

# **Review of an Environmental Permit for an Installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2016 (as amended)**

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

The Permit number is:                   EPR/BN4142IY  
The Operator is:                         Cargill PLC  
The Installation is:                     Brocklebank Oilseed Processing Plant  
This Variation Notice number is:   EPR/BN4142IY/V007

### **What this document is about**

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication by the European Commission of updated decisions on best available techniques (BAT) Conclusions.

We have reviewed the permit for this installation against the BAT Conclusions for the Food, Drink and Milk Industries published on 4<sup>th</sup> December 2019 in the Official Journal of the European Union. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the Operator in the operation and control of the plant and activities of the installation. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position.

As well as considering the review of the operating techniques used by the Operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue. Where this has not already been done, 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 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 new BAT Conclusions.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

## **How this document is structured**

1. Our decision
2. How we reached our decision
3. The legal framework
4. Annex 1 – Review of operating techniques within the Installation against BAT Conclusions.
5. Annex 2 – Review and assessment of changes that are not part of the BAT Conclusions derived permit review
6. Annex 3 – Improvement Conditions
7. Annex 4 – Pre-operational Conditions

# 1 Our decision

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

We consider that, in reaching our 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 to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 09/06/2022 requiring the Operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Notice required that where the revised standards are not currently met, the operator should provide information that:

- describes the techniques that will be implemented before 4 December 2023, which will then ensure that operations meet the revised standards, or
- justifies why standards will not be met by 4 December 2023, and confirmation of the date when the operation of those processes will cease within the Installation or an explanation of why the revised BAT standards are not applicable to those processes, or
- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised BAT standards described in the BAT Conclusions.

Where the Operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT-AEL) described in the BAT Conclusions Document, the Regulation 61 Notice required that the Operator make a formal request for derogation from compliance with that BAT-AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 61 Notice response from the Operator was received on 21/10/2022.

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 61 Notice response that appears to be confidential in relation to any party.

## 2.2 Review of our own information in respect to the capability of the Installation to meet revised standards included in the BAT Conclusions document

Based on our records and previous experience in the regulation of the installation we consider that the Operator will be able to comply with the techniques and standards described in the BAT Conclusions other than for those techniques and requirements described in BAT Conclusions 1(ii), 5, 6(a), and 32 – hexane AEL, EPL for wastewater. In relation to these BAT Conclusions, we do not fully agree with the Operator in respect of their current stated capability as recorded in their response to the Regulation 61 Notice. We have therefore included Improvement Condition IC10 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusions are delivered within 3 months of the variation being issued.

## 2.3 Requests for further information during determination

Although we were able to consider the Regulation 61 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 request on 26/05/2023 concerning BATcs 1, 3, 4, 6(b), 7, 8, 11, 12, 14, 30, BAT-AELs, hexane mass balance, BAT-EPLs, MCPs, cooling towers, water discharge, non-technical description, and site plan. A copy of the further information request was placed on our public register. In addition to the response to our further information request, we received additional information during the determination from the Operator via email on 07/07/2023 concerning the number of MCPs on site. We made a copy of this information available to the public in the same way as the response to our information request.

# **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.

## Annex 1: decision checklist regarding relevant BAT Conclusions

BAT Conclusions for the Food, Drink and Milk Industries, were published by the European Commission on 4 December 2019.

There are 37 BAT Conclusions.

BAT 1 – 15 are General BAT Conclusions (Narrative BAT) applicable to all relevant Food, Drink and Milk Installations in scope.

BAT 16 – 37 are sector-specific BAT Conclusions, including Best Available Techniques Associated Emissions Levels (BAT-AELs) and Associated Environmental Performance Levels (BAT-AEPLs):

BAT 16 & 17	BAT Conclusions for Animal Feed
BAT 18 – 20	BAT Conclusions for Brewing
BAT 21 – 23	BAT Conclusions for Dairies
BAT 24	BAT Conclusions for Ethanol Production
BAT 25 & 26	BAT Conclusions for Fish and Shellfish Processing
BAT 27	BAT Conclusions for Fruit and Vegetable Processing
BAT 28	BAT Conclusions for Grain Milling
BAT 29	BAT Conclusions for Meat Processing
BAT 30 – 32	BAT Conclusions for Oilseed Processing and Vegetable Oil Refining
BAT 33	BAT Conclusions for Soft Drinks and Nectar/Fruit Juice Processed from Fruit and Vegetables
BAT 34	BAT Conclusions for Starch Production
BAT 35 – 37	BAT Conclusions for Sugar Manufacturing

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Consolidated Variation Notice.

The overall status of compliance with the BAT conclusion is indicated in the table as:

**NA – Not Applicable**

**CC – Currently Compliant**

**FC – Compliant in the future (within 4 years of publication of BAT Conclusions)**

**NC – Not Compliant**

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
<b>GENERAL BAT CONCLUSIONS (BAT 1-15)</b>			
1	<p><b>Environmental Management System - Improve overall environmental performance.</b></p> <p>Implement an EMS that incorporates all the features as described within BATc 1.</p>	<b>FC</b>	<p>The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 1.</p> <p>The Operator declared that the EMS considers:</p> <ul style="list-style-type: none"> <li>• Organisational context and commitment</li> <li>• Environmental charter</li> <li>• Objectives and planning</li> <li>• Performance, evaluation and improvement</li> <li>• Competence, awareness and communications</li> <li>• Environment in operations.</li> <li>• Sectorial benchmarking</li> </ul> <p><b>The Operator declared compliance with BATc 1(ii) requirement will be achieved in the future, currently work being undertaken by an external contractor.</b></p> <p>The EMS is not accredited to ISO 14001 standard.</p>
2	<p><b>EMS Inventory of inputs &amp; outputs. Increase resource efficiency and reduce emissions.</b></p> <p>Establish, maintain and regularly review (including when a significant change occurs) an inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the features as detailed within the BATCs.</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 2. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 2.</p> <p>The Operator demonstrated that it has:</p> <ul style="list-style-type: none"> <li>• A simplified process diagram</li> <li>• Description of processes and techniques that identify emissions points</li> <li>• Monitoring of water inputs and outputs</li> </ul>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> <li>• Effluent quality monitored prior to sewer discharge</li> <li>• Identified waste gas streams and chemical composition</li> <li>• Information regarding energy consumption, resource used, and waste generation</li> <li>• Monitoring of inputs and outputs based on company's agreed KPIs and environmental targets</li> </ul>
3	<p><b>Monitoring key process parameters at key locations for emissions to water.</b> For relevant emissions to water as identified by the inventory of waste water streams (see BAT 2), BAT is to monitor key process parameters (e.g. continuous monitoring of waste water flow, pH and temperature) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	CC	<p>The operator has provided information to support compliance with BATc 3. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 3.</p> <p>Trade effluent discharge to sewer quality is monitored twice per day in-house (flow, pH, temperature, TSS, FOG) and monthly by United Utilities against discharge licence conditions; tests include monitoring of pesticides, heavy metals, COD, and SS.</p> <p>Uncontaminated surface water discharges to River Mersey via an automated valve designed to automatically shut-off if the above parameters are out of the permitted limits.</p>
4	<p><b>Monitoring emissions to water to the required frequencies and standards.</b> BAT is to monitor emissions to water with at least the frequency given [refer to BAT 4 table in BATc] and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	NA	<p>We are satisfied that BATc 4 is not applicable to this Installation.</p> <p>This BAT is concerned with effluent discharge to water and this installation does not have such discharges. Process effluent is treated on-site and discharge to sewer. The only emission to water is uncontaminated surface run-off and cooling waters.</p> <p>The site is allowed to discharge process water via emission point W1 to the dock in emergency situations, as described in Note 1 of Table S3.2 in the consolidate permit. In</p>

