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/BX5654IT

The Operator is:

D.D. Williamson (U.K.) Limited
The Installation is:

Trafford Park Caramel Plant

This Variation Notice number is: EPR/BX5654IT/V003

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 4th 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

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 24/03/2022 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 21/07/2022.

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 have no reason to consider that the Operator will not be able to comply with the techniques and standards described in the BAT Conclusions.

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 09/05/2023, relating to BATc6, BATc11, relevant hazardous substances, and process information. A copy of the further information request was placed on our public register.

3 The legal framework

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

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

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

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

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
	GENERAL BAT CONCLUSIONS (BAT 1-15)		
1	Environmental Management System - Improve overall environmental performance. Implement an EMS that incorporates all the features as described within BATc 1.	СС	The operator has provided information to support compliance with BATc 1. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 1. The operator has an EMS externally accredited to the ISO14001 standard.
2	EMS Inventory of inputs & outputs. Increase resource efficiency and reduce emissions. 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.	СС	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. The operator has an EMS externally accredited to the ISO14001 standard.
3	Monitoring key process parameters at key locations for emissions to water. 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).	CC	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. The site produces process effluent from condensed cooking gases and washing of caramel cooking pans between cooks, effluent is treated using pH adjustment via an onsite effluent treatment plant. Treated effluent is sent to United Utilities sewer for treatment at DavyHulme Treatment Works. United Utilities carry out test water samples for pH, COD, suspended solids, ammonia and sulphates.

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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
			The operator also monitor pH and temperature at the discharge point.
			Mercury limits and monitoring were previously included in the permit for emission to sewer (S1), however, we will not be retaining these requirements in table S3.2 as the facility/ installation does not use or produce materials/ products which are likely to have significant mercury present.
4	Monitoring emissions to water to the required frequencies and standards.	NA	We are satisfied that BATc 4 is not applicable to this Installation.
	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.		There are no direct discharges of process effluent arising from this installation. The operator has effluent treatment plant onsite and discharges effluent to United Utilities sewer. The Operator has a flow proportional composite sampler, a sample is taken every 24 hours.
5	Monitoring channelled emissions to air to the required frequencies and standards.	NA	We are satisfied that BATc 5 is not applicable to this facility.
	BAT is to monitor channelled emissions to air with at least the frequency given and in accordance with EN standards.		There are no relevant channelled emissions to air from the facility as the caramel production does not fall under a relevant sector as set out in BATc5.
			The emissions to air from caramel cooking are abated via a condenser and wet scrubber, the existing emission point (A1) has monitoring requirements in the existing permit. Monitoring for sulphur dioxide and ammonia have been retained in the permit.

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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
6	Energy Efficiency 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.	cc	The operator has provided information to support compliance with BATc 6. We have assessed the information provided and we are satisfied that the operator has demonstrated compliance with BATc 6. The site has an adequate Energy Efficiency Plan in place and has a number of improvement projects ongoing which integrate techniques which are considered BAT. Such as variable speed drives, LED lighting, and automated process controls turn off equipment from running continuously.
7	Water and wastewater minimisation 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. (a) water recycling and/or reuse	СС	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.
	 (a) Water recycling and/or reuse (b) Optimisation of water flow (c) Optimisation of water nozzles and hoses (d) Segregation of water streams Techniques related to cleaning operations: (e) Dry cleaning (f) Pigging system for pipes (g) High-pressure cleaning (h) Optimisation of chemical dosing and water use in cleaning-in-place (CIP) (i) Low-pressure foam and/or gel cleaning 		 The Operator uses a combination of techniques in place onsite including: Automated cleaning-in-place (CIP) cleaning cycles on DCS system. Recycling water for cleaning hosepipes. Optimisation of hosepipes by fitted guns. Separate storage tanks to prevent the need to wash out storage tanks between products. Optimised production programme to reduce the number of washes per week.

