



SYNTHITE LIMITED

ALYN WORKS, DENBIGH ROAD, MOLD,
FLINTSHIRE, UNITED KINGDOM CH7 1BT

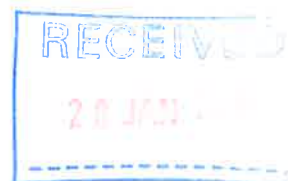
A Member of the Tennant Group (Est. 1797)

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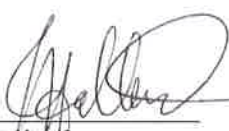
Environment Agency
Chester Rd.
Buckley
Flintshire
CH7 3AJ
27/01/14



Dear Sir,

Re: IPPC Permit BU2349

Please find enclosed three copies of monitoring returns for Q4 2014.


J. Hallard
Synthite Ltd.

Encs. Monitoring report

MONITORING RETURNS N. WALLS

	INITIALS	DATE
CHECKED Vs AUTHORISATION	AZ	11/4/14
TRACKING	JB	28.1.14
OK FOR PUBLIC REGISTER	AZ	11/4/14
TYPE REPORT'S RESPONSE	JB	EORM.



For Formidazole
Parathionmethyl
ALCOFORM Solution
Agricultural Products &
Chemical Till Manufacture



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Permit Reference Number: BU2349

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

Form Number: A1

Reporting of Emissions to Air for the period from 01/10/13 to 31/12/13

Emissions to Air							
Emission Point	Substance / Parameter	Emission Limit Value [6]	Result [1]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
A1	Dimethylamine	5mg/m3	<1.2	Gastec tube	12/11/13	None	25%
A2	Ammonia	10mg/m3	o/c	-	-	-	-
A3	Propionic Acid (Measured as VOC Toluene)	10mg/m3	0.2	VOC meter	16/10/13	None	25%
A4	Formic Acid (Measured as VOC Toluene)	10mg/m3	0.2	VOC meter	16/10/13	None	25%
A5	Ammonia	10mg/m3	<0.2	Gastec tube	16/10/13	None	25%
A5	Formic & Propionic Acid (Measured as VOC Toluene)	10mg/m3	0.8	VOC meter	16/10/13	None	25%
A6	Ammonia	10mg/m3	<0.2	Gastec tube	16/10/13	None	25%
A6	Formic Acid (Measured as VOC Toluene)	10mg/m3	0.8	VOC meter	16/10/13	None	25%
A7	Formaldehyde	2mg/m3	1.4	DNPH/HPLC	12/11/13	None	30%
A7	Acrylamide	5mg/m3	o/c	-	-	-	-
A7	Acrylic Acid	5mg/m3	o/c	-	-	-	-
A7	Ammonia	10mg/m3	2.2	Gastec tube	12/11/13	None	25%
A7	Sulphur Dioxide	50mg/m3	o/c	-	-	-	-
A7	n – Decane (Measured as VOC Toluene)	20mg/m3	12.5	VOC meter	12/11/13	None	25%
A8	Formaldehyde	5mg/m3	2.0	DNPH/HPLC	12/11/13	None	30%
A8	Methanol	40mg/m3	12.1	VOC meter	12/11/13	None	25%
A8	Dimethylamine	5mg/m3	<1.1	Gastec tube	12/11/13	None	25%