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			relation to this emission point, the total suspended solids parameter will be retained.
5	<p><b>Monitoring channelled emissions to air to the required frequencies and standards.</b> BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.</p>	FC	<p>The operator has provided information to support compliance with BATc 5. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 5.</p> <p>The Operator declared that they monitor emissions to air annually at BS EN 13284-1 standard from release points</p> <ul style="list-style-type: none"> <li>• A1 and A2 – seed preparation</li> <li>• A4 – dryer/cooler</li> </ul> <p><b>However, the Operator is not currently monitoring TVOCs, as required by this BATc. We have taken this opportunity to include in the consolidated permit the annual monitoring requirement to be conducted at EN 12619 Standard</b></p> <p><b>The monitoring requirement is applicable to the following air emission points associated with emissions of volatile organic compounds:</b></p> <ul style="list-style-type: none"> <li>• A1 and A2 – seed preparation</li> <li>• A3 – solvent building</li> <li>• A4 – dryer/cooler</li> </ul> <p>Improvement condition IC10 has been included in the permit to achieve compliance (see Annex 3).</p>
6	<p><b>Energy Efficiency</b> In order to increase energy efficiency, BAT is to use an energy efficiency plan (BAT 6a) and an appropriate combination of the common techniques listed in technique 6b within the table in the BATc.</p>	FC	<p>The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BATc 6.</p>



BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<p><b>The Operator declared that an energy efficiency plan will be developed and will be included in the EMS at its completion.</b></p> <p>The following energy efficiency techniques are currently used at this installation:</p> <ul style="list-style-type: none"> <li>• Burner regulation and control</li> <li>• Heat recovery with heat exchangers</li> <li>• Minimising blowdown from boiler</li> <li>• Optimisation of steam distribution system</li> <li>• Process control systems</li> <li>• Reducing compressed air leaks</li> <li>• Reducing heat losses</li> <li>• Variable speed drives</li> <li>• Multi-effect evaporation</li> </ul> <p>Improvement condition IC10 has been included in the permit to demonstrate compliance is achieved (see Annex 3).</p>
7	<p><b>Water and wastewater minimisation</b></p> <p>In order to reduce water consumption and the volume of waste water discharged, BAT is to use BAT 7a and one or a combination of the techniques b to k given below.</p> <p>(a) water recycling and/or reuse</p> <p>(b) Optimisation of water flow</p> <p>(c) Optimisation of water nozzles and hoses</p> <p>(d) Segregation of water streams</p> <p>Techniques related to cleaning operations:</p> <p>(e) Dry cleaning</p> <p>(f) Pigging system for pipes</p> <p>(g) High-pressure cleaning</p> <p>(h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP)</p> <p>(i) Low-pressure foam and/or gel cleaning</p> <p>(j) Optimised design and construction of equipment and process areas</p> <p>(k) Cleaning of equipment as soon as possible</p>	CC	<p>The operator has provided information to support compliance with BATc 7. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 7.</p> <p>The Operator declared using the following techniques:</p> <ul style="list-style-type: none"> <li>• Water recycling and reuse of returning condensate water to top up the hot water loop energy reclaim system</li> <li>• Optimisation of water flow</li> <li>• Optimisation of chemical dosing in CIP</li> <li>• Segregation of water streams</li> <li>• High pressure cleaning</li> <li>• Cleaning of equipment as soon as possible</li> <li>• Proper selection of cleaning chemicals and/or disinfectants</li> <li>• Dry cleaning were appropriate</li> </ul>

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
			<ul style="list-style-type: none"> <li>Optimised design of equipment of process areas.</li> </ul>
8	<p><b>Prevent or reduce the use of harmful substances</b></p> <p>In order to prevent or reduce the use of harmful substances, e.g. in cleaning and disinfection, BAT is to use one or a combination of the techniques given below.</p> <p>(a) Proper selection of cleaning chemicals and/or disinfectants</p> <p>(b) Reuse of cleaning chemicals in cleaning-in-place (CIP)</p> <p>(c) Dry cleaning</p> <p>(d) Optimised design and construction of equipment and process areas</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 8. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 8.</p> <p>The Operator is using the following techniques:</p> <ul style="list-style-type: none"> <li>Propper selection of cleaning chemicals and disinfectants</li> <li>Reuse of cleaning chemicals in CIP</li> <li>Dry cleaning</li> <li>Optimised design of equipment and process areas.</li> </ul>
9	<p><b>Refrigerants</b></p> <p>In order to prevent emissions of ozone-depleting substances and of substances with a high global warming potential from cooling and freezing, BAT is to use refrigerants without ozone depletion potential and with a low global warming potential.</p>	<b>NA</b>	<p>We are satisfied that BATc 9 is not applicable to this Installation.</p> <p>The Operator declared that no refrigerants are used in the production process. The only gases subject to this BATc are used for domestic purposes in air conditioning systems.</p>
10	<p><b>Resource efficiency</b></p> <p>In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below:</p> <p>(a) Anaerobic digestion</p> <p>(b) Use of residues</p> <p>(c) Separation of residues</p> <p>(d) Recovery and reuse of residues from the pasteuriser</p> <p>(e) Phosphorus recovery as struvite</p> <p>(f) Use of waste water for land spreading</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 10. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 10.</p> <p>The Operator declared that is using:</p> <ul style="list-style-type: none"> <li>Anaerobic digestion for soapstock</li> <li>Use of residue</li> <li>Separation of residue</li> <li>Use of water for land spreading.</li> </ul> <p>Land spreading and AD take place off-site using a third party company for this purpose.</p>
11	<b>Waste water buffer storage</b>	<b>CC</b>	<p>The Operator has provided information to support compliance with BATc 11. We have</p>