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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
	(j) Optimised design and construction of equipment and process areas (k) Cleaning of equipment as soon as possible		
8	Prevent or reduce the use of harmful substances 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. (a) Proper selection of cleaning chemicals and/or disinfectants (b) Reuse of cleaning chemicals in cleaning-in-place (CIP) (c) Dry cleaning (d) Optimised design and construction of equipment and process areas	cc	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. The operator uses cleaning-in-place (CIP) systems which only utilise hot water.
9	Refrigerants 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.	NA	We are satisfied that BATc 9 is not applicable to this Installation. No refrigerants are used in the industrial processes.
10	Resource efficiency In order to increase resource efficiency, BAT is to use one or a combination of the techniques given below: (a) Anaerobic digestion (b) Use of residues (c) Separation of residues (d) Recovery and reuse of residues from the pasteuriser (e) Phosphorus recovery as struvite (f) Use of waste water for land spreading	CC	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. The site reworks caramel back not the system to avoid wase. Any final left over caramel waste is sent to be used in animal feed.
11	Waste water buffer storage	CC	The operator has provided information to support compliance with BATc 11. We have assessed the information provided and we

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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
	In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water.		are satisfied that the operator has demonstrated compliance with BATc 11.
			The operator has provided information to demonstrate there is adequate buffer storage capacity at the installation.
			 The surface water drains from around the plant go to the wharf sumps which has a capacity of 128m³. The surface water drains in the area around the chemical tanks drain in to the canal sump which has a capacity of 32m³. The sumps then feed into the balance tank of 400m³ which overflows into the neutralising tank of capacity 80m³. The site sump is pumped into a final transfer tank of with a capacity of 7m³ The site sump has a manual isolation valves on the tank and pumps to prevent pumping to sewer.
12	Emissions to water – treatment In order to reduce emissions to water, BAT is to use an appropriate combination of the techniques given below. Preliminary, primary and general treatment	cc	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.
	(a) Equalisation(b) Neutralisation(c) Physical separate (eg screens, sieves, primary settlement tanks etc)		The Operator uses neutralisation via an effluent treatment plant on site which treats process effluent via physico-chemical treatment utilising a sump tank and mixing tank for pH dosing.
	Aerobic and/or anaerobic treatment (secondary treatment)		
	(d) Aerobic and/or anaerobic treatment (eg activated sludge, aerobic lagoon etc)		
	(e) Nitrification and/or denitrification		

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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
	 (f) Partial nitration - anaerobic ammonium oxidation Phosphorus recovery and/or removal (g) Phosphorus recovery as struvite (h) Precipitation (i) Enhanced biological phosphorus removal Final solids removal (j) Coagulation and flocculation (k) Sedimentation (l) Filtration (eg sand filtration, microfiltration, ultrafiltration) (m) Flotation 		
13	Noise management plan 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: - a protocol containing actions and timelines; - a protocol for conducting noise emissions monitoring; - a protocol for response to identified noise events, eg complaints; - 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.	NA	BATc 13 is only applicable to cases where a noise nuisance at sensitive receptors is expected and/or has been substantiated, or if forms part of an existing permit requirement. The site has no recent history of noise complaints and there is no existing permit requirement for a noise management plan.
14	Noise management	СС	The operator has provided information to support compliance with BATc 14. We have assessed the information provided and we are

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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
	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. (a) Appropriate location of equipment and buildings (b) Operational measures (c) Low-noise equipment (d) Noise control equipment (e) Noise abatement		satisfied that the operator has demonstrated compliance with BATc 14. A combination of the relevant techniques are implemented at the site. The site implements operational measures such as: Low noise equipment is utilised on site. Regular site audits by personnel. Noise measurement testing carried out across plant.
15	Odour Management 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: - a protocol containing actions and timelines; - a protocol for conducting odour monitoring. - a protocol for response to identified odour incidents eg complaints; - 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.	NA	BATc 15 is only applicable to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated, or if forms part of an existing permit requirement. There is no existing permit requirement and the site has no recent history of odour complaints therefore an odour management plan is not required.

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

Updating permit during permit review consolidation

- Activity name
- Introductory note (updated)
- Site plan
- Table S1.1 overhaul
 - o 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.

The facility name has been changed from previously 'Trafford Park Wet Corn Milling' to ensure the name more accurately reflects the activities at the site the facility name has been updated to 'Trafford Park Caramel Plant'.

The listed activity on the permit has been updated as the Environment Agency determined that regulation of the facility as a Food, Drink and Milk site would be more appropriate, as the facility manufactures caramel for food and feed. The Trafford Park Caramel Plant is part of a multi operator installation, the installation as a whole operated above the threshold of 300 tonnes per day as set in the Environmental Permitting Regulations 2016.

The facility was previously regulated under listed activity:

Section 4.7 A(1)(b) – Any activity for the manufacture of a chemical which may result in the release of ammonia into the air other than an activity in which ammonia is only used as a refrigerant.