Operator : Synthite Limited
Form Number : A1 continued

A9	n - Decane (Measured as VOC Toluene)	10mg/m ³	o/c			
A10	Formaldehyde	5mg/m ³	0.8	DNPH/HPLC	09/12/13	None
A10	Methanol	1mg/m ³	<0.3	Gastec tube	09/12/13	None
A11	Ammonia	10mg/m ³	6.1	Gastec tube	09/12/13	None
A11	Formaldehyde	5mg/m ³	0.9	DNPH/HPLC	09/12/13	None
A12	Methanol	1mg/m ³	<0.3	Gastec tube	09/12/13	None
A12	Formaldehyde	5mg/m ³	0.8	DNPH/HPLC	09/12/13	None
A13	Methanol	5mg/m ³	<0.4	Gastec tube	09/12/13	None
A14	Methanol	0.5kg/hr [7]	0.1	Estimated	01/10/13 to 31/12/13	None
A15	Formaldehyde	0.5kg/hr [7]	0.1	Estimated	01/10/13 to 31/12/13	N/A
A15	Methanol	5mg/m ³	4.1	DNPH/HPLC	11/12/13	None
A16	Formaldehyde	5mg/m ³	2.2	Gastec tube	11/12/13	None
A16	Methanol	5mg/m ³	0.3	DNPH/HPLC	11/12/13	None
A16	Nitrogen Dioxide	40mg/m ³	1.2	VOC meter	11/12/13	None
A17	Nitrogen Dioxide	50mg/m ³	0.2	Gastec tube	11/12/13	None
A18	Formaldehyde	150mg/m ³	0.6	Gastec tube	16/12/13	None
A18	Methanol	5mg/m ³	0.5	DNPH/HPLC	16/12/13	None
A18	Methanol	20mg/m ³	0.2	VOC meter	16/12/13	None

[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 and in relation to gases from combustion processes 3% oxygen, dry (for gaseous fuels).

[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)

Date 24.1.14

Permit Reference Number: BU23349
Installation: Mold Chemicals (Alyn Works)

Operator: Synthite Limited
Form Number: W1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/13 to 31/12/13

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	6.0 – 8.5 [7]	7.1 – 7.7	pH meter	17/10/13, 24/10/13	None	20%
	BOD	10mg/l	3	ISO5815:1989	04/12/13	None	20%
	Suspended Solids	20mg/l	Nil	GFA ISO11929:1997	All samples within quarter	None	20%
	Formaldehyde	0.25mg/l	0.17	DNPH/HPLC	15/11/13	None	30%
	Ammonia (Unionised as N)	5mg/l	2.5	Ion Selective Electrode	17/10/13	None	
	Temperature	25°C	12	Calibrated thermometer	04/10/13	None	20%
	Volumetric Flow Rate	700m ³ /day [8]	432	Meter (ISBN 014752364X)	29/11/13	None	20%

River Monitoring

R. Alyn	pH	n/a	7.7 – 8.2	pH meter	01/11/13, 08/11/13	None	20%
SJ 2363 6487	Formaldehyde	n/a	0.19	DNPH/HPLC	04/10/13	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

Date: 24.11.14

(authorised to sign as representative of the Operator)

Permit Reference Number: BU23349

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

Form Number: S1

Reporting of Emissions to Sewer for the period from 01/10/13 to 31/12/13

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]	5.7 – 7.6	pH Meter	09/12/13, 20/12/13	None	20%		
	Suspended solids	400mg/l	213	GFA ISO1929:1997	18/11/13	None	20%		
	Formaldehyde	40mg/l	2.29	DNPH/HPLC	06/11/13	None	30%		
	Methanol	40mg/l	15.2	Gas Chromatography	01/11/13	None	20%		
	Ammonia (Unionised as N)	25mg/l	16.4	Ion Selective Electrode	04/10/13	None			
	COD	1500mg/l	595	Dichromate ISO6060:1989	01/11/13	None	20%		
	Grease and Oils	10mg/l	<10	Gas Chromatography	All samples within quarter	None	20%		
	Volumetric Flow Rate	300m3/day [8]	299	Meter (ISBN 011752364X)	13/11/13	None	20%		
	Temperature	40°C	32	Calibrated Thermometer	18/10/13	None	20%		
	Other Monitoring Points								
B/H1	Groundwater level	n/a	3.59	Dip Tape	20/12/13	None	10%		
	Formaldehyde	n/a	0.01	DNPH/HPLC	20/12/13	None	30%		
B/H8	Groundwater level	n/a	1.73	Dip Tape	20/12/13	None	10%		
	Formaldehyde	n/a	0.09	DNPH/HPLC	20/12/13	None	30%		
B/H9	Groundwater level	n/a	2.76	Dip Tape	20/12/13	None	10%		
	Formaldehyde	n/a	0.15	DNPH/HPLC	20/12/13	None	30%		
B/H10	Groundwater level	n/a	3.10	Dip Tape	20/12/13	None	10%		
	Formaldehyde	n/a	0.13	DNPH/HPLC	20/12/13	None	30%		
B/HA	Groundwater level	n/a	3.28	Dip Tape	20/12/13	None	10%		
	Formaldehyde	n/a	0.04	DNPH/HPLC	20/12/13	None	30%		