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	In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.		assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 11.  The Operator declared that it has sufficient buffer capacity, including an emergency tank to store wastewater prior to discharge to sewer or return to ETP if required. The site drainage and a triple pump chamber are also included in the buffer storage and capacity definition.
12	<p><b>Emissions to water – treatment</b></p> <p>In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below.</p> <p>Preliminary, primary and general treatment</p> <p>(a) Equalisation</p> <p>(b) Neutralisation</p> <p>(c) Physical separate (eg screens, sieves, primary settlement tanks etc)</p> <p>Aerobic and/or anaerobic treatment (secondary treatment)</p> <p>(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)</p> <p>(e) Nitrification and/or denitrification</p> <p>(f) Partial nitrification - anaerobic ammonium oxidation</p> <p>Phosphorus recovery and/or removal</p> <p>(g) Phosphorus recovery as struvite</p> <p>(h) Precipitation</p> <p>(i) Enhanced biological phosphorus removal</p> <p>Final solids removal</p> <p>(j) Coagulation and flocculation</p> <p>(k) Sedimentation</p> <p>(l) Filtration (eg sand filtration, microfiltration, ultrafiltration)</p> <p>(m) Flotation</p>	<b>CC</b>	<p>The Operator has provided information to support compliance with BATc 12. We have assessed the information provided and we are satisfied that the Operator has demonstrated compliance with BATc 12.</p> <p>The site has an ETP on-site consisting of primary screening, flocculation and coagulation, DAF, and settlement. Following treatment, the wastewater is discharged to sewer under consent from United Utilities.</p>
12	<p><b>Emissions to water – treatment</b></p> <p><b>BAT-associated emission levels (BAT-AELs) for direct emissions to a receiving water body</b></p>	<b>NA</b>	We are satisfied that BAT- AELs are not applicable to this Installation.

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	<table border="1"> <thead> <tr> <th data-bbox="282 261 770 300">Parameter</th> <th data-bbox="770 261 1211 300">BAT-AEL (1) (2) (daily average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="282 300 770 338">Chemical oxygen demand (COD) (3) (4)</td> <td data-bbox="770 300 1211 338">25-100 mg/l (5)</td> </tr> <tr> <td data-bbox="282 338 770 376">Total suspended solids (TSS)</td> <td data-bbox="770 338 1211 376">4-50 mg/l (6)</td> </tr> <tr> <td data-bbox="282 376 770 414">Total nitrogen (TN)</td> <td data-bbox="770 376 1211 414">2-20 mg/l (7) (8)</td> </tr> <tr> <td data-bbox="282 414 770 453">Total phosphorus (TP)</td> <td data-bbox="770 414 1211 453">0,2-2 mg/l (9)</td> </tr> </tbody> </table>	Parameter	BAT-AEL (1) (2) (daily average)	Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)	Total suspended solids (TSS)	4-50 mg/l (6)	Total nitrogen (TN)	2-20 mg/l (7) (8)	Total phosphorus (TP)	0,2-2 mg/l (9)		<p>This installation does not have direct to water discharges of process effluent but only to sewer under consent from United Utilities.</p> <p><b>However, the site has a water emission point, W1, authorising the Operator to discharge wastewater streams originating from the installation, site drainage and fire water to Brocklebank Dock, a tributary of the Tidal River Mersey, under exceptional circumstance only. Therefore, the parameter listed in the extant permit, TSS, will be kept in the consolidated variation but no ELV will be applied to it as this wastewater stream is not considered process effluent.</b></p>
Parameter	BAT-AEL (1) (2) (daily average)												
Chemical oxygen demand (COD) (3) (4)	25-100 mg/l (5)												
Total suspended solids (TSS)	4-50 mg/l (6)												
Total nitrogen (TN)	2-20 mg/l (7) (8)												
Total phosphorus (TP)	0,2-2 mg/l (9)												
13	<p><b>Noise management plan</b></p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up, implement and regularly review a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting noise emissions monitoring;</li> <li>- a protocol for response to identified noise events, eg complaints;</li> <li>- a noise reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</li> </ul>	CC	<p>The operator has provided information to support compliance with BATc 13. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 13.</p> <p>The Operator declared that a Noise Management Plan has been developed and submitted to the Environment Agency for approval. Because this plan has been assessed and deemed appropriate, we consider the Operator to be compliant with BATc 13.</p>										
14	<p><b>Noise management</b></p> <p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.</p> <ol style="list-style-type: none"> <li>(a) Appropriate location of equipment and buildings</li> <li>(b) Operational measures</li> <li>(c) Low-noise equipment</li> <li>(d) Noise control equipment</li> <li>(e) Noise abatement</li> </ol>	CC	<p>The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 14.</p> <p>The Operator declared that is using</p> <ul style="list-style-type: none"> <li>• low-noise equipment, where possible, to avoid increasing the existing sound pressure level above the noise levels</li> </ul>										

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			<p>currently generated by other machineries and activities.</p> <ul style="list-style-type: none"> <li>• Appropriate location of equipment</li> <li>• Soundproofing compressors</li> <li>• Enclosing of noisy equipment</li> <li>• Periodic review of NMP.</li> </ul>
15	<p><b>Odour Management</b></p> <p>In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <ul style="list-style-type: none"> <li>- a protocol containing actions and timelines;</li> <li>- a protocol for conducting odour monitoring.</li> <li>- a protocol for response to identified odour incidents eg complaints;</li> <li>- an odour prevention and reduction programme designed to identify the source(s); to measure/estimate odour exposure: to characterise the contributions of the sources; and to implement prevention and/or reduction measures.</li> </ul>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 15. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 15.</p> <p>An Odour Management Plan has been requested by the Agency through PO2 condition in 2019 and the Operator supplied a 2021 updated copy of this plan containing:</p> <ul style="list-style-type: none"> <li>• Objectives</li> <li>• Sources and pathways</li> <li>• Receptors and impacts</li> <li>• Management approach and monitoring</li> <li>• Complaints and procedures</li> <li>• Emergency planning.</li> </ul> <p><b>However, in 2022 the compliance officer reported a strong odour around the skim pit, and complaints have been reported for offsite odour nuisances. As such, we will be including in the consolidated permit improvement conditions IC13 and IC14 asking the Operator to conduct a survey of waste gases composition, and an assessment of abatement techniques utilised on site. Based on the survey results, the Operator must propose appropriate ELVs based on modelling and impact assessment.</b></p>
	<b>OILSEED PROCESSING &amp; VEGETABLE OIL REFINING SECTOR</b>		