The facility will now be regulated under:

S6.8 A1 (d) (ii) – Treatment and processing of only vegetable raw materials, intended for the production of food or feed at a plant with a finished product production capacity greater than 300 tonnes per day.

This is in line with the "most apt" description in accordance with RGN2.

Capacity 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 Operator has completed a H1 assessment of emissions for typical figures of production at the time of permitting.

The existing H1 assessment of emissions to air remains valid for the revised 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 confirmed the air emission plan was up to date.

<u>Emissions to Water and implementing the requirements of the Water</u> 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.

Mercury limits and monitoring were previously included in the permit for emission point S1, however, we will not be retaining these requirements in table S3.2 due to the facility/ installation does not use or produce materials/ products which are likely to have significant mercury present.

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 during the original application received the site condition report is dated January 2006, in addition a site contamination report was produced in February 2000. The site condition report included 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.

The Operator submitted a summary report which referenced the site condition report and baseline report. We have reviewed the information and we consider that it adequately describes the current condition of the soil and groundwater. Consequently, we are satisfied that the baseline conditions have not changed.

We have assessed the risk assessment in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive – Operational instruction 233_06 [Assessing application site condition reports and surrender site condition reports submitted under the Environmental Permitting regime]. We consider the risk assessment is not satisfactory as it does not adequately describe the current condition of the site.

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 confirmed there has been no change in the hazardous substances used, their capability of causing pollution and/or the pollution prevention measures at the installation since the risk assessment was submitted on 09/02/2005. Consequently, we are satisfied there has been no change to the assessment of risk for hazardous substances.

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 stated that the installation is not likely to be or has previously not been affected by climate change.

Containment

We asked the Operator via the Regulation 61 Notice to:

- Provide details of any above-ground storage or process tanks including;
 - Contents;
 - o Capacity;
 - Construction material(s);
 - Preventative maintenance measures;
 - Additional containment:

We reviewed the information provided by the operator. We are satisfied that the existing site containment measures for above-ground storage or process tanks are appropriate to minimise the risk of fugitive emissions from these tanks.

Annex 3: Improvement Conditions

The following improvement conditions have been superseded or marked as complete and removed from the permit.

Superseded	Improvement Conditions
1	The Operator shall undertake an exercise to verify the releases of sulphur dioxide and ammonia from emission point A1. Releases shall be assessed, on a minimum of four separate occasions, and averaged over 15 minute periods throughout the venting process, using methodology set out in Agency Guidance Note M2: Monitoring of Stack Emissions to Air. The outcome of the verification, including details of the methods used, shall be reported in writing to the Agency.
2	The Operator shall review the adequacy and condition of the process effluent drains, having regard to Section 2.2.5 of Agency Guidance Note S4.03. A report shall be provided to the Agency summarising the review including the identification of any deficiencies identified, the improvements proposed and a timetable for their implementation.
3	The Operator shall, having regard to Section 2.2 of Agency Guidance Note S4.03, review the performance of the air emissions abatement system in respect of sulphur dioxide and ammonia. The review shall consider techniques capable of reducing emissions to air and chemical consumption within existing abatement system, and also consider the feasibility and benefits of the following: • use of a two-stage scrubber system to target sulphur dioxide and ammonia separately; and • use of two separate scrubber systems for the pressure and atmospheric pans. A report summarising the review, including recommendations and a timetable for their implementation, shall be submitted to the Agency.
4	The Operator shall investigate options for recovering and recycling steam condensate in the process, having regard to Section 2.4.3 of Agency Guidance Note S4.03. A written report summarising the techniques shall be submitted to the Agency including a timetable for the implementation of the preferred option(s).
5	The Operator shall review the provision of MCERTS accreditation for the monitoring equipment, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 and 2.10.2 and propose a timetable in a written report to the Agency for achieving this standard for any elements that are not MCERTS certified, with regard to Section 2.10 of Agency Guidance Note S4.03.
6	The Operator shall develop a written Site Closure Plan, having regard to Section 2.11 of the Agency Guidance Note S4.03. Upon completion of the plan a summary of the document shall be submitted to the Agency in writing.
7	The Operator shall, having regard to Section 2.2.2 of Agency Guidance Note S4.03, undertake an assessment of the treatment and disposal tons for process effluent arising from the installation, in order to reduce emissions of ammonia and sulphates. A report summarising the assessment and including a timetable for the implementation of the improvements identified shall be forwarded in writing to the Agency. Following submission of the report, the Operator shall undertake any measures approved in writing by the Agency.