

Vent Measurements: APRIL 23rd 2015

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	Homogenisation Tank to Tank	Mixer to Buk Tank
		ST1-SLC2	BT1-BT5	SLC3-BT1
Mean ppm	ppm	0.00	1.31	3.59
Flow Volume	m3/min	4.15	4.15	4.15
Emission rate	gm/min	0.00000	0.02039	0.05569
Emission Rate MR	kg/min	0.00000	0.00002	0.00006
Prebalanced Rate (PBR)	kg/min	0.18000	0.18000	0.04400
MR/PBR		0.00000	0.00011	0.00127
Efficiency 1-MR/PBR		1.00000	0.99989	0.99873
EFFICIENCY PERCENT	%	100.000	99.989	99.873

Vent Measurements: NOVEMBER 5TH 2015

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	Homogenisation Tank to Tank	Mixer to Buk Tank
		ST2-SLC1	BT3-BT4	SLC1-BT5
Mean ppm	ppm	11.49	17.63	244.96
Flow Volume	m3/min	3.20	3.20	3.20
Emission rate	gm/min	0.13789	0.21147	2.93889
Emission Rate MR	kg/min	0.00014	0.00021	0.00294
Prebalanced Rate (PBR)	kg/min	0.18000	0.18000	0.04400
MR/PBR		0.00077	0.00117	0.06679
Efficiency 1-MR/PBR		0.99923	0.99883	0.93321
EFFICIENCY PERCENT	%	99.923	99.883	93.321

Part D

Solvent/Product Analysis: 2015 (Base Data for VOC Calculation)

Solvent Analysis

Solvent	Op. Bal.	Receipts	Cl. Bal.	Usage		
ACETONE	1035	4611	564	5082		
ISOPROPANOL	1574	19842	726	20690	20968	
N-PROPANOL	79	330	131	278		
HEPTANES	147	66957	2840	64264		
HEXANES	0	0	0	0		
CYCLOHEXANE	0	0	0	0	1759078	879539
HYDROCARBON	19472	1759440	19834	1759078		
ETHANOL (IMS)	237	2370	333	2274		
TOTAL	22544	1853550	24428	1851666	1,615,252	46.59%

Production Analysis

Production Volume Jan - Dec 2015					
Product	Tanker	IBC	Drum	Poly	Total
SLC 100A	139,940	57,923	1,556,440	-	1,754,303
SLC 160	-	-	720,640	-	720,640
SLC 235	100,220	-	312,970	-	413,190
SLC 239G	-	-	8,550	-	8,550
SLC 9291ES	-	-	-	-	-
	-	-	-	-	0
SOLV 1E	-	-	11,792	192	11,984
SOLV 3	-	-	-	-	-
NDF 20/27T DF	-	-	32,232	1,278	33,510
SP 1427	127,200	199,500	168,530	951	496,181
DL	-	-	1,200	2,982	4,182
LF	-	-	-	-	-
NW	-	-	540	1,480	2,020
CSF	-	-	-	1,430	1,430
DREM	-	-	-	20,928	20,928
Total	367,360	257,423	2,812,894	29,241	3,466,918

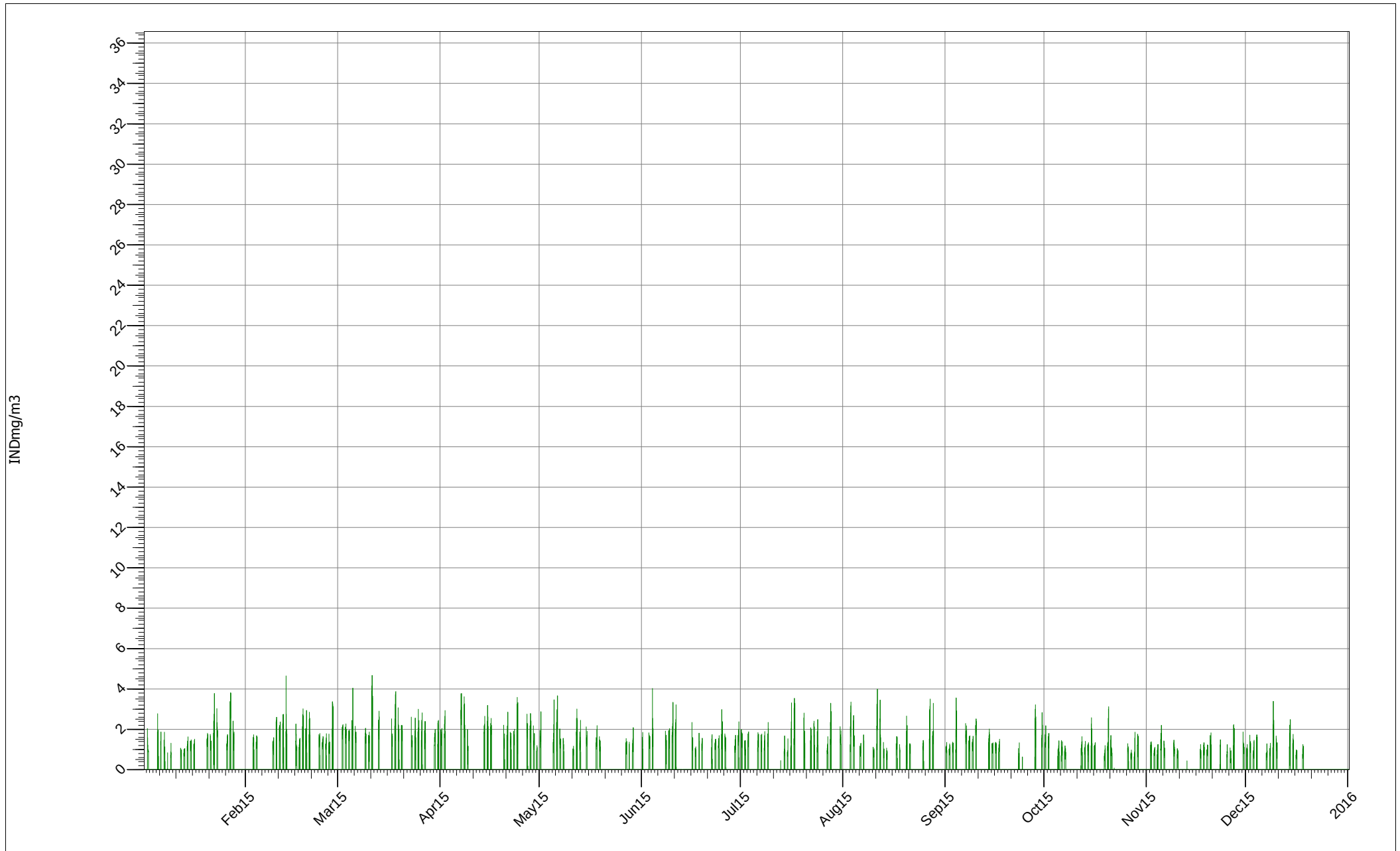
Emission Report

Company:DAREX UK LTD ContactGLENN DRAPER

Stack 1 Banbury

From:01 Jan 15 09:15:00 To:01 Jan 16 11:00:00

Device 1 : Stack1 Banbury Cal Factor: 0.11 (constant) Average:0.226 Averaging Period:15 mins Maximum:4.670



Emission Report

Company:DAREX UK LTD ContactGLENN DRAPER

Stack 2 Conveyors

From:01 Jan 15 06:15:00 To:01 Jan 16 11:30:00

Device 1 : Stack2 Conveyor Cal Factor: 2.00 (constant) Average:0.222 Averaging Period:15 mins Maximum:5.800