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<b>BAT CONCLUSIONS (BAT 30-32)</b>														
30	<p><b>Energy efficiency – Oilseed processing</b></p> <p>In order to increase energy efficiency, BAT is to use an appropriate combination of the techniques specified in BAT 6 and to generate an auxiliary vacuum.</p>	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 30. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 30.</p> <p>The Operator declared that it is using vacuuming in crush extract plant via steam injectors and vapour cooling to reduce the boiling point of solvent.</p> <p>In the Crush preparation plant a vacuum is maintained for oil drying purposes in the degumming section, which is maintained by a vacuum pump. This vacuum eliminates the need for oil drying via heating methods, thus reducing plant energy requirements.</p>											
31	<p>In order to reduce channelled dust emissions to air, BAT is to use one or a combination of the techniques given below.</p> <table border="1" data-bbox="277 871 1173 1161"> <thead> <tr> <th data-bbox="277 871 495 927">Technique</th> <th data-bbox="495 871 730 927">Description</th> <th data-bbox="730 871 1173 927">Applicability</th> </tr> </thead> <tbody> <tr> <td data-bbox="277 927 344 1018">(a)</td> <td data-bbox="344 927 495 1018">Bag filter</td> <td data-bbox="730 927 1173 1018">May not be applicable to the abatement of sticky dust.</td> </tr> <tr> <td data-bbox="277 1018 344 1074">(b)</td> <td data-bbox="344 1018 495 1074">Cyclone</td> <td data-bbox="730 1018 1173 1074" rowspan="2">Generally applicable.</td> </tr> <tr> <td data-bbox="277 1074 344 1161">(c)</td> <td data-bbox="344 1074 495 1161">Wet scrubber</td> </tr> </tbody> </table>	Technique	Description	Applicability	(a)	Bag filter	May not be applicable to the abatement of sticky dust.	(b)	Cyclone	Generally applicable.	(c)	Wet scrubber	<b>CC</b>	<p>The operator has provided information to support compliance with BATc 31. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 31.</p> <p>In relation to the following air emission points, the Operator declared that is using:</p> <p><b>Scrubber</b></p> <ul style="list-style-type: none"> <li>• A1 and A2</li> </ul> <p><b>Cyclone and scrubber</b></p> <ul style="list-style-type: none"> <li>• A5</li> </ul>
Technique	Description	Applicability												
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31	<p><b>BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from handling and preparation of seeds as well as drying and cooling of meal.</b></p> <table border="1" data-bbox="277 1305 1173 1445"> <thead> <tr> <th data-bbox="277 1305 495 1396">Parameter</th> <th data-bbox="495 1305 730 1396">Unit</th> <th colspan="2" data-bbox="730 1305 1173 1396">BAT-AEL (average over the sampling period)</th> </tr> </thead> <tbody> <tr> <td data-bbox="277 1396 495 1445">Dust</td> <td data-bbox="495 1396 730 1445">mg/Nm<sup>3</sup></td> <td data-bbox="730 1396 958 1445">New plants</td> <td data-bbox="958 1396 1173 1445">Existing plants</td> </tr> </tbody> </table>	Parameter	Unit	BAT-AEL (average over the sampling period)		Dust	mg/Nm <sup>3</sup>	New plants	Existing plants	<b>CC</b>	<p>The operator has provided information to support compliance with BAT-AELs. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BAT-AEL.</p> <p>The Operator provided the following information:</p> <ul style="list-style-type: none"> <li>• A1 – 1.98 mg/m<sup>3</sup></li> </ul>			
Parameter	Unit	BAT-AEL (average over the sampling period)												
Dust	mg/Nm <sup>3</sup>	New plants	Existing plants											

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%; text-align: center;">&lt;2-5 <sup>(1)</sup></td> <td style="width: 20%; text-align: center;">&lt;2-10 <sup>(1)</sup></td> </tr> <tr> <td colspan="4" style="padding: 5px;">(1) The upper end of the range is 20 mg/Nm<sup>3</sup> for drying and cooling of meal.</td> </tr> </table>			<2-5 <sup>(1)</sup>	<2-10 <sup>(1)</sup>	(1) The upper end of the range is 20 mg/Nm <sup>3</sup> for drying and cooling of meal.					<ul style="list-style-type: none"> <li>• A2 – 0.94 mg/m<sup>3</sup></li> <li>• A4 – 0.59 mg/m<sup>3</sup></li> </ul> <p><b>We take this opportunity to include in the consolidated permit new ELVs, as per this BAT requirement, at the upper range limit as follows:</b></p> <ul style="list-style-type: none"> <li>• A1 – 10 mg/m<sup>3</sup></li> <li>• A2 – 10 mg/m<sup>3</sup></li> <li>• A5 – 20 mg/m<sup>3</sup> (dryer/cooler – As per the footnote in Table 21 of the Bref we have used the upper limit of 20mg/m<sup>3</sup> as the emission point is related to the drying and cooling of meal.)</li> </ul> <p>We consider that the Operator is currently capable of meeting these limits therefore, the ELVs are applicable from the time of permit issue. As such, an improvement condition is not required.</p>							
		<2-5 <sup>(1)</sup>	<2-10 <sup>(1)</sup>															
(1) The upper end of the range is 20 mg/Nm <sup>3</sup> for drying and cooling of meal.																		
32	<p><b>In order to reduce the hexane losses from oilseed processing and refining, BAT is to use all of the techniques given below:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 15%;">Technique</th> <th style="width: 75%;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(a)</td> <td>Countercurrent flow of meal and steam in the desolventiser-toaster</td> <td>Hexane is removed from the hexane-laden meal in a desolventiser-toaster, involving a countercurrent flow of steam and meal.</td> </tr> <tr> <td style="text-align: center;">(b)</td> <td>Evaporation from the oil/ hexane mixture</td> <td>Hexane is removed from the oil/hexane mixture using evaporators. The vapours from the desolventiser-toaster (steam/hexane mixture) are used to provide thermal energy in the first stage of the evaporation.</td> </tr> <tr> <td style="text-align: center;">(c)</td> <td>Condensation in combination with a mineral oil wet scrubber</td> <td>Hexane vapours are cooled to below their dew point so that they condense. Uncondensed hexane is absorbed in a scrubber using mineral oil as a scrubbing liquid for subsequent recovery.</td> </tr> <tr> <td style="text-align: center;">(d)</td> <td>Gravitational phase separation in combination with distillation</td> <td>Undissolved hexane is separated from the aqueous phase by means of a gravitational phase separator. Any residual hexane is distilled off by heating the aqueous phase to approximately 80-95 °C.</td> </tr> </tbody> </table>		Technique	Description	(a)	Countercurrent flow of meal and steam in the desolventiser-toaster	Hexane is removed from the hexane-laden meal in a desolventiser-toaster, involving a countercurrent flow of steam and meal.	(b)	Evaporation from the oil/ hexane mixture	Hexane is removed from the oil/hexane mixture using evaporators. The vapours from the desolventiser-toaster (steam/hexane mixture) are used to provide thermal energy in the first stage of the evaporation.	(c)	Condensation in combination with a mineral oil wet scrubber	Hexane vapours are cooled to below their dew point so that they condense. Uncondensed hexane is absorbed in a scrubber using mineral oil as a scrubbing liquid for subsequent recovery.	(d)	Gravitational phase separation in combination with distillation	Undissolved hexane is separated from the aqueous phase by means of a gravitational phase separator. Any residual hexane is distilled off by heating the aqueous phase to approximately 80-95 °C.	CC	<p>The operator has provided information to support compliance with BATc 32. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 32.</p> <p>The following techniques are used on the site:</p> <ul style="list-style-type: none"> <li>• Counter current flow of meal and steam in the desolventiser-toaster</li> <li>• Evaporation from the oil/ hexane mixture</li> <li>• Condensation in combination with a mineral oil wet scrubber</li> <li>• Gravitational phase separation in combination with distillation</li> </ul>
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(d)	Gravitational phase separation in combination with distillation	Undissolved hexane is separated from the aqueous phase by means of a gravitational phase separator. Any residual hexane is distilled off by heating the aqueous phase to approximately 80-95 °C.																

