**Cranswick Convenience Foods Limited**

**Application to Vary an Environmental Permit – Reference EPR/ KP3733AN**

**Response to Not Duly Made Letter dated 29/10/2021**

Set out below are the responses to the questions raised in the above mentioned not duly made letter.

For ease of reference the questions posed are reproduced followed by the response to each question in turn.

1. ***Unfortunately the application payment you sent is incorrect. The proposed increased production capacity is above the IED threshold (75t/day) and is therefore classed as a substantial variation. The correct application charge is £12,858. This leaves a balance of £5,593 to pay.***

I would be grateful if you could clarify why you believe the application to vary the current environmental permit should be classed as a substantial variation given that:

* The existing permit already authorises the relevant schedule 1 listed activity at a rate of > 75te/ day.
* The existing permit does not place a limit on the site’s processing capacity / throughput (although the introductory note mentions an annual site production rate of 200,000 te which is substantially more than the predicted annual site production rate of 91,000 te after completion of the proposed development).
* As confirmed in the variation application (in particular in but not limited to Sections C2.2b and C3.1), the proposed development does not require changes or additions to the schedule 1 listed activity contained in the current environmental permit and does not require the existing site / permit area boundary to be extended as the new processing plant will be housed within a modified building which is located within the existing permit area boundary. Minor changes to existing directly associated activities only will be required as explained in detail in the above-mentioned sections of the permit variation application package.
* This permit variation application is very similar in nature to a variation application recently submitted and determined in connection with the introduction of new food cooking plant at a Cranswick sister site also located on Helsinki Road. That application was correctly dealt with as a Standard or Normal variation.

On the basis of the foregoing, we do not consider the application to constitute a substantial variation.

1. ***Please submit a BAT Assessment for the new production facility, assessed against the requirements of the Food, Drink and Milk Industries BREF BAT Conclusions, in particular, BAT Conclusions 1 – 15:*** [***https://eippcb.jrc.ec.europa.eu/reference/fooddrink-and-milk-industries***](https://eippcb.jrc.ec.europa.eu/reference/fooddrink-and-milk-industries)***.***

As confirmed in the permit variation application (in particular in but not limited to Sections C2.5 and C3.3/C3.3a1), Section C3.3 / C3.3a1 (Operating Techniques) of the application an assessment of BAT against the relevant criteria set out in the Food, Drink and Milk Industries BREF is included. The tabulated BAT assessment is presented in four separate subsections which deal with different aspects of the proposed development as described below, and takes into account all relevant criteria identified in the BAT conclusions document.

* New poultry meat processing line from receipt of raw materials through preparation and cooking to generation, packaging and storage of finished product.
* Refrigeration plant serving the new processing plant including refrigeration plant room and refrigerated storage areas.
* Additional gas fired steam boiler / thermal oil heating plant installed to satisfy increased steam / hot water demand and to provide heating for vegetable oil frying and oven cooking.
* General management techniques.

1. ***Please submit an Air Quality Risk Assessment in line with our guidance at: https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmentalpermit which provides a quantitative assessment of the Volatile Organic Compounds (VOC) emissions from the proposed new fryer lines.***

For the reasons set out below, there are currently no “actual” VOC emission concentration values available to us which can be used as input data to the H1 risk screening tool.

* The plant in question is currently under construction hence it is not possible to gather actual release concentration data from this source.
* The equipment manufacturer is unable to provide us with “design” VOC emissions data for the continuous frying plant.
* Permits for existing food manufacturing processes (including cooking activities) operated by Cranswick do not contain requirements to measure directly VOC emissions from cooking plant hence there are no data available from sister plants that can be used as surrogate values in the case in question.
* Whilst we have prepared a number of environmental permit applications on behalf of Cranswick including food preparation and cooking activities, we have considered VOC emissions from such sources to be insignificant and therefore qualitatively discounted them from further detailed examination. We have instead addressed such minor releases via general engineering and management controls, typically via Odour Management and Monitoring Plans. This approach has previously been accepted by the Environment Agency staff who have dealt with the permit applications. As a result, there are no data available from previous permitting work that we are able to use in this application.

