Vent Measurements: 7th October 2010

Mass Emission is calculated from Ideal Gas Law

mass emission mg/min = ppm x flow rate x molecular weight x P /RT

n= PV/RT

V = measured flow rate (m3/min)	
P = 101325 Pa (760 mm Mercury)	**101325**
T = 293 K	**293**
R = molar gas constant 8.314 (m3Pa/mol K)	**8.314**
Molecular weight for solvent = 90	**90**
R x T	**2436.002**
P/RxT	**41.595**

		Solvent Tank to Mixer	**Mixer to Buk Tank**	**Homogenisation Tank to Tank**
		ST2 to MM	**SS to BT6**	**BT3 to BT2**
Mean ppm	**ppm**	**1.30**	**4.57**	**0.00**
Flow Volume	**m3/min**	**1.89**	**1.89**	**1.89**
Emission rate	**gm/min**	0.00917	0.03228	0.00000
Emission Rate MR	**kg/min**	0.00001	0.00003	0.00000
Prebalanced Rate (PBR)	**kg/min**	0.18000	0.18000	0.04400
MR/PBR		0.00005	0.00018	0.00000
Efficiency 1-MR/PBR		0.99995	0.99982	1.00000
EFFICIENCY PERCENT	**%**	**99.995**	**99.982**	**100.000**