Permit Number: EPR/DP3832EF Operator: Biotage GB Limited

Facility: Unit C IST House, Distribution Way. Form Number: Air1 / 08/02/17

Reporting of emissions to air for the period from 01/01/2016 **to** 31/12/2016

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
A1 Main building EP1	Hydrogen chloride	15.12 g/hr	Duration of batch reaction	68.05 g/hr (56.93 g/hr)	BS EN 1911	30/11/16; 09:05 – 15:59	13
A1 Main building EP1	VOC - Methanol	4.0824 g/hr	Duration of batch reaction	22.7 g/hr	CEN/TS 13649:2014	30/11/16; 09:05 – 15:53	9 – 10
A2 Main building EP1	Hydrogen chloride	49.068 g/hr	Duration of batch reaction	39.97 g/hr (17.90 g/hr)	BS EN 1911	01/12/16; 08:03 – 11:16 02/12/16; 07:35 – 10:48	13
A2 Main building EP1	VOC - Methanol	45.684 g/hr	Duration of batch reaction	38.0 g/hr	CEN/TS 13649:2014	01/12/16; 07:56 – 11:10 02/12/16; 07:33 – 10:51	10
A3 Main building EP1	Oxides of nitrogen (as NO_2)	48.84 g/hr	Duration of batch reaction	12.55 g/hr	BS EN 14792:2005	29/11/16; 10:30 – 30/11/16; 07:18	2
A3 Main building EP1	VOC - Methanol	355.68 g/hr	Duration of batch reaction	70.0 g/hr	CEN/TS 13649:2014	29/11/16; 10:30 – 14:53	9 – 10
A4 Resin shed EP2	Hydrogen Bromide	0.6264 g/hr	Duration of batch reaction	112.63 g/hr (15.54 g/hr)	US EPA Method 26	28/11/16; 10:45 – 13:10 29/11/16; 07:41 – 14:16	13

Comment: re figures in Results column in brackets represent average emissions over the batch process.

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed ..... Date.....08/02/17.....
(Authorised to sign as representative of Operator)

Permit Number:	DP3832EF	Operator:	Biotage GB Limited
Facility:	Unit C IST House	Form Number:	WaterUsage1 / 08/02/2017

Reporting of Water Usage for the year 2016

Water Source	Usage (m^3/year	Specific Usage (m^3/unit output)
Mains water	15 329 m^3 / year	24 362.7 m^3 / tonne
Site borehole	0.0 m^3 / year	
River abstraction	0.0 m^3 / year	
TOTAL WATER USAGE	15.33 m^3 / year	24 362.7 m^3 / tonne

Operator's comments :

Signed .....
(authorised to sign as representative of Operator)

Date.....08/02/17 .....

Permit Number: EPR/DP3832EF Operator: Biotage GB Limited

Facility: Unit C IST House, Distribution Way. Form Number: Performance1 / 08/02/17

Reporting of other performance indicators for the period 01/01/2016 **to** 31/12/2016

Parameter	Units	
Polystyrene polymer	0.0708	tonnes/year for activity A1
1,2 - Dichloroethane	1.0226	tonnes/year for activity A1
Bromine	0.0511	tonnes/year for activity A1
Thallium acetate	0.0011	tonnes/year for activity A1
Dichloromethane	0.9381	tonnes/year for activity A1
Methanol	0.6720	tonnes/year for activity A1
Amorphous synthetic silica	0.2023	tonnes/year for activity A2
Ethylbenzene	0.3198	tonnes/year for activity A2
Imidazole	0.0087	tonnes/year for activity A2
Trichlorosilanes (various)	0.0819	tonnes/year for activity A2
Hexane	0.8969	tonnes/year for activity A2
Acetone	1.4388	tonnes/year for activity A2
Methanol	0.9892	tonnes/year for activity A2
Si - Thiol	0.2927	tonnes/year for activity A3
Nitric Acid	0.3474	tonnes/year for activity A3
Methanol	3.4957	tonnes/year for activity A3
Bonded silica sorbents	0.0128	tonnes/year for activity A4
Dichloromethane	0.0507	tonnes/year for activity A4
Chlorosulfonic acid	0.0168	tonnes/year for activity A4
Methanol	0.6399	tonnes/year for activity A4
Total amount of product produced – Activity A1	0.0865	tonnes
Total amount of product produced – Activity A2	0.2372	tonnes
Total amount of product produced – Activity A3	0.2932	tonnes

Parameter	Units	
Total amount of product produced – Activity A4	0.0123	tonnes
Total amount of hazardous waste produced	42.214	tonnes
Total amount of non-hazardous waste produced	95.285	tonnes

Operator's comments :

NB Waste quantities added to this form as there was nowhere else to report them.

Signed .....

(Authorised to sign as representative of Operator)

Date.....08/02/17.....

Permit Number:	DP3832EF	Operator:	Biotage GB Limited
Facility:	Unit C IST House	Form Number:	Energy1 / 08/02/17

Reporting of Energy Usage for the year 2016

Energy Source	Energy Usage Quantity	Primary Energy (MWh)	Specific Usage (MWh/unit output)
Electricity *	446.3 MWh	1071.12 MWh	1702.4 MWh / tonne
Natural Gas	196.1 MWh		311.7 MWh / tonne
Gas Oil	0.0 tonnes		
Recovered Fuel Oil	0.0 tonnes		
TOTAL	642.4 MWh		1021.0 MWh / tonne

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed ..... N Tarking .....
(Authorised to sign as representative of Operator)

Date.....08/02/17.....