

# Comparison of Condar measurement to EPA method 5G-3

OXYGEN DRIFT??

| Run Data                |        |        |        |        |        |        |          |          |        |         |         |
|-------------------------|--------|--------|--------|--------|--------|--------|----------|----------|--------|---------|---------|
|                         | Run 1  | Run 2  | Run 3  | Run 4  | Run 5  | Run 6  | Run 7    | Run 8    | Run 9  | Run 10  | Run 11  |
| Particulate Catch, gm   | 0.0155 | 0.0200 | 0.0191 | 0.0231 | 0.159  | 0.0424 | 0.0275   | 0.5814   | 0.0534 | 0.0908  | 0.1325  |
| Length of test, Hr      | 2      | 2      | 2      | 2      | 2.66   | 2.66   | 1.833333 | 0.833333 | 2.6666 | 2.6666  | 3.83333 |
| Orifice dH, "H2O        | 0.10   | 0.16   | 0.2    | 0.2    | 0.12   | 0.12   | 0.13     | 0.13     | 0.13   | 0.13    | 0.13    |
| Stack Temperature, °F   | 360.4  | 240.7  | 248.7  | 254.8  | 322.47 | 319.59 | 507.417  | 295      | 335.94 | 292.176 | 236.916 |
| Average Stack Oxygen, % | 11.79  | 17.40  | 13.82  | 14.07  | 14.20  | 14.15  | 13.11    | 14.32    | 16.47  | 16.78   | 15.54   |
| Average Stack CO2, %    | 9.11   | 3.49   | 7.00   | 6.68   | 6.38   | 6.39   | 7.61     | 5.93     | 4.11   | 3.82    | 4.77    |
| Average Stack CO, %     | 0.00   | 0.02   | 0.15   | 0.29   | 0.64   | 0.73   | 0.36     | 1.30     | 0.64   | 0.59    | 1.18    |
| Dry Burn-Rate, Kg/hr    | 3.35   | 1.94   | 2.46   | 2.48   | 1.36   | 2.12   | 3.37     | 2.13     | 1.31   | 1.29    | 0.98    |
| Condar gm/dry kg fuel   | 0.50   | 1.25   | 0.52   | 0.66   | 4.77   | 1.26   | 1.10     | 53.52    | 2.34   | 4.17    | 3.13    |
| Condar g/hr             | 1.69   | 2.43   | 1.29   | 1.63   | 6.48   | 2.67   | 3.71     | 114.00   | 3.07   | 5.37    | 3.07    |
| Dilution Factor         | 2.29   | 5.98   | 2.95   | 3.06   | 3.12   | 3.09   | 2.68     | 3.17     | 4.72   | 5.07    | 3.90    |
| Stack Temp Factor       | 0.80   | 0.87   | 0.86   | 0.86   | 0.82   | 0.82   | 0.74     | 0.84     | 0.81   | 0.84    | 0.87    |
| 5G-3, g/hr              | 1.61   | 2.49   | 1.07   | 1.59   | 5.41   | 2.66   | 3.63     | 39.46    | 2.76   | 5.05    | 4.59    |
| Absolute Error g/hr     | 0.08   | 0.06   | 0.22   | 0.04   | 1.07   | 0.01   | 0.08     | 74.54    | 0.31   | 0.32    | 1.52    |

Note: Runs 5 and 11 experienced oxygen analyzer drift. Run 8 was all smoke and no flames.

↑  
NO FLAME  
ALL SMOKE