

Environment Agency

Review of an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2010 (as amended)

Decision document recording our decision-making process following review of a permit

The Permit number is: EPR/AP3238ZU

The Operator is: Cofely Industrial Energy Services Limited

The Installation is: Grimsby Fibres Power Station

This Variation Notice number is: EPR/AP3238ZU/V003

What this document is about

All Environmental permits which permit the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the Industrial Emissions Directive (IED), need to be varied to implement the special provisions for LCP given in the IED, by the 1 January 2016 (Article 82(3)). The IED makes special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.

The IED provides a period of transition towards the new ELVs via Article 32, the Transitional National Plan (TNP). It also makes provision for plant that wish to be exempted from compliance with the new ELVs in Article 33, the Limited Life Derogation (LLD). Other derogations include limited operating hour regimes for sites using 500 hr or 1500 hr derogations. There are also options for exemption from emission limits based on operating hours.

The operator has submitted a response to our notice requiring information, issued under regulation 60(1) of the Environmental Permitting Regulations (EPR), which has provided us with information on which compliance route they wish to follow for each LCP. The response also included specific details relating to each LCP, necessary for accurate implementation the IED requirements. A copy of the regulation 60 notice and the operator's response is available on the public register.

We have reviewed the permit for this installation, including all variations since the last permit consolidation, and referred to the operator's response to the regulation 60 notice requiring information. This is our decision document, which explains the reasoning for the consolidated variation notice that we have issued.

It explains how we have reviewed and considered the compliance routes and, where relevant, the emissions limits proposed by the Operator for each LCP on the installation. This review has been undertaken with reference to the:

- Chapter III and annex V of the IED
- “IED BAT ESI Review Paper, 28 October 2014” produced by the Environment Agency (referred to as the “2014 ESI BAT review paper” in this document)
- “IED BAT Non-ESI Review Paper, 28 October 2014” produced by the Environment Agency (referred to as the “2014 Non-ESI BAT review paper” in this document)
- “Electricity Supply Industry – IED compliance protocol for Utility Boilers and Gas Turbines”, published by the Joint Environmental Programme.

It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. It also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

The consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue. It also modernises the entire permit to reflect the conditions contained in our current generic permit template.

The introduction of new template conditions makes the Permit consistent with our current general approach and philosophy and with other permits issued to installations in this sector. Although the wording of some conditions has changed, while others have been deleted because of the new regulatory approach, it does not reduce the level of environmental protection achieved by the Permit in any way. In this document we therefore address only our determination of substantive issues relating to the chapter III review and any changes to the operation of the installation.

How this document is structured

Glossary

1. Our decision
2. How we reached our decision
3. The legal framework
4. Key Issues

Annex 1 – Review and assessment of changes that are not part of the Chapter III IED derived permit review.

GLOSSARY

Baseload	means: (i) as a mode of operation, operating for >4000hrs per annum; and (ii) as a load, the maximum load under ISO conditions that can be sustained continuously, i.e. maximum continuous rating
BAT	best available techniques
BREF	best available techniques reference document
CCGT	combined cycle gas turbine
Emergency use	<500 operating hours per annum
ELV	emission limit value set out in either IED or LCPD
GT	gas turbine
IED	Industrial Emissions Directive 2010/75/EC
MCR	Maximum Continuous Rating
OCGT	Open Cycle Gas Turbine

1 Our decision

We have decided to issue the Variation Notice to the Operator. This will allow it to continue to operate the Installation, subject to the conditions in the Consolidated Variation Notice.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the varied permit will ensure that a high level of protection is provided for the environment and human health.

The Consolidated Variation Notice contains many conditions taken from our standard Environmental Permit template including the relevant annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the Notice, we have considered the techniques identified by the operator for the operation of their installation, and have accepted that the details are sufficient and satisfactory to make those standard conditions appropriate. This document does, however, provide an explanation of our use of “tailor-made” or installation-specific conditions, or where our Permit template provides two or more options.

2 How we reached our decision

2.1 Requesting information relating to the requirements of Chapter III of and Annex V to the IED

We issued a Notice under Regulation 60(1) of the Environmental Permitting (England and Wales) Regulations 2010 (a Regulation 60 Notice) on 17/12/14 requiring the Operator to provide information for each LCP they operate, including:

- The type of plant, size and configuration.
- The proposed compliance route.
- Minimum start up and shut down loads.
- The proposed emission limits and how they accord with the 2014 BAT review paper.
- For gas turbines, proposed emission limits for each plant between the MSUL/MSDL and 70% load, with a justification.

The Regulation 60 Notice response from the Operator was received on 24/04/15.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review but not that it necessarily contained all the information we would need to complete that determination.

The Operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 60 Notice response that appears to be confidential in relation to any party.

2.2 Requests for Further Information during determination

Although we were able to consider the Regulation 60 Notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information requests on 08/06/15. A copy of the further information request and the response received on 27/07/15 were placed on our public register.

3 The legal framework

The Consolidated Variation Notice will be issued under Regulations 18 and 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an installation as described by the IED;
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the Consolidated Variation Notice, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

Meeting the requirements of the IED

Following the initial response to the Regulation 60 Notice, detailing compliance with IED Chapter III special provisions for Large Combustion Plants (LCP), the operator reconsidered the aggregation rules and the steam and power requirements of their customers. A number of items of plant have been removed from service and remaining plant has been de-rated in terms of thermal input. This results in each plant being less than 50MWth input. The aggregated total net thermal input of the windshield is also less than 50MWth. Therefore, it has been determined that the site does not meet the requirements to be an LCP under Chapter III of IED, and instead it remains a combustion activity, subject to the requirements of Chapter II of the IED.

