



Environmental Compliance Limited
Unit G1
Main Avenue
Treforest Industrial Estate
Pontypridd CF37 5YL

(01443) 841760 t
(01443) 841761 f

info@envirocompli.com e
www.envirocompli.com w

Our Ref: sjb/ECL.014.01.01/L001

31st May 2018

Wales Permitting Service
Natural Resources Wales
Cambria House
29 Newport Road
Cardiff
CF24 0TP

For the attention of: Miss Llinos Owen, Senior Permitting Officer.

Dear Miss Owen,

Application Reference: EPR/NP3433BC/V005
Operator: Convatec Limited
Installation: Convatec Rhymney Gelling Fibre Plant

Further to your Schedule 5 request for further information, I am pleased to provide the following response.

1. Noise

As discussed, at the current design stage it is difficult to obtain accurate noise data in order to assess the noise from the RTO. Currently, the RTO fans have been specified with acoustic cladding to attenuate the noise emission to 76dB(A) at 1m and noise datasheets have been obtained from the fan supplier.

Discussion with a noise consultant with a view to modelling the noise emission (based on the noise datasheets for the fans), to determine the impact on the local community has identified that the acoustic cladding installed on the fans may only be effective in the near field. There is the potential that noise emission from the stack could contribute to noise emissions in the far field. It is also considered that the blade passing frequency of the main process fans may provide a tonal noise emission which could dominate when compared to the overall noise emission.

The RTO equipment supplier is unable to confirm the attenuating effect of the RTO equipment on the noise emission from the fans and so the noise consultant has not been able to assess any attenuating effect of the RTO unit, which includes various ducting, valves and two beds of ceramic media which is insulated, before being discharged to the stack.

Therefore it is not possible to model the noise emission from the RTO stack with any degree of certainty.

We would therefore request an improvement condition requesting that a noise survey be undertaken during the first 6 months of operation (post commissioning). This would allow ConvaTec to assess that actual noise from the RTO and consequently the actual impact on potentially sensitive receptors.

The RTO equipment supplier has indicated that if noise impacts are significant, a solution will depend upon both the noise emission and the tonal frequency (i.e. if, as anticipated, the blade passing frequency of the RTO fans is dominant).

Once the noise data is available, the options can be identified to retrofit the equipment, and mitigate any noise impact.

2. Emission Points

Please find appended drawing 5-LTJ-6779 detailing all emission points.

