

1. Non-technical summary

Innospec Limited (Innospec) has submitted an environmental permit variation to reflect the following operational changes to its Octane Additives manufacturing installation at Innospec Limited, Ellesmere Port Lead Alkyl, Innospec Manufacturing Park, Oil Sites Road, Ellesmere Port, Cheshire, CH65 4EY:

- The installation of a new energy centre with a combined heat and power (CHP) facility, consisting of two gas engines and two steam boilers.. The installation will have a total aggregated thermal input of 34.689MWth. The gas engines and the fired side of the steam boilers will be served by separate 17m flue stacks within a common chimney.
- Once successfully commissioned, the energy centre will replace the site's two existing steam boilers (emissions points A30 and A31). in addition, low grade heat from the energy centre will be used for space heating and will replace the existing site high pressure hot water boiler (emissions point A33).
- Removal of redundant activities from the existing permit, while retaining the existing permit installation boundary.

The replacement of the older boilers is necessary due to the efficiency and condition of the boiler house building. The new energy centre will deliver significant energy efficiency improvements. The gas engines and boilers have been selected to operate on up to 100% hydrogen from 2026, in line with the projected availability of hydrogen from Hynet as part of the Stanlow Industrial Cluster. Initially the engines and boilers will operate on natural gas. The development is vital to Innospec's ongoing manufacturing activities and to reducing the environmental impact of its operations.

The installation has been designed to constitute 'good quality' CHP, under the CHP Quality Assurance (CHPQA) scheme.

As the engines and boilers have a rated thermal input in excess of 1MWth and will be installed after 20 December 2018, they will all constitute 'new' Medium Combustion Plant (MCP) under the Environmental Permitting (England and Wales) Regulations 2016, as amended.

As the gas engines will be natural gas-fired 'new' medium combustion plant, an NO_x emission limit of 95mg/m³ will apply. A NO_x emissions limit of 100mg/m³ will apply to the steam boilers. These emissions limits are set by Annex II, Part 2 of the Medium Combustion Plant Directive (EU) 2015/2193. The engines and boilers have been selected to meet these limits. The gas engines will also constitute 'specified generators' and will meet the applicable NO_x emissions limits as these are less stringent than through the MCP regime.

Additionally, as the aggregated thermal input of combustion plant at the installation exceeds 20MWth and will continue to do so, a permit variation is required with respect to operations under Section 1.1 Part B (a) to Schedule 1, Part 2 of the Environmental Permitting (England and Wales) Regulations 2016.

The energy centre was subject to planning application 22/00070/FUL (submitted to Cheshire West and Chester Council on 7 January 2022) and received planning permission on 23 August 2022.

In addition, the company would like to consolidate this variation, alongside the previous variations and accepted technical change requests, into the permit.

This permit variation application does not concern Innospec's other installation permit (BU4112IK), which authorises the manufacturing of active chemicals.