

| Module 1 | | | |
|--------------------|---------------------------------------------------------------------------------|------------|------------|
| Variable | Description | Value | Units |
| | final volume module 1 | 877.320 | cubic feet |
| | initial volume module 1 | 786.703 | cubic feet |
| V_{m1} | total gas volume collected (module 1) | 90.617 | cubic feet |
| Average ΔH | average delta H over entirety of run | 0.03 | in water |
| T_m | average gas meter temperature | 68 | °F |
| P_{bar} | barometric pressure | 29.75 | in Hg |
| Y | DGM calibration factor | 1.007 | unitless |
| K_1 | volume corrected to standard conditions | 17.64 | R/(in Hg) |
| V_{std} | volume gas sampled (corrected to standard conditions) | 90.8169447 | scf |
| Total Catch | total catch (raw data) | 32.38 | mg |
| C_1 | concentration of FM in tunnel gas (dry basis, corrected to standard conditions) | 0.00635654 | g/scf |

| Module 2 | | | |
|--------------------|---------------------------------------------------------------------------------|-------------|------------|
| Variable | Description | Value | Units |
| | final volume module 2 | 309.510 | cubic feet |
| | initial volume module 2 | 208.458 | cubic feet |
| V_{col} | total gas volume collected (module 2) | 101.052 | cubic feet |
| Average ΔH | average delta H over entirety of run | 0.03 | in water |
| T_m | average gas meter temperature | 68 | °F |
| P_{bar} | barometric pressure | 29.75 | in Hg |
| Y | DGM calibration factor | 1.003 | unitless |
| K_c | volume corrected to standard conditions | 17.64 | °F/(in Hg) |
| V_{corr} | volume gas sampled (corrected to standard conditions) | 100.8103755 | scf |
| Total Catch | total catch (raw data) | 37.585 | mg |
| C_c | concentration of PM in tunnel gas (dry basis, corrected to standard conditions) | 0.000372829 | g/scf |

| Ambient | | | |
|--------------------|----------------------------------------------------------------------------------|-------------|--------------|
| Variable | Description | Value | Units |
| | final volume ambient | 129.1492 | cubic meters |
| | initial volume ambient | 127.4621 | cubic meters |
| V_{gas} | total gas volume collected (ambient) | 59.5794 | cubic feet |
| Average ΔH | average delta H over entirety of run | 6.07 | in water |
| T_m | average gas meter temperature | 64.5 | °F |
| P_{bar} | barometric pressure | 29.75 | in Hg |
| γ | DGM calibration factor | 1.001 | unitless |
| K_1 | volume corrected to standard conditions | 17.64 | %(in Hg) |
| $V_{standard}$ | volume gas sampled (corrected to standard conditions) | 60.609919 | dsf |
| Total Catch | total catch (raw data) | 0.09 | mg |
| C_g | concentration of PM1 in tunnel gas (dry basis, corrected to standard conditions) | 1.48491E-06 | g/dscf |

| Total Particulate Matter (based on TSS-2 and AS-1 data) | | | |
|---------------------------------------------------------|----------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C_c | concentration of PM in tunnel gas (dry basis, corrected to standard conditions) | 0.00036469 | g/dscf |
| C_d | concentration of PM in tunnel gas (dry basis, corrected to standard conditions) | 1.4849E-06 | g/dscf |
| Q_{dil} | average gas flow rate through dilution tunnel | 516.295973 | dscf/min |
| B_{vol} | water vapor in gas stream (assumed) (proportion by volume) | 0.02 | unitless |
| v_d | average velocity of gas through dilution tunnel | 25.5183576 | ft/s |
| A | cross-sectional area of dilution tunnel | 0.349 | square ft |
| T_d | average gas temperature in dilution tunnel | 532.429855 | R |
| T_{ref} | absolute average gas temperature in dilution tunnel | 528 | R |
| P_c | average gas static pressure in dilution tunnel | 29.7463259 | in Hg |
| P_{ref} | standard absolute pressure | 29.92 | in Hg |
| F_p | adjustment factor for center of tunnel pitot tube placement | 0.93 | unitless |
| V_{avg} | average gas velocity after multi point pitot traverse | 530 | ACFM |
| V_{cent} | average gas velocity at center of dilution tunnel calculated after pitot tube traverse | 570 | ACFM |
| K_p | pitot tube constant | 85.49 | $\frac{\text{ft} \cdot \text{lb}}{\text{lb} \cdot \text{ft}^2} \cdot \frac{\text{min}^2}{\text{in}^2} \cdot \frac{\text{in}^2}{\text{in}^2} \cdot \frac{\text{in}^2}{\text{in}^2} \cdot \frac{\text{in}^2}{\text{in}^2}$ |
| C_p | pitot tube coefficient | 0.99 | unitless |
| ΔP_{cg} | average velocity pressure in dilution tunnel | 0.17036145 | in H ₂ O |
| M_d | dilution tunnel dry gas MW (assumed) | 29 | lb/(lb-mol) |
| θ | total sampling time | 827.00 | min |
| E_t | total particulate emissions | 155.07802 | g |

Quality Review _____