

Permit Reference Number: EPR/BU2349IL

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

Form Number: A1

Reporting of Emissions to Air for the period from 01/10/2021 to 31/12/2021

Emissions to Air							
Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
A1 (A1)	Dimethylamine	5 mg/m ³	<1.2	Gastec Tube	20/10/2021	None	25%
A7 (CA1)	Formaldehyde	2 mg/m ³	0	DNPH/HPLC	20/10/2021	None	30%
	Acrylamide	5 mg/m ³	-	MDHS 57	20/10/2021	None	25%
	Acrylic acid	5 mg/m ³	-	Gastec Tube	20/10/2021	None	25%
	Ammonia	10 mg/m ³	0	Gastec Tube	20/10/2021	None	25%
	Sulphur dioxide	50 mg/m ³	-	Gastec Tube	20/10/2021	None	25%
	n-Decane (Measured as VOC Toluene)	20 mg/m ³	8.9	VOC Meter	20/10/2021	None	25%
A8 (CA2)	Formaldehyde	5 mg/m ³	0.3	DNPH/HPLC	20/10/2021	None	30%
	Methanol (Measured as VOC Toluene)	40 mg/m ³	6.8	VOC Meter	20/10/2021		
	Dimethylamine	5 mg/m ³	<1.2	Gastec Tube	20/10/2021	None	25%
A10 (FA2)	Formaldehyde	5 mg/m ³	0.2	DNPH/HPLC	20/10/2021	None	30%
	Methanol	1 mg/m ³	0.2	Gastec Tube	20/10/2021	None	25%
A11 (FA3)	Ammonia	10 mg/m ³	4.1	Gastec Tube	10/11/2021	None	25%
	Formaldehyde	5 mg/m ³	0.3	DNPH/HPLC	10/11/2021	None	30%
	Methanol	1 mg/m ³	0.1	Gastec Tube	10/11/2021	None	25%
A12 (FA5)	Formaldehyde	5 mg/m ³	0.4	DNPH/HPLC	10/11/2021	None	30%
	Methanol	5 mg/m ³	0.3	Gastec Tube	10/11/2021	None	25%
A13 (FA8)	Methanol	0.5 kg/hr [7]	0.1	Estimated	01/10/2021 – 31/12/2021	N/A	Not Known
A14 (FA9)	Methanol	0.5 kg/hr [7]	0.1	Estimated	01/10/2021 – 31/12/2021	N/A	Not Known
A15 (FA12)	Formaldehyde	5 mg/m ³	0.4	DNPH/HPLC	10/11/2021	None	30%
	Methanol	5 mg/m ³	0.2	Gastec Tube	10/11/2021	None	25%
A16 (FA15)	Formaldehyde	5 mg/m ³	<0.1	DNPH/HPLC	03/12/2021	None	30%
	Methanol (Measured as VOC Toluene)	40 mg/m ³	0.2	VOC Meter	03/12/2021	None	25%
	Nitrogen dioxide	50 mg/m ³ [6]	13.2	Gastec Tube	03/12/2021	None	25%
A17 (FA16)	Nitrogen dioxide	150 mg/m ³ [6]	14.2	Gastec Tube	03/12/2021	None	25%

A18 (FA24)	Formaldehyde	5 mg/m ³	<0.1	DNPH/HPLC	03/12/2021	None	30%
	Methanol (Measured as VOC Toluene)	20 mg/m ³	<0.1	VOC Meter	03/12/2021	None	25%

[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 the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[6] The emission limit values are expressed as instantaneous and corrected to 273K, 101.3kPa, 11% oxygen, dry.

[7] Taken as average vent concentration multiplied by the volume of expressed air and actual number of deliveries.

Signed
(Authorised to sign as representative of the Operator)



(JM)

Date.....26/01/22.....

