Natural Resources Wales permitting decisions

Variation and consolidation of a bespoke permit – Kronospan Limited

We have decided to issue a Natural Resources Wales initiated variation and consolidated permit for Chirk Particleboard Factory in Chirk operated by Kronospan Limited.

The permit number is EPR/BW9999IG.

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

The permit has been varied following the publication of the following revised Best Available Techniques (BAT) Reference Documents (BRef):

- Production of Large Volume Organic Chemicals (LVOC), published on 7 December 2017 in the Official Journal of the European Union
- Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector (CWW), published 9 June 2016 in the Official Journal of the European Union

This variation incorporates the changes required by the Industrial Emissions Directive (IED) following a statutory review of this permit. The opportunity has been taken to consolidate the original permit and subsequent variations. The rest of the installation is unchanged and continues to be operated as stated in the permit.

Purpose of this document

This decision document:

- explains how we have carried out our statutory review of the Operator's permit;
- why we have decided to vary the permit as a result of that review; and
- why we have included the specific conditions in the revised permit through the variation notice we are issuing.

It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position.

Structure of this document

- Assessment of installation against the published BAT conclusions
- Annex 1 – Decision Checklist regarding relevant BAT Conclusions (LVOC)
- Annex 2 – Decision Checklist regarding relevant BAT Conclusions (CWW)
- Annex 3 – Decision Checklist regarding additional information requested in Regulation 61(1) Notice

Assessment of installation against the published BAT conclusions

1. Our decision

We have issued a variation, which will allow Kronospan Limited to operate the installation, subject to the conditions in the varied permit.

The variation does three things:

- it consolidates the original permit to reflect changes made through earlier variations;
- it brings the permit into line with our modern regulatory template; and
- it varies the permit where appropriate to reflect the outcome of our statutory review and incorporate BAT and BAT-Associated Emission Levels (BAT-AELs)

We consider that, in reaching this decision, we have taken into account all relevant considerations and legal requirements and that the permit will continue to ensure that a high level of protection is provided for the environment and human health.

The latest consolidated permit, issued on the 04/10/2022 ensured that the installation employed BAT and ensured a high level of protection for human health and the environment. We have altered the permit as a result of the statutory review, and we are confident that the new requirements will deliver a higher level of protection to that which was previously achieved. Where the site is not currently compliant with BAT, Improvement Conditions have been included to bring the site up standard.

2. The legal framework

The variation and consolidation notice (which includes the consolidated permit as Schedule 2) will be issued under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 (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 Industrial Emissions Directive (IED);
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the varied and consolidated permit, 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.

3. How we reached our decision

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 on 15 January 2019 requiring the operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the relevant BAT conclusions documents.

The Regulation 61(1) Notice required the operator to:

1. Confirm whether or not they currently comply with the requirements of the BAT conclusions, including any associated emission levels, providing a description of the techniques in place and how they meet the standard
2. If they do not comply with the BAT conclusion describe how and by when they intend to meet the standard, before the compliance date
3. Confirm if they intent to continue operating in a manner which would not comply with the relevant new BAT conclusion after the compliance date, what the justification for being allowed to do so is, and by what date they intend to come into full compliance, or a description of alternative measures to be adopted that will provide equivalent environmental protection

The following additional information was also requested:

A. For all discharges to surface water and/or sewers from the site, the Operator must provide information for priority hazardous substances and any other relevant substances.
B. Where their permitted activity involves the use, production or release of a relevant hazardous substances (as defined in Article 3(18) of the IED) the Operator was

required to carry out a risk assessment considering the possibility of soil and groundwater contamination at the permitted installation with such substances.

Where the operator proposed that they were not intending to meet a BAT standard, that also included a BAT-AEL described in the BAT Conclusions Document, the Regulation 61(1) Notice requested that the operator make a formal request for derogation from compliance with that 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.

As considerable time had passed since we issued the Regulation 61(1) Notice, on 28 November 2022 we asked the Operator to review and resubmit their response to the Regulation 61(1) Notice, their response was received on 31 January 2023.