Notwithstanding the foregoing and in order to answer your question (you have asked for a quantitative assessment of VOC emissions from the proposed new fryer lines) as fully as possible, we have made a number of assumptions to derive worst case data for input to the H1 risk screening tool. The assumptions are as follows;

* There are six emission points designated A9, A10, A11, A12, A13 and A14 associated with the continuous frying plant. These emission points are the outlets from roof mounted fans which serve the immediate areas in which the frying lines are located hence the fans extract ambient air from the working area and hot air / vapours from the frying plant vents.
* Each of the six fans pumps air at a rate of 1000 m3/hour.
* The Food, Drink and Milk Industries BREF assigns an emission limit value for Total VOC in the range 3 to 50 mg/Nm3. For the purposes of this exercise a value of 50 mg/Nm3 is assumed. This is considered to be a very pessimistic value given that the extraction fans will primarily be pumping ambient air from the frying plant areas.
* As the H1 screening tool does not include VOC as a selectable substance, rather than add VOC as a new substance, four surrogates have been used. These are methane and 2, Methylbut-1-ene which are frequently used as VOC surrogates in gas monitoring equipment, and toluene and ethyl benzene which are two of the more volatile hydrocarbons which may to be released from the hot vegetable oil cooking process. These four substances have been used additively in H1 (ie. a concentration of 50 mg/Nm3 has been assumed for each component). Again, this is a very pessimistic approach.
* Long term emissions are based on a 55% loading rate which is a typical loading rate for cooking plant in use on the existing site.

The above data have been entered into a revised version of the H1 screening tool originally submitted as part of the permit variation application. The revised version is provided as part of this response. In all cases the H1 outputs predict releases from release points A9 to A14 well below significance thresholds.

It is accepted that, in the absence of actual emission concentration data, the foregoing is a best estimate based on worst case assumptions. Consequently, it is suggested that the permit when issued, should contain a requirement in the form of an improvement condition, to monitor VOC emissions from the new fryer lines and to repeat the H1 risk screening process using actual monitoring data to determine whether or not any further actions may be appropriate.

1. ***Please confirm if the discharge to sewer will increase as a result of this variation, and provide the discharge volume. If the discharge volume is increasing significantly, and the discharge is likely to contain hazardous chemicals or elements, then please also provide a Surface Water Pollution Risk Assessment in line with our guidance at*** [***https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit***](https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit)

As confirmed in the permit variation application (in particular in, but not limited to Sections C3.2 and C3.6e) the quantity of waste water generated by the site and discharged to sewer will increase as a result of the development. There are no discharges from the site to surface water or groundwater. The waste water quantity and quality data from the above mentioned sections of the application have been used to calculate concentrations of potentially polluting and other substances likely to be present in the discharge from site to sewer and present in the discharge from the receiving sewage treatment works to the River Humber Estuary. These calculations are provided in document reference WIA-SF included in Section C2.6 of the application. The data have been used to populate the H1 risk screening tool which is also provided in Section C2.6 of the application. Outputs from the H1 assessment for discharges from the sewage treatment works all fall below the relevant significance thresholds hence no further detailed modelling work is required.

1. ***Your proposal includes the addition of new point source emissions, where VOC’s, PM, NOx and SOx are the main parameters. The Installation is sited in a sensitive location due to its proximity to ecological receptors. As such your application would usually require an assessment under the Habitats Regulations. The charge of £779 for this assessment is not included in your baseline application charge. However, I will review this as part of my determination, and reserve the right to request this additional payment should we be required to undertake a habitats risk assessment.***

As confirmed in the permit variation application (in particular in but not limited to Sections C3.2 and C3.4a) the only significant point source releases to air arise from combustion plant that is fired by natural gas. Particulate matter, sulphur dioxide and VOC emissions are not of concern for combustion equipment fired by natural gas. In addition, as described in Section C3.1 of the application, where relevant, newly installed combustion plant will be Medium Combustion Plant Directive compliant. Combustion plant emissions data have been used to populate the H1 risk screening tool which is provided in Section C2.6 of the permit variation application. Outputs from the H1 assessment for releases into air show that NOx emissions from the combustion plant are above significance thresholds. Detailed air dispersion modelling has therefore been undertaken and a full copy of the dispersion modelling report is provided in Section C2.6 of the application. The modelling outputs show that the identified sensitive receptors in the vicinity of the site (see screening report and maps provided by the Environment Agency and included in Section C2.6 of the application) are not adversely affected by NOx emissions to air from the site. Emissions from the site to sewer are not capable of adversely impacting the identified receptors. There are no emissions from site to other media. Consequently, as the detailed air dispersion modelling has shown that NOx emissions from the site are incapable of adversely impacting the identified sensitive receptors either in the short or the long term, a separate Habitats Assessment is not required.