

From: Zachary, Aled
To: Carl Rowe
Subject: RE: EPR/ FP3031CW Improvement Action IC1
Date: 13 December 2013 15:06:05
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

Hi Carl,

I've reviewed some guidance on this and Rated thermal input is defined as:

"the rate at which fuel can be burned at the maximum continuous rating of the appliance multiplied by the gross calorific value of the fuel and expressed as megawatts thermal"

Thermal input can be calculated from the maximum fuel feed rate, the calorific value of the fuel and the thermal efficiency of the unit. However, the usual way is to take the manufacturer's rated input for that design - this should be in the manufacturer's handbook or manual, or should be obtainable from the manufacturer directly (Scania in this case). Where the appliances are old then the insurance certificate covering the equipment should also state the rated thermal input.

I'm not sure if that helps you further answer the query? I will also seek some guidance from the permitting team on this matter if extra information on the units proves difficult to source.

If you have any further queries please give me a call directly.

Kind regards,

Aled

Aled Zachary

Swyddog Cydymffurfriad ARLI / PPC Compliance Officer

Cyfoeth Naturiol Cymru / [Natural Resources Wales](#)

Ffôn/Tel: 01244 894596

Ffôn symudol / Mobile: 07780 924921

Gwefan/Website

<http://www.cyfoethnaturiolcymru.gov.uk/> / www.naturalresourceswales.gov.uk

Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

From: Carl Rowe [mailto:carl.rowe@headlandgroup.com]
Sent: 13 December 2013 13:27
To: Zachary, Aled
Subject: Re: EPR/ FP3031CW Improvement Action IC1

Hello Aled,

	INITIALS	DATE
OK FOR PUBLIC REGISTER	<i>AZ</i>	19/12/13
COPIED TO PUBLIC REGISTER	<i>JB</i>	<i>EDem</i>

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall confirm in writing the thermal input rating for each of the two supplementary diesel generators (in kWh).	31/12/13

As explained in our recent meeting – I am finding this improvement action above very hard to close off.

The only information I have at this time is:

Each generator can generate 250KVA then this equates to approx 200KW power output - assuming a power factor of 0.8, However this is power OUTPUT not power INPUT. Therefore assuming an efficiency of the engine of 30% then the power input would be = $200/0.3 = 667\text{KW/h}$ ea.

But this is based on an assumption.

The only technical data I have for the two diesel generators is attached below.

SCANIA

TECHNICAL DATA

GENERAL	DC12	DI12
Number of cylinders	6 in line	
Cylinder diametermm	127	
Strokemm	154	
Capacitydm ³ (litres)	11.70	
No. of main bearings	7	
Firing order	1 - 5 - 3 - 6 - 2 - 4	
Compression ratio	18:1	
Engine direction of rotation viewed from rear	Anti-clockwise	
Fan direction of rotation viewed from front	Clockwise	
Cooling	Liquid	
Valve clearances, cold engine		
intake valvemmm	0.45	
exhaust valvemmm	0.70	
Weight, without coolant or oilkg	1065*	995
*With charge air cooler, radiator, expansion tank and pipes		
Power	see engine card. "Engine record card"	
LUBRICATION SYSTEM		
Max. oil pressure (hot engine at engine speeds above 1000 r/min)bar (kp/cm ²)	6	
Normal oil pressure (hot engine at operating speeds)bar (kp/cm ²)	3 - 6	
Min. oil pressure (hot engine 1000 rpm)bar (kp/cm ²)	1.0	
Oil capacity, see page 29		
Crankcase pressure with closed crankcase ventilationmm VP	-55 - +20	

We will have a new contractor Generator Engineer in the New Year and I will try and work out the exacts with him – but this will be after the deadline given in the permit.

The long term future for the generators is that we will look to make them redundant in 2015/2016 as a result of the site's future plan to install an electrical substation on site.

Regards

Carl Rowe
Health, Safety & Environment Manager

Tel: +44(0)1244 537370
Mobile: +44(0)7702 941948
Email: carl.rowe@headlandgroup.com



: [carl.rowe_cheminova](#)



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Headland Agrochemicals Ltd, Rectors Lane, Pentre, Deeside, Flintshire, CH5 2DH
Telephone: 01244 537370 Fax: 01244 532097