Article 11 of the IED Chapter II requires operators of combustion plant to take all appropriate preventative measures against pollution, that best available techniques (BAT) are applied, that no significant pollution is caused, that the generation of waste is prevented and where it is disposed, reducing any impact on the environment, energy is used efficiently, necessary measures are taken to prevent accidents and limit their consequences and necessary measures are taken upon definitive cessation of activities to avoid any risk of pollution and return the site to a satisfactory state.

4. Key Issues

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Where relevant and appropriate, we have incorporated the techniques described by the Operator in their Regulation 60 Notice response as specific

operating techniques required by the permit, through their inclusion in Table S1.2 of the Consolidated Variation Notice.

The variation notice removes the LCP reference numbers:

- **LCP62, LCP63 and LCP96.**

Emission point A1 - 2 x gas turbines (GTs) and 2 x heat recovery steam generators (HRSGs). These are arranged as 2 x trains of GT/HRSG combination which vent via multiple flues within a single windshield with a stack height of 61m. The maximum thermal input is 24MWth per train i.e. 48MWth in total.

Emission point A2 – is redundant.

Emission point A3 – 2 x gas-fired package boilers each of 16.1 MWth. Aggregating these plants results in a total thermal input of 32.2 MWth. These plants vent via multiple flues within a single windshield with a stack height of 47m.

Emission point A4/A5 - are the bypass stacks fitted to the gas turbines. These operate for less than 500 hours per year.

Emission point A6/A7 – A6 is redundant, being replaced by A7, a single three cell tower cooling tower unit.

Emission point A8 – gas engine/waste heat recovery boiler, with a thermal input of 4.592 MWth and a stack height of 10m.

All the above combustion plants are fired on natural gas.

Compliance Route:

As explained above, the installation no longer includes LCP therefore is not subject to Chapter III of the IED. No compliance route is required.

Emission limits:

The operator has proposed limits which represent BAT in line with the requirements of Chapter II of the IED. Consequently we have accepted the proposed limits and incorporated them into table 3.1 of the permit.

Parameter and release point	Existing mg/m ³	Reference Period	New Permit limit mg/m ³
A1 - NO _x	150	Daily mean of validated hourly averages.	150
A1 - CO	20	Daily mean of	30 ^{Note1}

		validated hourly averages.	
A3 - NO _x	150	Hourly averages	150
A3 – CO	30	Hourly averages	30 ^{Note1}
A4/A5	No ELV less than 500 hours	-	No ELV less than 500 hours
A8 ^{Note2}	-	-	-
<p>Note 1: Operator asked for a minor relaxation to confirm 100% compliance, 30mg/m³ is 70mg/m³ less than the Annex V ELV</p> <p>Note 2: This plant is 4.592MWth, therefore, the emissions are regarded as insignificant and no ELV is set.</p>			

Energy efficiency:

In line with the DEFRA Part A guidance, to report on the scope for further improvement, a condition has been included for the operator to carry out a 4-yearly efficiency review.

Reporting efficiency:

In order to ensure the efficiency of plant using fossil fuels or biomass is maximised and regularly recorded, condition 1.2.1(c), condition 4.2.2(b) and table S4.2 have been added to the permit.

Resource efficiency metrics:

A more comprehensive suite of reporting metrics has been added to the permit template. Table S4.2 “Resource Efficiency Metrics” has been added requiring the reporting of various resource parameters.

Additional IED Chapter II requirements:

Condition 3.1.4 relating to protection of soil, groundwater and groundwater monitoring, has been added in compliance with IED requirements.

Conditions 4.3.1 and 4.3.2 relating to notifications have been amended in compliance with IED requirements.

Annex 1: Review and assessment of changes that are not part of the Chapter III IED derived permit review.

The operator, in his response to improvement condition 9 (IC9), committed to install a new treatment plant and associated monitoring facilities to achieve the numerical values shown in Table S3.2 of the permit shown below. The operator requested this table be included in the permit as part of this variation. We have agreed that, to fit in with the next planned site shutdown during August 2016, this table can be included in the permit and the ELVs shall take effect from 01/01/17 or from the date of commissioning of the new effluent treatment plant as identified in the operator's response to IC9.

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit) ¹	Reference period	Monitoring frequency	Monitoring standard or method
W1 (on drawing reference Plan A) Discharge to the River Humber.	Total suspended solids	Boiler blowdown.	80mg/ml	24-hour flow proportional sample	Daily	BS6068-2.54 1995
	pH	Water treatment plant effluent.	5-9	Instantaneous	Continuous	BS6068-2.50 1995
	Temperature		30°C	Instantaneous	Continuous	BSEN13500
	Hourly flow	Surface waters	210m ³ /hr	Hourly	Continuous	MCERTS
	Total oxidant (as chlorine)		0.50mg/l	24 hr period beginning 00.01	Continuous	SCA Blue Book 51 ISBN0117516260
	Oil and grease		No visible emission	24 hr flow proportional sample	Daily	Visual inspection
	COD		1000mg/l	24 hr composite	No less than once per week	ASTM 1995 standard method for chemical oxygen demand of water D1252-95 ASTM Annual Book of Standards
Note 1. These limits shall take effect from 01 January 2017.						