Permit Reference Number: EPR/BU2349IL
Installation: Mold Chemicals (Alyn Works)

Operator: Synthite Limited
Form Number: W1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2021 to 31/12/2021

Emissions to Water							
Emission Point	Substance / Parameter	Emission Limit Value [6]	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
W1	pH	6 – 8.5 [7]	7.0 – 8.4	pH Meter	01/10/2021 – 31/12/2021	None	20%
	BOD	10 mg/L	5	ISO5815:1989	09/12/2021	None	20%
	Suspended Solids	20 mg/L	0	GFA ISO11929:1997	01/10/2021 – 31/12/2021	None	20%
	Formaldehyde	0.25 mg/L	0.20	DNPH/HPLC	05/10/2021, 15/10/2021, 01/11/2021	None	30%
	Ammonia (Unionised as N)	5 mg/L	2.7	Ion Selective Electrode	05/10/2021	None	
	Temperature	25 °C	13	Calibrated Thermometer	12/10/2021, 18/10/2021	None	20%
	Volumetric Flow Rate	700 m ³ /day [8]	549	Meter (ISBN 011752364X)	16/12/2021	None	20%
River Monitoring							
R. Alyn SJ 2363 6487	pH	n/a	8.3	pH Meter	21/10/2021, 02/11/2021, 11/11/2021	None	20%
	Formaldehyde	n/a	0.20	DNPH/HPLC	01/10/2021	None	30%

[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 the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[3] For non-continuous measurements the date and time of the sample that produced the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[6] The emission limit values are expressed as instantaneous.

[7] The emission limit values for pH are expressed as minimum and maximum individual values.

[8] The emission limit value for volumetric flow rate is expressed as a daily maximum (not to exceed 30m³/hour).

Signed (JM)..... Date.....26/01/22... (authorised to sign as representative of the Operator)

Permit Reference Number: EPR/BU2349IL

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

Form Number: S1

Reporting of Emissions to Sewer for the period from 01/10/2021 to 31/12/2021

Emissions to Sewer							
Emission Point	Substance / Parameter	Emission Limit Value [6]	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
S1	pH	5 – 9 [7]	7.0 – 8.6	pH Meter	01/10/2021 – 31/12/2021	None	20%
	Suspended solids	400mg/l	400	GFA ISO11929:1997	08/11/2021	None	20%
	Formaldehyde	10mg/l	6.9	DNPH/HPLC	08/12/2021	None	30%
	Methanol	10mg/l	0.1	Gas Chromatography	05/10/21, 29/10/21, 03/11/21, 05/11/21, 12/11/21, 02/12/21	None	20%
	Ammonia (Unionised as N)	50mg/l	22.8	Ion Selective Electrode	02/12/2021	None	
	COD	800mg/l	617	Dichromate ISO6060:1989	03/12/2021	None	20%
	Grease and Oils	10mg/l	0	Gas Chromatography	01/10/2021 – 31/12/2021	None	20%
	Volumetric Flow Rate	300m3/day [8]	300	Meter (ISBN 011752364X)	18/11/2021	None	20%
	Temperature	43°C	21	Calibrated Thermometer	01/10/2021	None	20%
Other Monitoring Points		Result [9]					
B/H1	Groundwater level	n/a	0.87 m	Dip Tape	20/12/2021	None	10%
	Formaldehyde	n/a	0	DNPH/HPLC	20/12/2021	None	30%
B/H8	Groundwater level	n/a	2.8 m	Dip Tape	20/12/2021	None	10%
	Formaldehyde	n/a	0	DNPH/HPLC	20/12/2021	None	30%
B/H9	Groundwater level	n/a	2.88 m	Dip Tape	18/11/2021	None	10%
	Formaldehyde	n/a	0.01	DNPH/HPLC	18/11/2021	None	30%
B/H10	Groundwater level	n/a	2.50 m	Dip Tape	18/11/2021	None	10%

	Formaldehyde	n/a	0	DNPH/HPLC	18/11/2021	None	30%
B/HA	Groundwater level	n/a	2.45 m	Dip Tape	21/12/2021	None	10%
	Formaldehyde	n/a	0.01	DNPH/HPLC	21/12/2021	None	30%
B/HB	Groundwater level	n/a	2.90	Dip Tape	21/12/2021	None	10%
	Formaldehyde	n/a	0	DNPH/HPLC	21/12/2021	None	30%
SP4	Groundwater level	n/a	1.30	Dip Tape	20/12/2021	None	10%
	Formaldehyde	n/a	0	DNPH/HPLC	20/12/2021	None	30%
Culvert Pump	Formaldehyde	n/a	330	DNPH/HPLC	14/12/2021	None	30%

[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 the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colourimetry.