AELs	<b>BAT-associated emission levels (BAT-AELs) for hexane losses from oilseed processing and refining:</b>			<b>CC</b>	<p>The operator has provided information to support compliance with BAT-AELs for hexane loss. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BAT-AELs. The Operator declared that hexane loss was recorded in 2021 at value of 0.41 kg per tonne of rapeseeds processed which is within the 0.2 – 0.7 kg/t working range shown in this BAT.</p> <p><b>Taking into account the current hexane loss performance level achieved by the Operator, we have taken this opportunity to include in the consolidated permit a new limit for annual average hexane loss equal to 0.6 kg/tonne of seeds processed, applicable from the time of permit issue.</b></p> <p>The Operator has supplied the hexane mass balance formula used to assess solvent losses using the following equation:</p> <p><math>a + c + f - b - g = h \Rightarrow h / i = j</math> where,</p> <p>a – starting hexane inventory   c – hexane receipts   f - In process hexane prior   b - ending hexane inventory current result   g - in process hexane current   h – daily hexane loss   i - daily crush   j – hexane loss.</p> <p><b>However, the mass-balance calculation provided by the operator does not include recovery and reutilisation of hexane. Furthermore, it is unclear if hexane loss through chemical and/or physical reactions is measured and accounted for, or if uncertainties are included in the calculations.</b></p> <p><b>Because the Operator has not provided us with a solvent management plan (SMP) as</b></p>	
	Parameter	Type of seeds or beans processed	Unit			BAT-AEL (yearly average)
	Hexane losses	Soybeans	kg/tonne of seeds or beans processed			0,3-0,55
Rapeseeds and sunflower seeds		0,2-0,7				



<p style="writing-mode: vertical-rl; transform: rotate(180deg);">BATC No.</p>	<p><b>Summary of BAT Conclusion requirement for Food, Drink and Milk Industries</b></p>	<p><b>Status NA/ CC / FC / NC</b></p>	<p><b>Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement</b></p>										
			<p>part of the RFI and Clarifications requests to demonstrate how uncertainties and errors are dealt with and how fugitive emissions are minimised, we consider that a comprehensive, stand-alone SMP is required for the sustainable management of hexane.</p> <p>Improvement condition IC11 has been included in the permit to achieve compliance (see Annex 3).</p>										
<p><b>Oilseed processing &amp; vegetable oil refining sector Environmental Performance Levels</b></p>													
<p>EPL</p>	<p><b>Environmental Performance Level – Energy consumption</b></p> <table border="1" data-bbox="286 703 1218 911"> <thead> <tr> <th>Specific process</th> <th>Unit</th> <th>Specific energy consumption (yearly average)</th> </tr> </thead> <tbody> <tr> <td>Integrated crushing and refining of rapeseeds and/or sunflower seeds</td> <td rowspan="3">MWh/tonne of oil produced</td> <td>0,45-1,05</td> </tr> <tr> <td>Integrated crushing and refining of soybeans</td> <td>0,65-1,65</td> </tr> <tr> <td>Stand-alone refining</td> <td>0,1-0,45</td> </tr> </tbody> </table>	Specific process	Unit	Specific energy consumption (yearly average)	Integrated crushing and refining of rapeseeds and/or sunflower seeds	MWh/tonne of oil produced	0,45-1,05	Integrated crushing and refining of soybeans	0,65-1,65	Stand-alone refining	0,1-0,45	<p><b>CC</b></p>	<p>The operator has provided information to support compliance with BAT-EPL for energy. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BAT-EPL.</p> <p>The Operator declared an energy consumption of 0.12 MWh/tonne (comprising of 0.09 MWh – crush plant, and 0.03 MWh – refinery) of rapeseed processed in 2022-2023 which is below the 0.45 -1.05 MWh/t range applicable for crushing and refining of rapeseeds.</p>
Specific process	Unit	Specific energy consumption (yearly average)											
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Stand-alone refining		0,1-0,45											

BATC No.	Summary of BAT Conclusion requirement for Food, Drink and Milk Industries	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement										
EPL	<p><b>Environmental Performance Level – Specific waste water discharge</b></p> <table border="1" data-bbox="286 300 1223 507"> <thead> <tr> <th data-bbox="286 300 734 363">Specific process</th> <th data-bbox="734 300 981 363">Unit</th> <th data-bbox="981 300 1223 363">Specific waste water discharge (yearly average)</th> </tr> </thead> <tbody> <tr> <td data-bbox="286 363 734 427">Integrated crushing and refining of rapeseeds and/or sunflower seeds</td> <td data-bbox="734 363 981 427" rowspan="3">m<sup>3</sup>/tonne of oil produced</td> <td data-bbox="981 363 1223 427">0,15-0,75</td> </tr> <tr> <td data-bbox="286 427 734 467">Integrated crushing and refining of soybeans</td> <td data-bbox="981 427 1223 467">0,8-1,9</td> </tr> <tr> <td data-bbox="286 467 734 507">Stand-alone refining</td> <td data-bbox="981 467 1223 507">0,15-0,9</td> </tr> </tbody> </table>	Specific process	Unit	Specific waste water discharge (yearly average)	Integrated crushing and refining of rapeseeds and/or sunflower seeds	m <sup>3</sup> /tonne of oil produced	0,15-0,75	Integrated crushing and refining of soybeans	0,8-1,9	Stand-alone refining	0,15-0,9	FC	<p>The operator has provided information to support compliance with BAT-EPL for wastewater discharge. We have assessed the information provided and we are not satisfied that the operator has demonstrated compliance with BAT-EPL.</p> <p><b>The Operator declared a volume of 1.19 m<sup>3</sup> of wastewater (comprising of 0.66 m<sup>3</sup> – crush plant, and 0.53m<sup>3</sup> – refinery) discharged per tonne of oil produced in 2022-2023 which is not within the 0.15 – 0.75 m<sup>3</sup> range for crushing and refining of rapeseeds.</b></p> <p>We consider that the operator will be future compliant with BAT-EPLs. Improvement condition IC12 has been included in the permit to achieve compliance (see Annex 3).</p>
	Specific process	Unit	Specific waste water discharge (yearly average)										
	Integrated crushing and refining of rapeseeds and/or sunflower seeds	m <sup>3</sup> /tonne of oil produced	0,15-0,75										
	Integrated crushing and refining of soybeans		0,8-1,9										
Stand-alone refining	0,15-0,9												

