

Test ID	ADEC
Date	2.26.2020

Module 1			
Variable	Description	Value	Units
	final volume module 1	940.065	cubic feet
	initial volume module 1	875.497	cubic feet
V _{tot1}	total gas volume collected (module 1)	64.568	cubic feet
Average ΔH	average delta H over entirety of run	0.03	in water
T _{in}	average gas meter temperature	67	°F
P _{bar}	barometric pressure	29.62	in Hg
Y	DGM calibration factor	1.003	unitless
K _{s1}	volume corrected to standard conditions	17.64	R/(in Hg)
V _{std1}	volume gas sampled (corrected to standard conditions)	64.18199886	dscf
Total Catch	total catch (raw data)	45.805	mg
C ₁	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	0.000733674	g/dscf

Module 2			
Variable	Description	Value	Units
	final volume module 2	512.850	cubic feet
	initial volume module 2	451.580	cubic feet
V _{tot2}	total gas volume collected (module 2)	61.270	cubic feet
Average ΔH	average delta H over entirety of run	0.20	in water
T _{in}	average gas meter temperature	68	°F
P _{bar}	barometric pressure	29.62	in Hg
Y	DGM calibration factor	1.003	unitless
K _{s2}	volume corrected to standard conditions	17.64	°F/(in Hg)
V _{std2}	volume gas sampled (corrected to standard conditions)	60.91375994	dscf
Total Catch	total catch (raw data)	44.62	mg
C ₂	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	0.000732511	g/dscf

Ambient			
Variable	Description	Value	Units
	final volume ambient	132.8084	cubic meters
	initial volume ambient	131.6784	cubic meters
V _{tot}	total gas volume collected (ambient)	39.9056	cubic feet
Average ΔH	average delta H over entirety of run	6.15	in water
T _{in}	average gas meter temperature	64.7	°F
P _{bar}	barometric pressure	29.62	in Hg
Y	DGM calibration factor	1.002	unitless
K _{s3}	volume corrected to standard conditions	17.64	°F/(in Hg)
V _{std3}	volume gas sampled (corrected to standard conditions)	40.44946171	dscf
Total Catch	total catch (raw data)	0.745	mg
C ₃	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	1.8418E-05	g/dscf

Total Particulate Matter (based on ISS-2 and AS-1 data)			
C ₁	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	0.000733092	g/dscf
C ₂	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	1.8418E-05	g/dscf
Q _{td}	average gas flow rate through dilution tunnel	521.0370269	dscf/min
B _{wt}	water vapor in gas stream (assumed) (proportion by volume)	0.02	unitless
V ₁	average velocity of gas through dilution tunnel	26.00213024	ft/s
A	cross-sectional area of dilution tunnel	0.349	square ft
T ₁	average gas temperature in dilution tunnel	535.2375926	R
T _{std}	absolute average gas temperature in dilution tunnel	528	R
P ₁	average gas static pressure in dilution tunnel	29.61632588	in Hg
P _{std}	standard absolute pressure	29.92	in Hg
F _p	adjustment factor for center of tunnel pitot tube placement	0.93	unitless
V _{adv}	average gas velocity after multi point pitot traverse	530	ACFM
V _{std1}	average gas velocity at center of dilution tunnel calculated after pitot tube traverse	570	ACFM
K _p	pitot tube constant	85.49	ft/(lb/(lb-mol) * (ft/s) ²)
C _p	pitot tube coefficient	0.99	unitless
ΔP _{std}	average velocity pressure in dilution tunnel	0.175185185	in H ₂ O
M ₁	dilution tunnel dry gas MW (assumed)	29	lb/(lb-mol)
θ	total sampling time	539.00	min
E _T	total particulate emissions	197.899989	g

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