

Permit Reference Number: NP 3433 BC

Operator: ConvaTec Limited

Installation: ConvaTec Rhymney Hydrocel Plant

Form Number: A1 v2016

Reporting of Emissions to Air for the period from01OCT2015.....to.....31DEC2015.....

Emission Point	Substance / Parameter	Emission Limit Value	Result [1]	Test Method [2] [6]	Sample Date and Times [3]	Accreditation/ Certification [4]	Uncertainty [5]
A1	VOC ^a (continuous)	-	665 mgC/m ³	CEM FID	02:38 4NOV2015	MCERT	±2%
A1	VOC ^a (extractive)	-	175.28 mgC/m ³	BS EN 12619:2013	08:51-12:50 25NOV2015	UKAS/MCERTS	6%

Note a: Expressed as Total Carbon

[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. For continuous measurements the percentage of the process operating time covered by 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] Monitoring methods and schedules to be agreed in writing by the Environment Agency on completion of Improvement Programme items IP6, IP7 and IP8, when the Environment Agency will also set Emission Limit Values for these Release Points by varying the Conditions of the Permit. The reference measurements used shall be agreed in writing by the Agency.

Signed *KS Rice* Date: 25 Feb 2016
(Authorised to sign as representative of the Operator)

Environmental Compliance Limited

ConvaTec
Permit No
Variation No
Report Ref

: TP9535LH (Spine Line, A1 – A3) & NP3433BC (Scrubber, A1)
: ...
: P2495 : R002

Installation Name
Visit Details
Survey Dates
Report Issue Date

: Alginite Fibre Plant (Spine Line, A1 – A3) & Hydrocol Plant (Scrubber, A1)
: Annual Compliance
: 24th & 25th November 2015
: 13th January 2016

Emission Point Reference	Substance to be Monitored	Emission Limit Value	Periodic Monitoring Result	Units	Uncertainty	Reference Conditions	Date of Sampling	Start and End Times	Monitoring Method Reference	Accreditation for use of Method	Tick if non-conforming test (see Sections 2 & 5)	Operating Status
A1 Scrubber	Volumetric Flowrate	...	6.90	m ³ /sec	5	Stack Conditions 273 K, 101.3 kPa	25/11/2015	09:44 – 10:00	BS EN 16911-1	UKAS / MCERTS		Normal
	Volumetric Flowrate	...	6.02	m ³ /sec	6	Wet Gas				UKAS / MCERTS		
	TVOC as Carbon	...	175.28	mgC/m ³	6			08:51 – 12:50	BS EN 12619:2013	UKAS / MCERTS		

Notes

The volumetric flowrate shown above is that from the initial pitot traverse. Any other flow measurements made during isokinetic sampling and/ or repeat traverses are shown later in the tables section.

* For TVOC the permit requires data to be reported as hourly averages. The average figure presented for TVOC in Table 1.1 is the maximum hourly average result during the 4 hr sample period. All other half hour averages are presented in the tables section in the appendices of this report.

The uncertainty figures presented in Table 1.1 for TVOC are "measurement uncertainty" figures, which do not take into account the variability of the measured sample values. The "uncertainty of measurement results" figures, which do include this contribution, are presented in the appendices of the report for these determinands.

Emission Limit Value

The emission limit value is that stated in the permit and will be expressed as a concentration or a mass emission.

Periodic Monitoring Result

The result given is expressed in the same terms and units as the emission limit value.

Uncertainty

The uncertainty associated with the quoted result is at the 95% confidence interval. The uncertainty results DO NOT take into account the effect of the sample location limitations.

Reference Conditions

All results are expressed at 273 K and 101.3kPa. The oxygen and moisture corrections are stated.

Monitoring Method Reference

The method stated is in accordance with the Environment Agency Technical Guidance Note M2, or other method approved by the Environment Agency.

Accreditation for use of Method

The details indicate the accreditation for the use of the complete monitoring method, e.g. MCERTS, UKAS. If use of the method is not accredited "NA" is stated.

Operating Status

The details indicate the feedstock and the loading rate of the plant during monitoring.

Chemical Analysis on sample reagents was performed by an External Laboratory as detailed in Section 4

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UKAS Accreditation Held but UKAS Accreditation cannot be claimed for the test as sampling did not comply with the Standard Reference Method (SRM), see section 2 & 5

NA

Method is NOT UKAS Accredited.

Operator: ConvaTec Limited

Form Number: S1 v2016

Reporting of Emissions to Air for the period from01OCT2015.....to.....31DEC2015.....

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Accreditation/ Certification ^[4]	Uncertainty ^[5]
S1	pH	6-11	6.7	WAS 039	23OCT2015 9:00am	UKAS	±2.85 to ±1.39%
S1	COD	4000mg/l	38 mg/l	WAS 040	23DEC2015 9:00am	UKAS	±5.07 to ±2.36%
S1	Suspended solids	1000mg/l	4 mg/l	WAS 006	23DEC2015 9:00am	UKAS	±19.93%

[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. For continuous measurements, or flow/time proportional samples, the percentage of the process operating time covered by the monitoring 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

Signed Date 25 FEB 2016
(Authorised to sign as representative of the Operator)

Permit Reference Number: NP 3433 BC

Operator: ConvaTec Limited

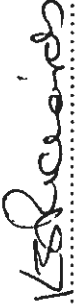
Installation: ConvaTec Rhymney Hydrocel Plant

Form Number: SED1 v2016

Reporting of Emissions to Air for the period from01OCT2015.....to.....31DEC2015.....

