

Permit Reference Number: KP3734SH

Operator: Navigator Terminals Windmill Limited

Installation: Barry Silicon Based Manufacturing Installation

Form Number: E1

Reporting of Energy Usage for the year 2018

Energy Source	Energy Usage		CO ₂ Produced (t)
	Quantity	Primary Energy (MWh)	
Electricity * (MWh)	852.060	852.060	143
Natural Gas (MWh)	158	158	26.386
Diesel / Distillate Fuel Oil (t)	0.13	1.404	0.237
TOTAL	1010.19	1011.464	169.623

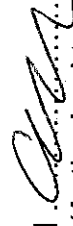
Trends in Energy Usage	
Year	Parameter
	Primary Energy Usage (MWh)
2006	1655
2007	1557
2008	1521
2009	1532
2010	1466
2011	1392
2012	1476
2013	1389
2014	1280
2015	1310
2016	1059
2017	956
2018	1011

CO₂ Produced (t)

279.69
262.232
256
261
249
237
249
234
216
220.6
179
161
169

Operator's comments:

**Electric supplied from the adjacent CHP plant, losses are assumed to be negligible.

Signed  A Jackson
(Authorised to sign as representative of the Operator)

Date.....18/1/19

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Reporting of Waste Disposal and Recovery for the year 2018

Waste Description	Disposal		Trends in Waste Disposal	
	Route	Tonnes (t)	Year	Parameter
1) Hazardous Waste:				Total Hazardous Wastes (t)
WEEE		0.5	2006	185
Other Hazardous waste		0.92	2007	203
			2008	202
			2009	167
			2010	170
2) Non-Hazardous Wastes:			2011	33.72
Site Cess Pit		142.92	2012	0
General		12.66	2013	0
Non haz washings		9.68	2014	0.5
Siloxane waste (sample waste)	Via Dow	9.56	2015	0.05
			2016	0
			2017	0
Hazardous		1.42	2018	1.42
Non- Hazardous		174.82		

Operator's comments: Previously, waste product was transported to customer for recovery. It has been confirmed that this material was actually being disposed of by customer. Navigator are now handling the disposal of this as waste hence the increase in non-hazardous waste being reported.

Signed ...A Jackson...
(Authorised to sign as representative of the Operator)

Date.....18/1/19

Operator: Navigator Terminals Windmill Limited

Installation: Barry Silicon Based Manufacturing Installation

Form Number: MR1

Reporting of Mass Release for the year 2017

[illegible]

Trends in Mass Release (kg)			
Year	Parameter	Octamethylcyclotetrasiloxane (D4 Cyclics)	Decamethylcyclotetrasiloxane (D5 Cyclics)
2007	Methanol 153	1510	8.69
2008	43	1699	10.76
2009	100	1431	11.4
2010	55	1678	11
2011	98	1812	10
2012	70	2170	10
2013	125	2445	11
2014	121	2530	13.7
2015	85	3298	12.96
2016	100	2559	14.71
2017	34.4	2165.25	14.12
2018	92.4	2351.83	8.59

Operator's Comments:

The Methanol mass (air emission) release was calculated by averaging the results obtained from the fugitive emission surveys carried out by LDAR Envolve Ltd.

D4 and D5 Cyclic products mass emissions are calculated from ideal gas laws in conjunction with Raoult's law using vapour pressure, the final calculated figure is directly related to the tank throughputs.

Signed A Jackson (Authorised to sign as representative of the Operator)

Date.....18/1/19.....

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