

Test ID	ADEC
Date	2/13/20

Module 1			
Variable	Description	Value	Units
	final volume module 1	943.310	cubic feet
	initial volume module 1	877.390	cubic feet
V _{tot1}	total gas volume collected (module 1)	65.920	cubic feet
Average ΔH	average delta H over entirety of run	0.03	in water
T _{in}	average gas meter temperature	66	°F
P _{bar}	barometric pressure	29.3	in Hg
Y	DGM calibration factor	1.007	unitless
K _c	volume corrected to standard conditions	17.64	R/(in Hg)
V _{total}	volume gas sampled (corrected to standard conditions)	65.2904347	dscf
Total Catch	total catch (raw data)	63.225	mg
C _p	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	0.00096837	g/dscf

Module 2			
Variable	Description	Value	Units
	final volume module 2	383.115	cubic feet
	initial volume module 2	309.570	cubic feet
V _{tot2}	total gas volume collected (module 2)	73.545	cubic feet
Average ΔH	average delta H over entirety of run	0.03	in water
T _{in}	average gas meter temperature	66	°F
P _{bar}	barometric pressure	29.3	in Hg
Y	DGM calibration factor	1.003	unitless
K _c	volume corrected to standard conditions	17.64	°F/(in Hg)
V _{total}	volume gas sampled (corrected to standard conditions)	72.47063487	dscf
Total Catch	total catch (raw data)	69.065	mg
C _p	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	0.000953007	g/dscf

Ambient			
Variable	Description	Value	Units
	final volume ambient	130.4160	cubic meters
	initial volume ambient	129.1494	cubic meters
V _{tot}	total gas volume collected (ambient)	44.7296	cubic feet
Average ΔH	average delta H over entirety of run	6.11	in water
T _{in}	average gas meter temperature	64.8	°F
P _{bar}	barometric pressure	29.3	in Hg
Y	DGM calibration factor	1.002	unitless
K _c	volume corrected to standard conditions	17.64	°F/(in Hg)
V _{total}	volume gas sampled (corrected to standard conditions)	44.84427481	dscf
Total Catch	total catch (raw data)	0.305	mg
C _p	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	6.80131E-06	g/dscf

Total Particulate Matter (based on ISS-2 and AS-1 data)			
C _p	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	0.00096069	g/dscf
C _a	concentration of PM in tunnel gas (dry basis, corrected to standard conditions)	6.8013E-06	g/dscf
Q _{td}	average gas flow rate through dilution tunnel	513.328476	dscf/min
B _{td}	water vapor in gas stream (assumed) (proportion by volume)	0.02	unitless
V _c	average velocity of gas through dilution tunnel	25.7572183	ft/s
A	cross-sectional area of dilution tunnel	0.349	square ft
T _c	average gas temperature in dilution tunnel	532.343366	R
T _{td}	absolute average gas temperature in dilution tunnel	528	R
P _c	average gas static pressure in dilution tunnel	29.2963259	in Hg
P _{td}	standard absolute pressure	29.92	in Hg
F _p	adjustment factor for center of tunnel pitot tube placement	0.93	unitless
V _{tdw}	average gas velocity after multi point pitot traverse	530	ACFM
V _{tdwt}	average gas velocity at center of dilution tunnel calculated after pitot tube traverse	570	ACFM
K _p	pilot tube constant	85.49	$\frac{ft^3 \cdot sec^2 / lb}{min \cdot in^4}$
C _p	pilot tube coefficient	0.99	unitless
ΔP _{td}	average velocity pressure in dilution tunnel	0.17096774	in H ₂ O
M _c	dilution tunnel dry gas MW (assumed)	29	lb/(lb-mol)
Θ	total sampling time	611.00	min
E _t	total particulate emissions	299.17994	g

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