Run Report - Hexavalent Chrome

Project	Ash Grove TDF Baseline	Run #	102
Project #	2870	Location	Humbolt
Test Date	5/26/2005	Method	SW846 0061

Stack Dimensions

◉ Circular ○ Rtangular		
Stack Axis # 1	in.	105.00
Stack Axis # 2	in.	105.00
Cross-Section Area	ft^2	60.13

Stack Gas Conditions

Barometric Pressure	in. Hg	28.82
Console Elevation	ft	0
Stack Elevation	ft	0
Static Pressure	in. H_2O	-0.33
Stack Pressure	in. Hg	28.80
O_2	%	6.20
CO_2	%	24.90
H_2O	%	17.40
Dry Mol. Weight	g/g-mol	32.23
Wet Mol. Weight	g/g-mol	29.76

Isokinetics

Run Time	min	180.00
Nozzle Diameter	in.	0.267
Isokineticity	%	99.8
90-110% Criteria		Pass

Dry Gas Volume

Inital DGM Volume	ft^3	955.700
Final DGM Volume	ft^3	1058.714
Leak Volume	ft^3	0.000
Leak-Check Volume	ft^3	0.639
Net DGM Volume	ft^3	102.785
Meter Correction (ΔY)		1.004
Corrected Gas Volume	dscf	94.218

Traverse Point Data

Average Stack Temp.	° F	307
Average SQRT(ΔP)	in. H_2O	0.605
Average ΔP	in. H_2O	0.369
Average ΔH	in. H_2O	1.10
Average Meter Temp.	° F	98

Flow Rate

Pitot Coefficient		0.840
Gas Velocity	ft/min	2,466
Volumetric Flow, Actual	acfm	148,306
Corrected Flow, Wet	scfm	98,202
Corrected Flow, Dry	dscfm	81,115

Emissions

Total Chrome Collected	µg	2.39
Chrome Concentration (Wet)	µg/acf	0.0139
Chrome Concentration (Dry)	µg/dscf	0.0253
Chrome Concentration (Dry)	gr/dscf	3.91E-07
Emission Rate	lb/hr	2.72E-04

Metric Equivalents - Hexavalent Chrome

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Stack Dimensions

◉ Circular ○ Rectangular

Stack Axis # 1	m	2.67
Stack Axis # 2	m	2.67
Cross-Section Area	m^2	5.586

Stack Gas Conditions

Barometric Pressure	mm Hg	732.0
Static Pressure	mm H_2O	-8.4
Stack Pressure	mm Hg	731.4
O_2	%	6.20
CO_2	%	24.90
H_2O	%	17.40
Dry Mol. Weight	g/g-mol	32.23
Wet Mol. Weight	g/g-mol	29.76

Isokinetics

Run Time	min	180.00
Nozzle Diameter	in.	6.782
Isokineticity	%	99.8
90-110% Criteria		Pass

Dry Gas Volume

Inital DGM Volume	m^3	27.063
Final DGM Volume	m^3	29.980
Leak Volume	m^3	0.000
Leak-Check Volume	m^3	0.018
Meter Correction (ΔY)		1.004
Net DGM Volume	m^3	2.911
Corrected Gas Volume	dscm	2.668

Traverse Point Data

Average Stack Temp.	° C	153
Average SQRT(ΔP)	mm H_2O	3.049
Average ΔP	mm H_2O	9.366
Average ΔH	mm H_2O	28.05
Average Meter Temp.	° C	37

Flow Rate

Pitot Coefficient		0.840
Gas Velocity	m/min	752
Volumetric Flow, Actual	acm/min	4,200
Corrected Flow, Wet	scm/min	2,781
Corrected Flow, Dry	dscm/min	2,297

Emissions

Total Chrome Collected	µg	2.39
Chrome Concentration (Wet)	µg/acm	0.489
Chrome Concentration (Dry)	µg/dscm	0.895
Chrome Concentration (Dry)	mg/dscm	0.0009
Emission Rate	mg/hr	123.34

AIR SOURCE TECHNOLOGIES, INC.

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Traverse Point	Stack Temp (° F)	ΔP (in. H_2O)	ΔH (in. H_2O)	Meter In (° F)	Meter Out (° F)
A-1	305	0.280	0.79	77	76
A-1	305	0.300	0.83	78	77
A-2	309	0.390	1.15	83	79
A-2	308	0.380	1.10	87	81
A-3	308	0.420	1.25	91	85
A-3	308	0.410	1.30	94	87
B-1	302	0.260	0.78	94	95
B-1	303	0.260	0.78	98	95
B-2	307	0.380	1.15	101	97
B-2	307	0.390	1.15	104	98
B-3	308	0.420	1.25	106	99
B-3	309	0.410	1.25	109	102
C-1	303	0.330	0.98	100	100
C-1	302	0.330	1.05	100	98
C-2	308	0.420	1.25	104	98
C-2	309	0.410	1.25	105	100
C-3	311	0.440	1.30	108	102
C-3	310	0.440	1.40	109	103
D-1	305	0.270	0.81	105	105
D-1	305	0.270	0.78	107	105
D-2	308	0.380	1.10	110	108
D-2	309	0.400	1.25	112	107
D-3	311	0.430	1.35	114	107
D-3	311	0.430	1.20	115	108
Average	**307**	**0.369**	**1.10**	**100**	**96**

Leak Check Volumes

Start	980.460	1005.808	1032.858		
End	980.700	1005.965	1033.100		
Difference	0.240	0.157	0.242		

Run Analysis - Hexavalent Chrome

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Impinger Weights

		Initial	Final	ference
Impinger 1	g			0.0
Impinger 2	g			0.0
Impinger 3	g			0.0
Silica Gel	g			0.0
			Total	0.0

Moisture

Moisture Volume	scf	0.000
Dry Gas Volume	dscf	94.218
Calculated Moisture	%	17.40
Saturation Moisture	%	N/A
Reported Moisture	%	17.40

Chrome Analysis

Total Sample Volume	ml	1186
Cr Concentration	µg/L	3.0
Dilution Factor		1.000
Total Chrome	µg	2.39

Blank Correction	µg	1.17