3. Odour Emission Concentration

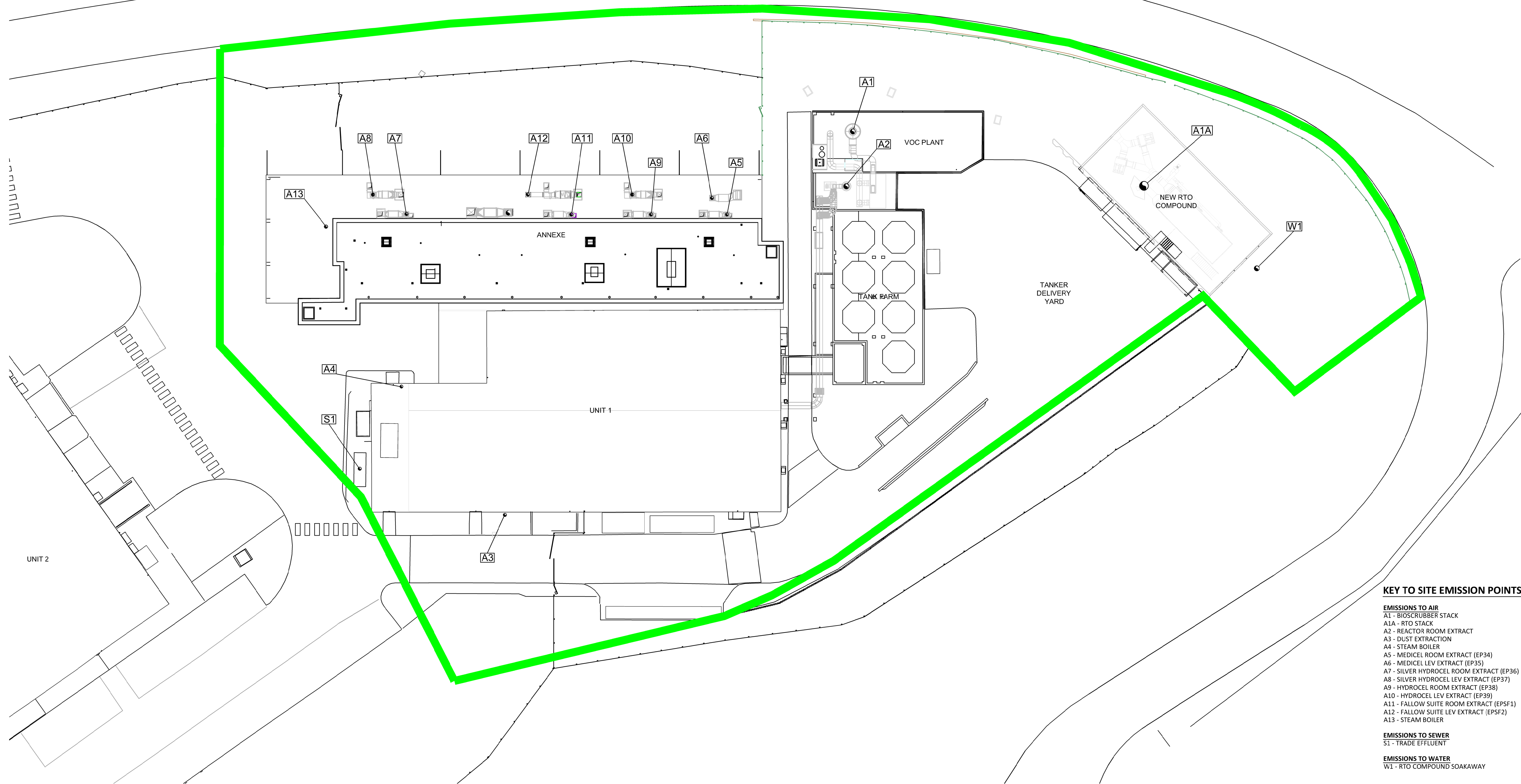
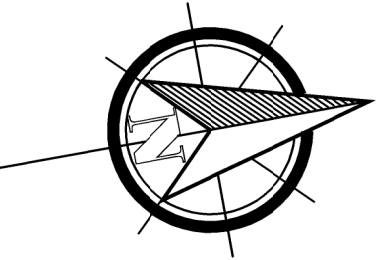
Evidence of the 500 OU_E/m³ odour emission used for dispersion modelling is detailed in the email from Tony Skadorwa (TSL) to Sarah Burley (ECL) dated 1st February 2018 which includes the 'ADMS Information Request' spreadsheet – attached to this letter.

Should you require any further information on this matter, please do not hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'S Burley'.

Sarah Burley
Technical Director
ECL Limited.



KEY TO SITE EMISSION POINTS

- EMISSIONS TO AIR**
A1 - BIOSCRUBBER STACK
A1A - RTO STACK
A2 - REACTOR ROOM EXTRACT
A3 - DUST EXTRACTION
A4 - STEAM BOILER
A5 - MEDICEL ROOM EXTRACT (EP34)
A6 - MEDICEL LEV EXTRACT (EP35)
A7 - SILVER HYDROCEL ROOM EXTRACT (EP36)
A8 - SILVER HYDROCEL LEV EXTRACT (EP37)
A9 - HYDROCEL ROOM EXTRACT (EP38)
A10 - HYDROCEL LEV EXTRACT (EP39)
A11 - FALLOW SUITE ROOM EXTRACT (EP5F1)
A12 - FALLOW SUITE LEV EXTRACT (EP5F2)
A13 - STEAM BOILER
- EMISSIONS TO SEWER**
S1 - TRADE EFFLUENT
- EMISSIONS TO WATER**
W1 - RTO COMPOUND SOAKAWAY