Emission Point	Substance / Parameter	Emission Limit Value [6]	Result [9]	Test Method [2]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
B/HB	Groundwater level	n/a	6.60	Dip Tape	20/12/13	None	10%
	Formaldehyde	n/a	0.04	DNPH/HPLC	20/12/13	None	30%
SP4	Groundwater level	n/a	1.90	Dip Tape	20/12/13	None	10%
	Formaldehyde	n/a	0.10	DNPH/HPLC	20/12/13	None	30%
Culvert Pump	Formaldehyde	n/a	208	Titration using sulphite method	18/12/13	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



Date: 24/1/14 (Authorised to sign as representative of the Operator)

Permit Reference Number: BU2349

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

Form Number: R1

Reporting of Waste Disposal and Recovery for the year 2013

Waste Disposal & Recovery			
Waste Description	Disposal		Recovery Tonnes
	Route	Tonnes	
1) Hazardous Wastes			
Chemical waste	D9	154.380	
Oil disposal	R9	2.200	
Other general	D1	187.000	
Total hazardous waste		343.58	
2) Non-Hazardous Wastes			
Pallets	Recycled		486**
Paper/cardboard	Recycled		54
Total non-hazardous waste			63.72
TOTAL WASTE		343.58	

Operator's comments :

** = Number of Packages NOT tonnes

Trends in Waste Disposal and Recovery

Year	Parameter		Total Waste	Waste per unit output
	Haz	Non-Haz		
2004	579	2,809	3389	0.025
2005	438	390	828	0.005
2006	274	748	1,057	0.006
2007	303	392	664	0.003
2008	306	456	762	0.003
2009	108	413	521	0.003
2010	67	162	230	0.001
2011	575	214	789	0.003
2012	952	113	1065	0.005
2013	344	64	407	0.002

Signed

(Authorised to sign as representative of the Operator)

Date: 24.1.14

Permit Reference Number: BU2349

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

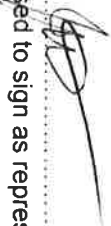
Form Number: WU1

Reporting of Water Usage for the year 2013

Water Usage		
Water Source	Usage (m ³)	Specific Usage (m ³ /t)
Mains water	127,394	
Boreholes A&B	110,043	
TOTAL WATER USAGE	237,437	

Trends in Water Usage				
Year	Parameter		Total	
	Mains water	Boreholes	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

Operator's comments :

Signed  (Authorised to sign as representative of the Operator)

Date 24.1.14

Permit Reference Number: BU2349

Operator: Synthite Limited

Installation: Mold Chemicals (Alyn Works)

Form Number: E1

Reporting of Energy Usage for the year 2013

Energy Usage			
Energy Source	Energy Usage		CO ₂ Produced (tonnes)
	Quantity	Primary Energy (MWh)	
Electricity *	13,673 MWh	35,514 MWh	-
Exit Gas Boiler**	5,585 MWh	6,981 MWh	2,744
Catalytic Steam**	4,879 MWh	6,099 MWh	2,451
Natural Gas	401,937 m ³	3,975 MWh	817
Gas Oil	0 Tonnes	-	-
TOTAL		52,569	6,012

* Conversion factor for delivered electricity to primary energy = 38.5

**Exit Gas Boiler and Catalytic Steam Generator conversion at 80% of primary energy – consistent with CCA

Operator's comments :

Trends in Energy Usage			
Year	Parameter	CO ₂ produced	CO ₂ per unit output
2004	Primary Energy usage	13,009	0.096
2005		12,127	0.078
2006		12,160	0.076
2007		11,070	0.054
2008		8,954	0.039
2009		7,097	0.035
2010		7,779	0.031
2011		6,473	0.028
2012		6,340	0.027
2013		6,012	0.027

Signed



(Authorised to sign as representative of the Operator)

Date: 27.1.14