[3] For non-continuous measurements the date and time of the sample that produced the result is given.

[4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.

[5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[6] The emission limit values are expressed as instantaneous.

[7] The emission limit values for pH are expressed as minimum and maximum individual values.

[8] The emission limit value for volumetric flow rate is expressed as a daily maximum.

[9] Readings are in metres below the respective borehole surface.

Signed

(JM).....

Date.....26/01/22.....(Authorised to sign as representative of the Operator)

Operator: Synthite Limited

Form Number: R1

Reporting of Waste Disposal and Recovery for the year 2021

Waste Disposal & Recovery			
Waste Description	Disposal		Recovery
	Route	Tonnes	Tonnes
1) Hazardous Wastes			
060204	D09	305.6	
150110	R04		24.279
160305	R13		16.48
170605	D15	0.34	
161001	D15	4.8	
150110	D15	0.1	
070110	D15	1	
150110	R13		4.375
160305	D15	16	
160508	D09	6	
160305	D09	0.787	
130208	R03		1
160305	R15		26.38
Total hazardous waste		334.627	72.514
2) Non-Hazardous Wastes			
200138	R		81.8
160117	R		3.08
160118	R		1.8
200101	R		4.715
200301	D1	32.858	
200139	R		2.97
200140	R		5.3
200301	R		4
170140	R		0.715
170405	R		5.02
150110	R13		3.52
Total non-hazardous waste		32.858	112.92

[illegible]

TOTAL WASTE		367.485	185.434

Operator's comments :

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

Date.....26/01/22.....

Operator: Synthite Limited

Form Number: WU1

Reporting of Water Usage for the year 2021

Trends in Water Usage				
Year	Parameter			
	Mains water	Boreholes	Total Water usage	Water per unit output
2004	210,558	78,612	289,170	2.14
2005	172,031	83,600	255,631	1.64
2006	145,004	93,392	238,396	1.49
2007	159,226	88,712	247,939	1.22
2008	160,359	57,944	218,303	0.95
2009	133,162	64,965	198,126	0.97
2010	147,159	57,064	204,222	0.80
2011	172,442	20,173	192,616	0.83
2012	111,323	63,635	174,958	0.74
2013	127,394	110,043	237,437	1.07
2014	137,550	44,420	181,970	0.79
2015	143,692	47,937	191,629	1.05
2016	117,669	53,166.6	170,835.6	1.09
2017	153,818	48,964.22	202782.22	1.22
2018	167,174	8,462	175,636	1.05
2019	237,543	0	237,543	1.20
2020	219,495	0	219495	1.17
2021	222,579	0	222,579	1.24

Operator's comments :

Signed (JM)..... Date.....26/01/22..... (Authorised to sign as representative of the Operator)

Operator: Synthite Limited

Form Number: E1

Reporting of Energy Usage for the year 2021

Trends in Energy Usage			
Year	Parameter		
	Primary Energy usage	CO ₂ produced	CO ₂ per unit output
2005	73,664	12,127	0.078
2006	79,222	12,160	0.076
2007	76,517	11,070	0.054
2008	68,385	8,954	0.039
2009	59,155	7,097	0.035
2010	58,212	7,779	0.031
2011	53,447	6,473	0.028
2012	51,904	6,340	0.027
2013	52,569	6,012	0.027
2014	53,100	6,409	0.028
2015	55,341	6,766	0.037
2016	54,759	6,541	0.042
2017	47,864	6,519	0.039
2018	36,710	8,625	0.052
2019	43,027	8,555	0.043
2020	39,829	8,755	0.050
2021	47,304	9,576	0.054

Operator's comments :

Signed



(JM)

(Authorised to sign as representative of the Operator)

Date.....26/01/22.....