A		ISSUED FOR ENVIRONMENTAL PERMIT APPLICATION		17/05/18	BD	TS
LTR	DESCRIPTION			DATE	BY	APPD
REVISIONS						
Drawing Status						
PRE-CONSTRUCTION						
THIS DRAWING IS THE PROPERTY OF CONVALEE INC. AND IS LOANED FOR REFERENCE PURPOSES ONLY. IT SHALL NOT BE REPRODUCED, COPIED, ALTERED OR DISPOSED OF. IT SHALL BE RETAINED BY THE RECIPIENT AND RETURNED TO THIS COMPANY ON DEMAND.						
Title: ENVIRONMENTAL PERMIT						
SITE EMISSION POINTS						
Project title: VENT COLLECTION DUCTING TO RTO						
Project No: C1-1006-00220						
Ref:				Scale: 1:250		
Request by: CVT		Drawn by: TSL		Checked: TS		Approval: TS
Date: 17.05.18		Date: 17.05.18		Date: 17.05.18		Date: 17.05.18
Drawing Number: 5-LTJ-6779				Sheet No. 1 of 1		Revision: A
This Document is Confidential and Proprietary. Unless Otherwise Marked, it is an Uncontrolled Copy.						

Sarah Burley

From: Tony Skadorwa <Tony.Skadorwa@tslprojects.com>
Sent: 01 February 2018 12:01
To: Sarah Burley
Cc: Andy Barker
Subject: FW: Stack Height - ConvaTec Odour Expectations at Stack Outlet
Attachments: 171130 - RTO Emissions Data (Ammended DN950).xlsx; 171130 - RTO Emissions Data (Ammended DN1120).xlsx

Follow Up Flag: Follow up
Flag Status: Completed

Hi Sarah,

Further to the query to verify the odour emission from the RTO – I can confirm that the 500 OUE/m³ value used for the dispersion modelling is correct.

Please finalise the report.

Best regards,
Tony Skadorwa

From: Jones, Kevin N [mailto:KJones@megtec.co.uk]
Sent: 01 February 2018 11:51
To: Tony Skadorwa <Tony.Skadorwa@tslprojects.com>; Keymer, Stuart <SKeymer@megtec.co.uk>
Cc: Andy Barker <Andy.Barker@tslprojects.com>; Cross, Phillip <PCross@megtec.co.uk>; Klose, Michael <MKlose@megtec.de>
Subject: RE: Stack Height - ConvaTec Odour Expectations at Stack Outlet

Hello Tony

Stuart is out on another site today, so I am picking up on the response as the stack height is a key decision.

The data used in the dispersion modelling is correct and the anticipated outlet of 500 OUE/m³ based on an inlet of 2000 OUE/m³ is good to be used.

The presence of acetic acid is likely to be below measurability, if present at all, the comment only referenced its theoretical presence at very high (above design inlet conditions) and as such can in our opinion be ignored for the stack height calculation.

Apologies if the last response gave undue cause for concern.

Regards

Kevin

Kevin Jones
Sales Manager

Parameter Name	Units	Scenario			
		Maximum Flow	Average Flow		Minimum Flow
		(39,141Nm3/hr)	(29,930Nm3/hr)		(15,437Nm3/hr)
		RTO Stack	RTO Stack		RTO Stack
Stack Height	m	TBC	TBC	TBC	
Actual Volumetric Flow Rate	m3/s		13.1	10.0	4.9
Stack Diameter	m		0.950	0.950	0.950
Actual Stack Velocity	m/s		0.0	0.0	0.0
Stack Gas Temperature	oC		56	56	40
Stack x coordinate	UK OS Grid - 6 figure		310595	310595	310595
Stack y coordinate	UK OS Grid - 6 figure		208507	208507	208507
Oxygen Concentration in stack emission	%		20.2	20.2	21
Moisture Concentration in stack emission	%		2.26	3.01	1.80
Mass H2O	kg/kg		0.0141	0.0188	0.0112
Maximum Flow	Nm3/hr		39141	29930	15437
Stack CSA	m2		0.709	0.709	0.709

Emission Rates	Pollutant	ELVs (mg/Nm3)	ELV (Que)	Scenario			
				Maximum Flow	Average Flow	Minimum Flow	
				(39,141Nm3/hr)	(29,930Nm3/hr)	(15,437Nm3/hr)	
				Emission Rate (g/s OR Oue/s as appropriate)	Emission Rate (g/s OR Oue/s as appropriate)	Emission Rate (g/s OR Oue/s as appropriate)	
	Nitrogen dioxide	50	n/a	0.54	0.42	0.21	
	Carbon monoxide	100	n/a	1.09	0.83	0.43	
	Odour	n/a	500				
	VOCs	20	n/a	0.22	0.17	0.09	
	Formaldehyde		n/a	0.0005	0.0004	0.0002	
	Acetaldehyde		n/a	0.002155	0.001648	0.000850	