Cyfoeth Naturiol Cymru
Natural Resources Wales

Natural Resources Wales permitting decisions

Castle Cement Limited - Padeswood Cement Works

Contents

Variation

The variation number is: EPR/BL1096IB/V017

The operator is: Castle Cement Limited

The Installation is located at: Padeswood Cement Works, Padeswood, Mold, Flintshire CH7 4HB

This minor technical variation includes replacements to the existing bypass system from the clinker production process. The replacements include the gas conditioning tower to a heat exchanger and a change to the dust abatement from an electrostatic precipitator (ESP) to a bag filter. There is no change to the emissions from the installation as a result of this variation. The operating techniques for the bypass system have been incorporated from the application into the environmental permit.

The applicant requested a consolidation of the environmental permit with this minor technical variation. This has resulted in an update to the introductory note that referenced the type of dust abatement on the bypass system which changed with this variation.

We have decided to issue the variation for Padeswood Cement Works operated by Castle Cement Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

Key issues of the decision

Receipt of application

An application was received on the 20th April 2021. The application was 'Duly Made' as of the 16th September 2021. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete the determination.

The facility

The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following directly associated activities. There is no change to these as a result of this variation.

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
A1	3.1 A(1)a	Producing cement clinker in a rotary kiln with a production capacity exceeding 500 tonnes per day. **R01** – Use principally as a fuel or other means to generate energy **R05** – Recycling / Reclamation of other inorganic materials **R11** – Use of waste obtained from any other operations numbered R01 – R10 **R13 –** Storage of wastes pending recovery operations R01 – R12 (excluding temporary storage, pending collection, on the site where it is produced).	Receipt and storage of raw materials (including substitute raw materials) through crushing, blending, other processing and feeding to the kiln system. Mixing of hazardous waste (approved alternative raw materials) with raw materials for the production of clinker. Receipt and storage of fuels (including substitute fuels) and feeding to the kiln system. This includes the use of coal and gas oil as a start-up & shutdown fuel Discharge of clinker from the cooler to the clinker store or export facility and discharge of emissions from the chimney or other process vents.

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

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enquiries@naturalresourceswales.gov.uk
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Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity and WFD Annex I and II operations**	**Limits of specified activity and waste types**
A2	3.1 A(2)(a)	Grinding cement clinker in cement mills 1, 2,3, 4 & 5	Receipt of clinker from the kiln and import facility through storage and transfer to the cement mills. Receipt, on site of all other raw materials (e.g. gypsum), through storage, blending and feeding, to the cement mills through to discharge of cement to storage silos. Emissions to air from process vents.
A3	Section 3.1 part B (a)	Storing, loading or unloading cement or cement clinker in bulk prior to further transportation in bulk.	Cement & clinker storage, bulk loading, unloading and dispatch. Emissions to air from process vents.
A4	Section 3.1 part B (b)	Blending cement in bulk or using cement in bulk other than at a construction site, including the bagging of cement and cement mixtures, the batching of ready-mixed concrete and the manufacture of concrete blocks and other cement products.	Blending and bagging of cement products. Emissions to air from process vents.
Directly Associated Activity			
A5	Waste storage and handling **R13 -** Storage of wastes pending recovery operations R1 toR12 (excluding temporary storage, pending collection, on the site where it is produced). **D15 -** Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where the waste is produced).		From waste generation, storage and monitoring to waste despatch.
A6	1.925 MW Hot Gas Generator providing auxiliary heat to Mill 5.		Combustion of gas oil including release to air of combustion gasses through Mill 5 stack.
A7	Rail loading facilities		Loading of cement products for dispatch

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Legislation

NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

All applicable European Directives have been considered in the determination of the application.

The site

There is no change to the site plan, emission points or site boundary as a result of this minor technical variation.

Emission limits

This variation does not change any emission limits in the permit and there are no additional limits associated with this change.

Environmental Risk Assessment

There is no new emissions to air, land or water from the installation as a result of this application for a minor technical change. The replacements on the bypass system are expected to give rise to improved dust abatement and energy efficiencies. Therefore no environmental risk assessment has been completed.

Noise

There will be a noise contribution with the changes on the bypass system. Noise abatement has been included, namely a silencer on the suction side of the Heat Exchanger (HEX) cooling fans. Silencers at the blower end of the (HEX) will be added if necessary, to prevent any off site noise impact outside the installation boundary. Noise monitoring is undertaken on a quarterly basis so this will continue to ensure there is no off-site impact. The bypass system is located in the centre of the site close to the raw meal grinding so any noise contribution as a result of this change is expected to be minor.

Operating techniques

As a result of this variation the operating techniques for the replacements to the bypass system have been added to the permit (see below ‘Incorporating the application’).

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We have reviewed the application and are satisfied that there is a management system in place with associated procedures to meet permit compliance. This minor technical variation is expected to give rise to environmental improvements from the existing bypass system e.g. energy and water savings.

Incorporating the application

We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.

These descriptions are specified in the Operating Techniques table S.1.2 in the permit:

Table S1.2 Operating techniques

Description	Parts	Date Received
Consolidated response to Information Notice dated 17/12/01	Sections 2.1 to 2.11	05/06/02
Response to Information Notice dated 11/04/03	The response given to questions 6 to 18, 23, 25 to 29 & 39	06/06/03
Additional Information May 2004	Sections 3,4, 7 to 18	10/05/04
Variation Application KP3338UC	C2.1 to C2.9, C2.10 (except 2.10.17 to 2.10.20, 2.10.23 and table 2.10.2), C2.11	30/03/07
Response to Information Notice dated 27/06/07	The response given to questions 1,2 and 3	20/07/07
Variation Application AP3134UN	C2.1 to C2.9, C2.10 (except 2.10.18 to 2.10.21, 2.10.24 and table 2.10.2), C2.11	03/07/07
Response to information Notice dated 31/06/07	The response given to questions 1 & 4 to 7	28/08/07
Additional Information August 2008	Use of SNCR (selective non-catalytic reduction)	21/08/08
Supporting information to variation application EA/EPR/BL1096IB/V012, document reference Pad1-2015	All	23/02/15
Information received in support of Natural Resources Wales Cement Sector Permit Review 2014	All parts of operator response to Regulation 60 (1) notice sent 06/03/14	30/01/15
Information received in support of Natural Resources Wales Cement Sector Permit Review 2014	All parts of operator response to Regulation 60 (1) notice sent 26/06/15	29/07/15
Application	Table 3a – technical standards , Part C3 of the application form Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for the production of cement, lime and magnesium oxide	16/06/17
Application	Application for variation to Padeswood Works Permit Document Ref CM5	16/06/17

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Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Response to Schedule 5 Notice dated 11/10/17	Response to question regarding BAT for Noise control at CM5	03/11/17
Mineral Products Association Code of Practice for the Use of Waste Materials in Cement and Dolomitic Lime Manufacture	All	06/03/2018
Application PAN-013925 (EPR/BL1096IB/V017	Application supporting document 'Installation of a replacement Bypass system' Responses to application form Part C2 and Part C3	20 4 2021

END.

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