## **Annex 2: Review and assessment of changes that are not part of the BAT Conclusions derived permit review**

### Control of solvent emissions

This Installation utilises hexane as part of the process.

In part, this is considered by the FDM BAT Conclusions, as per BAT 32

In addition, Chapter V of the Industrial Emissions Directive sets out the requirements for installations that use organic solvents. Whilst this does not directly apply to oilseed processing, we are incorporating some of the methodologies as part of this permit review, to ensure the appropriate operational controls are in place.

Chapter V Annex VII Part 6 requires operators to continuously monitor solvent emissions where the mass emission rate is greater than 10 kg/h TOC.

The mass emission rate for this installation is 2 kg/h, set as an ELV from air emission point A3.

Chapter V Annex VII Part 7 requires operators to have a solvent emissions management plan in place.

This is incorporated into the permit by the operating techniques.

The mass balance methodology for this site has been reviewed as part of BAT 32.

### Control of odour emissions

BAT 2 requires operators to fully characterise their waste gases.

The operator has not undertaken this characterisation to determine the waste gases odorous components. We have included IC14 asking the Operator to review the waste gases potential to causing odorous emissions and the associated abatement/reduction techniques.

We have imposed additional monitoring requirements of odorous species (see BAT 5) and have reviewed the OMP to ensure it is robust.

In terms of emissions to sewer, compounds of sulphur can cause off-site odour impacts if discharged at an elevated level. We have therefore included a requirement for the operator to monitor this parameter.

### Updating permit during permit review consolidation

- Introductory note updated
- Site plan
- Table S1.1 overhaul
  - Activity Reference (AR) renumbering
  - Updated listed activities
  - Addition of production capacity
  - Directly associated activities (DAAs) standardisation

We have updated permit conditions to those in the current generic permit template as a part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.

**Production Threshold**

The Environment Agency is looking to draw a “line in the sand” for permitted production capacity; a common understanding between the Operator and regulator for the emissions associated with a (maximum) level of production, whereby the maximum emissions have been demonstrated as causing no significant environmental impact.

We have included a permitted production level (capacity) within table S1.1 of the permit for the section 6.8 listed activity and we need to be confident that the level of emissions associated with this production level have been demonstrated to be acceptable.

The existing permitted volume of raw materials and finished products at the site has not increased since the previous variation and therefore the assessment for emissions to water/sewer remain valid for capacity threshold now placed within table S1.1 of the permit.

**Emissions to Air**

We asked the operator to list all emission points to air from the installation in the Regulation 61 notice. And to provide a site plan indicating the locations of all air emission points.

The operator has provided an up to date air emission plan.

**Implementing the requirements of the Medium Combustion Plant Directive**

**Existing Medium Combustion Plant (1MW-50MW)**

We asked the Operator to provide information on all combustion plant on site in the Regulation 61 Notice as follows:

- Number of combustion plant (CHP engines, back-up generators, boilers);
- Size of combustion plant – rated thermal input (MWth)
- Date each combustion plant came into operation

The Operator provided the information in the table below:

**Boilers**

1. Rated thermal input (MW) of the medium combustion plant.	2.3 MWth
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Boiler 2 (D4) – 2.3 MWth
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Natural gas 100%
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown,	Boiler 2 – March 2022

proof of the fact that the operation started before 20 December 2018.	
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We have reviewed the information provided and we consider that the declared combustion plant, Boiler 2, qualify as “new” medium combustion plant.

Boiler 2 of 2.3 MWth has replaced the previous two boilers with an aggregated input of 2.5 MWth (Boiler 1 – 1MWth, and Boiler 2 – 1.5MWth). This boiler has a smaller capacity than the aggregate input of the boilers being replaced, shown in the extant permit therefore, we do not consider that for its operation an updated H1 Assessment is required. Boiler 2, containing upgraded technology and components, is likely to pose a less polluting potential to environmental receptors than the boilers being replaced.

For existing MCP with a rated thermal input of less than or equal to 5 MW, the emission limit values set out in table 1 of Part 2 of Annex II MCPD shall apply from the time of permit issue.

We have included the appropriate emission limit values for new medium combustion plant as part of this permit review. See Table S3.1 in the permit. We have also included a new condition 3.1.4 within the permit which specifies the monitoring requirements for the combustion plant in accordance with the MCPD.

### **Particulate Emissions**

BAT-AELs are derived for those substances identified as key environmental issues during the BREF review process.

Because the Operator has identified current compliance against BAT-AELs, we will implement the relevant emission limit values (ELVs) from the date of permit issue. This is relevant for emission points A1, A2, and A5 against BAT 31 for dust emissions from the cyclone and wet scrubber.

We have added an improvement condition (IC15) for size fractionation of particulate emissions because a BAT-AEL applies for dust emissions to air. The justification for this IC is that there are a number of activities within the FDM sector which may result in release of particulates to air e.g. drying, milling and grinding. Overall there is little available information on how much fine particulates are released. This IC is a one-off exercise requiring operators to monitor and report on the fractions of fine particulate (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions and increase our understanding of potential health effects. Where BAT-AELs may apply to multiple emission points, we may accept limited representative monitoring rather than expecting them to monitor every single emission point.

### **Emissions to Water and implementing the requirements of the Water Framework Directive**

We asked the Operator to provide information on all emissions to water at the installation in the Regulation 61 Notice as follows;

- Identify any effluents which discharge directly to surface or groundwater;
- Provide an assessment of volume and quality, including results of any monitoring data available;
- and for any discharges to water / soakaway whether a recent assessment of the feasibility of connection to sewer has been carried out.

The operator has previously provided assessments for all emissions to water at the installation. The operator declares there has been no change to activities and subsequent effluents generated at the installation since this risk assessment was taken. Consequently, we agree that the original risk assessments remain valid at this time.

