of Nitrogen		(NOx)	ppm	1356		1023		538	
Carbon Monoxide		(CO)	ppm	26.39		26.95		209.9	
Average Oxides of Nitrogen (USEPA Method 7E - instrumental analyser)									
Nitrogen Oxides (NOx as NO2)		(Conc)	mg/ Nm3	27.84		210.1		110.4	
Nitrogen Oxides (NOx as NO2)		(E)	g/ min	20.77		0.95		0.522	
Average Carbon Monoxide (USEPA Method 10 - instrumental analyser)									
Carbon Monoxide (CO)		(Conc)	mg/ Nm3	33.00		33.70		262.5	
Carbon Monoxide (CO)		(E)	g/ min	2.462		1530		12.40	