Emission Point	Substance / Parameter	Emission Limit Value	Result ^[1]
All emissions (including fugitive, excluding solvent sent for recovery)	VOC	<5% of total solvent input	1.6% By mass balance

[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.

Signed  Date: 25 FEB 2016.
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Permit Reference Number: NP 3433 BC

Operator: ConvaTec Limited

Installation: ConvaTec Rhymney Hydrocel Plant

Form Number: R1 v2016

Reporting of Waste Disposal and Recovery for the year2015.....

Waste Description	Disposal		Recovery Tonnes
	Route	Tonnes	
Trickling Filter Blowdown Bundwater Removal Landfill Waste Recycled Waste	Tanker	4007	2345
	Tanker	2307	-
	Tanker	142	-
	Landfill	33.6	-
	Recycled	5.304	5.304
1) Total hazardous waste		6314	2345
2) Total non-hazardous waste		180.9	5.304
TOTAL WASTE		6494.9	2350.3

Year	Trends in Waste Disposal and Recovery		
	Total hazardous waste disposed and recovered (tonnes)	Total waste disposed and recovered (tonnes)	Total Hazardous Waste per unit output (tonnes /tonne)
2005	-	-	-
2006	1393	1402	12
2007	2255	2272	12.6
2008	2129	2146	12.5
2009	1628	1641	12.06
2010	1424	1437	12.32
2011	1922	1944	12.9
2012	1750	1776	11.36
2013	2477	2496.8	10.24
2014	2399	2416.2	9.63
2015	2345	2350.3	9.48

Operator's comments :

Signed *VSR* Date *25 FEB 2016*
(Authorised to sign as representative of the Operator)

Permit Reference Number: **NP 3433 BC**

Operator: **ConvaTec Limited**

Installation: **ConvaTec Rhymney Hydrocel Plant**

Form Number: **WU1 v2016**

Reporting of Water Usage for the year2015.....

Water Source	Usage (m ³)	Specific Usage (m ³ /tonne)
Mains water (potable)	25008	100.8
Non potable water	-	-
TOTAL WATER USAGE	25008	100.8

Trends in Water Usage		
Year	Parameter	
	Total Water usage (m ³)	Total Water Usage per unit output (m ³ /tonne)
2005	-	-
2006	11609	99.99
2007	10321	57.66
2008	9769	57.46
2009	9827	72.8
2010	7794	56.5
2011	12012	80.6
2012	13516	87.8
2013	28803	119.02
2014	32171	129.2
2015	25008	100.8

Operator's comments :

Signed *VSR* Date *25 FEB 2016*
(Authorised to sign as representative of the Operator)

Permit Reference Number: **NP 3433 BC**

Operator: **ConvaTec Limited**

Installation: **ConvaTec Rhymney Hydrocel Plant**

Form Number: **E1 v2016**

Reporting of Energy Usage for the year2015.....

Energy Source	Energy Usage		Primary CO ₂ Produced (tonnes)
	Quantity	Primary Energy (MWh)	
	MWh		
Electricity *	3265	7836	1301
Gas	5513	5513	1048
TOTAL	8778	13349	2349

Year	Trends in Energy Usage		
	Primary Energy usage (MWh)	Primary CO ₂ Produced (tonnes)	Primary CO ₂ per tonne product (tonnes/tonne)
2005	-	-	-
2006	7118	2504	21.6
2007	7401	2628	14.1
2008	8242	2859	16.8
2009	7578	2690	19.9
2010	7718	2723	19.7
2011	8201	2886	19.4
2012	9010	1566	10.17
2013	13516	2382	9.84
2014	13281	2338	9.39
2015	13349	2349	9.43

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed

K. S. D. Jones

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(Authorised to sign as representative of the Operator)

Date.....

25 FEB 2016

Permit Reference Number: NP 3433 BC

Operator: ConvaTec Limited

Installation: ConvaTec Rhymney Hydrocel Plant

Form Number: PI1 v2016

Reporting of Performance Indicators for the year2015.....

Annual Production/Treatment			
Production of Hydrocel		174	tonnes
Percentage converted to Silver Hydrocel		37.2	%

Environmental Performance Indicators [EPI's]			Trends in Environmental Performance	
Parameter	Annual EPI	Units	Year	Parameter
VOC emission per tonne of product	380.78	Kg/tonne		VOC released per tonne product (Kg/tonne)
Waste produced per tonne of product	26052	Kg/tonne		
Energy use: primary carbon dioxide per tonne product	9472	Kg/tonne	2005	-
			2006	131.06
			2007	92.46
			2008	61.46
			2009	61.14
			2010	62.15
			2011	326.64
			2012	167.13
			2013	306.5
			2014	382.52
			2015	380.78

Operator's comments : Annual Production 2011 – 149T, 2012 – 154T, 2013 – 242T, 2014 – 249T, 2015 – 248T

Signed *V. S. Richards* Date: 25 FEB 2016 ,
(Authorised to sign as representative of the Operator)