### **Soil & groundwater risk assessment (baseline report)**

The IED requires that the operator of any IED installation using, producing or releasing “relevant hazardous substances” (RHS) shall, having regarded the possibility that they might cause pollution of soil and groundwater, submit a “baseline report” with its permit application. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility and at cessation of activities. It must enable a quantified comparison to be made between the baseline and the state of the site at surrender.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site’s current or approved future use. To do this, the Operator has to submit a surrender application to us, which we will not grant unless and until we are satisfied that these requirements have been met.

The Operator submitted a site condition report [Ref. number L30238, dated 28 January 2011] as part of the Re.61 Response Tool. The site condition report includes a report on the baseline conditions as required by Article 22. We reviewed that report and considered that it adequately described the condition of the soil and groundwater at that time.

### **Hazardous Substances**

Hazardous substances are those defined in Article 3 of Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures

The operator has provided a short risk assessment on the hazardous substances stored and used at the installation. The risk assessment was a stage 1-3 assessment as detailed within EC Commission Guidance 2014/C 136/03.

The stage 1 assessment identified the hazardous substances used / stored on site. The stage 2 assessment identified if hazardous substances are capable of causing pollution. If they are capable of causing pollution they are then termed Relevant Hazardous Substances (RHS). The Stage 3 assessment identified if pollution prevention measures are fit for purpose in areas where hazardous substances are used / stored. This includes drains as well.

The outcomes of the three stage assessment identified that pollution of soil and/or ground water to be unlikely.

### **Climate Change Adaptation**

The operator has considered if the site is at risk of impacts from adverse weather (flooding, unavailability of land for land spreading, prolonged dry weather / drought).

The operator has identified the installation as likely to be or has been affected by flooding which we consider to be a severe weather event.

We do not consider the operator to have submitted a suitable climate change adaptation plan for the installation. We have included an improvement condition into the permit (IC16) to request a climate change adaptation plan is submitted by the operator for approval from the Environment Agency.

## **Containment**

We asked the Operator via the Regulation 61 Notice to provide details of the each above ground tanks which contain potentially polluting liquids at the site, including tanks associated with the effluent treatment process where applicable.

The Operator provided details of all tanks;

- Tank reference/name
- Contents
- Capacity (litres)
- Location
- Construction material(s) of each tank
- The bunding specification including
  - Whether the tank is bunded
  - If the bund is shared with other tanks
  - The capacity of the bund
  - The bund capacity as % of tank capacity
  - Construction material of the bund
  - Whether the bund has a drain point
  - Whether any pipes penetrate the bund wall
- Details of overfill prevention
- Drainage arrangements outside of bunded areas
- Tank filling/emptying mitigation measures (drips/splashes)
- Leak detection measures
- Details of when last bund integrity test was carried out
- Maintenance measures in place for tank and bund (inspections)
- How the bund is emptied
- Details of tertiary containment

and whether the onsite tanks currently meet the relevant standard in the Ciria “Containment systems for the prevention of pollution (C736)” report.

We reviewed the information provided by the operator. We are satisfied that the existing tanks and containment measures on site meet the standards set out in CIRIA C736.

### Annex 3: Improvement Conditions

Based on the information in the Operator's Regulation 61 Notice response and our own records of the capability and performance of the installation at this site, we consider that we need to set improvement conditions so that the outcome of the techniques detailed in the BAT Conclusions are achieved by the installation. These improvement conditions are set out below - justifications for them is provided at the relevant section of the decision document (Annex 1 or Annex 2).

Previous improvement conditions marked as complete in the previous permit.

<b>Superseded Improvement Conditions – Removed from permit as marked as “complete”</b>	
<b>Reference</b>	<b>Improvement Condition</b>
IC1	<p>The Operator shall submit to the Agency a programme of work for implementing the following improvements to storage, ensuring that the capacity of each bund is greater than 110 percent of the largest tank or 25 percent of the total tankage, whichever is the larger:</p> <ul style="list-style-type: none"> <li>• Ensure that the coupling points of the main diesel storage tank and emergency firewater pump/generator diesel tank are within the bund;</li> <li>• Ensure that coupling points have pipe closure valves;</li> <li>• Provide bunding for drums located in the fire pump house yard;</li> <li>• Provide bunding for the four Anitox (formaldehyde) IBC's.</li> </ul> <p>Timescales for implementing the programme of work shall be agreed in writing with the Agency.</p>
IC2	<p>The Operator shall undertake a review of the current bunding and containment measures that are in place in the following areas, having regard to Sector Guidance Note S6.10:</p> <ul style="list-style-type: none"> <li>• Crude Oil Tank Farm</li> <li>• Edible Oil Tank Farm</li> </ul> <p>The review shall identify any improvements that can be carried out, and a proposed timescale for implementation.</p>
IC3	<p>The Operator shall review the provision of MCERTS certification (or where this is not applicable, UKAS accreditation) for the organisations or methods employed to sample and analyse samples taken to fulfil the conditions of the permit. A report shall be submitted that details a timetable for achieving this standard for all parameters identified by the review as not meeting the required certification/accreditation.</p>
IC4	<p>The Operator shall develop and implement a formalised Environmental Management System, having regard for section 2.3 of the Agency's Sector Guidance Note S6.10.</p>
IC5	<p>The Operator shall submit to the Agency a scrubber monitoring plan. The plan shall include the following:</p> <ul style="list-style-type: none"> <li>• The recharge period for liquor in the mineral oil scrubber;</li> <li>• The analysis and frequency of testing of strength of sodium hypochlorite in the scrubber liquor in the Seed Prep Scrubber and DC Exhaust Scrubber (i.e. determination of free chlorine).</li> </ul>
IC6	<p>The Operator shall undertake monitoring of emissions of hydrogen sulphide and hexane from point CCAP 5, having regard to Section 2.10 of Agency Guidance Note S6.10 and Agency Technical Guidance Notes M1 and M2.</p>



	Following completion of the monitoring, the Operator shall conduct an assessment of the impact from the emissions of Hydrogen Sulphide using Agency Horizontal Guidance Note H1, which shall be submitted to the Agency for approval, along with a proposal for the future monitoring of emissions of Hydrogen Sulphide and Hexane from emission point CCAP 5.
IC7	The Operator shall investigate new technologies available for continuous hydrogen sulphide and hexane monitoring of releases from emission point CCAP 5. A report summarising the options identified shall be submitted to the Agency together with a plan for installing the most suitable option.
IC8	The Operator shall investigate options for minimising dust emissions from silos, having regard to Section 2.2.1 of Agency Guidance Note S6.10. This should include consideration of relocating silos within an enclosed building. The Operator shall submit a report to the Agency summarising the options. A timetable for implementing improvements shall be agreed with the Agency.
IC9	The Operator shall develop a written Site Closure Plan, having regard to Section 2.11 of the Agency Guidance Note S6.10. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing.
IC10	Retained as it has not been completed

The following improvement conditions have added to the permit as a result of the variation.

<b>Improvement programme requirements</b>		
<b>Reference</b>	<b>Reason for inclusion</b>	<b>Justification of deadline</b>
IC10	<p>The operator shall submit, for approval by the Environment Agency, a report demonstrating achievement of the 'Narrative' BAT conclusions as identified in the Food, Drink and Milk Bref published on 4 December 2019 where BAT is currently not demonstrated or achieved. The report shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Methodology applied for achieving BAT</li> <li>• Demonstrating that BAT has been achieved.</li> </ul> <p>The report shall address the BAT Conclusions for Food, Drink and Milk Industries with respect to BATc 5 and 6.</p> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	19/11/2024 or other date agreed in writing with the Environment Agency
IC11	<p>The Operator shall submit an updated Solvent Management Plan (SMP) to the Environment Agency for technical assessment and approval, demonstrating compliance against BAT 32 for the FDM industries. Further guidance on SMPs can be found on our website Solvent Management Plans: environmental permits - GOV.UK (<a href="http://www.gov.uk">www.gov.uk</a>)</p>	19/08/2025 or other date agreed in writing with the Environment Agency

	<p>The updated plan must include the following elements:</p> <ul style="list-style-type: none"> <li>• a protocol containing remediation actions and timelines;</li> <li>• a protocol for conducting solvent emissions monitoring;</li> <li>• a protocol for response to identified solvent loss events, e.g. fugitive emissions;</li> <li>• a protocol to reduce solvent mass-balance uncertainties;</li> <li>• a solvent reduction programme designed to identify the source(s), to measure/estimate solvent loss, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</li> </ul> <p>The solvent management plan should be reviewed at least annually to ensure continued compliance against BAT 32 as described above.</p>	
IC12	<p>The operator shall confirm in writing to the Environment Agency that they have achieved the specific Environmental Performance Levels (EPLs) for specific energy consumption, where compliance with the EPL was not demonstrated at the time of R61 submission. Where an operator cannot achieve the EPL, they should provide a justification and derive a site-specific benchmark.</p> <p>Refer to BAT Conclusions for a full description of the requirements.</p>	19/11/2024 or other date agreed in writing with the Environment Agency
IC13	<p>The operator shall submit, for approval by the Environment Agency an annual monitoring procedure two weeks before the monitoring program associated with improvement condition IC14 is due to start. The information shall contain, but not limited to the following aspects:</p> <ul style="list-style-type: none"> <li>• Complete list of current emission points</li> <li>• Chosen emission points for the 2-day campaign monitoring program</li> <li>• Monitoring methodology or standard used, reflective of BATc 5 requirements</li> <li>• Existing odour abatement techniques designed efficiencies.</li> </ul>	19/08/2025 or other date as agreed in writing with the Environment Agency.
IC14	<p>The operator shall submit a written report to the Environment Agency for approval following a 2-day intensive monitoring program (associated with IC 14) to review the substances with the potential of causing odour emissions and associated abatement techniques current efficiencies.</p> <p>The report shall include but not limited to the following aspects::</p> <ul style="list-style-type: none"> <li>• Full investigation and characterisation of the inlet and outlet gas streams for site abatement systems.</li> </ul>	19/08/2025 or other date as agreed in writing with the Environment Agency.

	<ul style="list-style-type: none"> <li>• Abatement emissions monitoring results including odour concentrations (OUe/m3), GCMS monitoring results, TVOC, ammonia, SO<sub>2</sub>, H<sub>2</sub>S, and CO levels.</li> <li>• Details of site-specific “action levels”.</li> <li>• Proposed ELVs</li> <li>• Impact assessment and modelling for the proposed ELVs.</li> <li>• Recommendations for improvement including the replacement or upgrading of the abatement plant where appropriate.</li> </ul> <p>The report should also list all relevant contingency mitigation actions to minimise the risk of elevated odour pollution from the installation in abnormal operating periods e.g. plant breakdown and detail the actions to restore systems to normal operating conditions for effective odour control.</p> <p>The monitoring program shall be reviewed on an annual basis and the results communicated to the Environment Agency.</p>	
IC15	<p>The Operator shall submit a written report to the Environment Agency of monitoring carried out to determine the size distribution of particulate matter in the exhaust gas emissions to air from emission point [A1, A2 and A5], identifying the fractions within the PM<sub>10</sub> and PM<sub>2.5</sub> ranges. The monitoring shall be carried out under representative operating conditions and shall be in accordance with EN ISO 23210 unless otherwise agreed with the Environment Agency.</p>	19/08/2025 or other date agreed in writing with the Environment Agency
IC16	<p>The operator shall produce a climate change adaptation plan, which will form part of the EMS. The plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Details of how the installation has or could be affected by severe weather;</li> <li>• The scale of the impact of severe weather on the operations within the installation;</li> <li>• An action plan and timetable for any improvements to be made to minimise the impact of severe weather at the installation.</li> </ul> <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	19/08/2025 or other date agreed in writing with the Environment Agency

## Annex 4: Pre-operational Conditions

The following pre-operational conditions have been removed from the previous permit variation, V008 as they are deemed to have been completed.

<b>Pre-operational measures for future development</b>		
<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
PO1	Commissioning Protocol of odour abatement system	Prior to the completion of PO2, the operator shall submit a written report to the Environment Agency detailing the commissioning protocol for the new odour abatement system (CCAP6) including details of the conditions of both “dry” and “wet” commissioning for agreement in writing by the Environment Agency.
PO2	Replacement DC stack and abatement system	<p>As part of commissioning, the operator shall carry out a programme of odour testing to qualify the performance of the scrubber odour control system and to determine the level of bleach dosing required (testing under Scenario 2a and Scenario 2b to be completed). The operator shall submit a report detailing a comprehensive review of the odour testing programme.</p> <p>Having regard for the outcome of the testing undertaken, the report shall also provide justification for the abatement systems/techniques used to treat the odour source and demonstrate how they are fit for purpose and represent BAT.</p> <p>The operator shall further develop the existing odour management plan (OMP) for approval in writing by the Environment Agency. The revised plan shall have regard for the requirements/outcomes of PO2.</p> <p>At least 2 weeks before full operation the operator shall submit a report demonstrating that the necessary procedures are in place for the operation of the scrubber and that staff have received the necessary training. The operator shall confirm completion of the works in writing to the Environment Agency and update the site EMS accordingly.</p>