We considered that the response contained sufficient information for us to commence determination of the permit review. The operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 61(1) Notice response that appears to be confidential in relation to any part.

4. Key issues/Regulation 61 response

BAT Conclusions for the Production of Large Volume Organic Chemicals were published as Commission Implementing Decision EU 2017/2117 in the Official Journal of the EU on 7 December 2017. There are 90 BAT Conclusions. Annex 1 provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This should be read in conjunction with the permit and the variation notice issued.

BAT Conclusions for the Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector were published as Commission Implementing Decision EU 2016/902 in the Official Journal of the EU on 9 June 2016. There are 23 BAT Conclusions. Annex 2 provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This should be read in conjunction with the permit and the variation notice issued.

Annex 3 provides a record of decisions made in relation to each of the two additional requested items (A – B as above).

A sufficient response was received from Kronospan Limited. Where the operator has concluded that they have achieved BAT, and we are in agreement, no further information/justification has been sought by Natural Resources Wales. We did send a request for information on 3 March 2023 asking the Operator to consider the CWW BRef for the Activity Reference A3 (detailed below), the Operator's response was received on 24 March 2023.

There are many activities at the site however not all activities are subject to the mentioned BAT conclusions. The mentioned BAT conclusions only relate to certain chemical activities. There are the following chemical activities on the permit:

1. Activity Reference AR2 – Section 4.1 Part A(1)(a)(ii) – Manufacture of formaldehyde by catalytic oxidation of methanol – *commonly referred to as the 'formalin plant'*
2. Activity Reference AR3 – Section 4.1 Part A(1)(a)(viii) – Manufacture of urea-formaldehyde and melamine-urea-formaldehyde resins – *commonly referred to as the 'resin plant'*

Activity Reference AR2 is listed in the 'scope' of the LVOC BAT conclusions and the production capacity is over 20 ktonnes/year therefore is subject to the LVOC BAT conclusions. Activity Reference AR3 is not listed in the scope of the LVOC BAT conclusions therefore is not subject to the LVOC BAT conclusions. The CWW BAT conclusions apply to all Section 4 chemical activities therefore applies to both AR2 and AR3 chemical activities.

Other BRefs relevant to the permit review

Within this permit review we are only considering the LVOC and CWW BRefs. No other BRefs have been considered.

5. Changes we have made

Improvement Conditions

Based on the information provided in the Regulation 61(1) response, we consider that we need to set improvement conditions. These conditions are set out below. We are setting improvement conditions to ensure the site is brought up to standard set out in the BAT conclusions.

NRW IC41	The Operator shall submit a written Emissions Management Plan. The emissions management plan shall address the emissions of substances not controlled by emission limits (excluding odour, noise and dust which are covered by separate management plans). The plan shall describe the operating techniques employed. It shall also address the delivery of all relevant Production of Wood-based Panels BAT Conclusions and all relevant Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector BAT Conclusions. The written report will be incorporated into Table S1.2 of this permit as existing operating techniques.	Within 9 months of variation V008 issue
NRW IC50	The operator shall carry a risk assessment of the discharge to the Afon Bradley (emission point W1 in this permit). The risk assessment shall include: • an assessment of hazardous chemicals and elements which shall be carried out in line with the methodology outlined in the gov.uk guidance entitled "Surface water pollution risk assessment for your environmental permit"; • an assessment of sanitary and other pollutants which shall be carried out in line with the methodology outlined in H1 Annex D2 guidance 'Assessment of sanitary and other pollutants within Surface Water Discharges' The risk assessment shall be submitted to Natural Resources Wales for review.	04 January 2024

NRW IC51	Following NRWIC50, the Operator shall carry out a BAT assessment of the discharge to the Afon Bradley to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it. The assessment shall consider all relevant Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector BAT Conclusions. The assessment should give priority to identification and treatment of contaminated effluent or surface water at source and shall aim to reduce the emissions. The Operator shall also review the discharge process and review whether a batch discharge process is considered BAT taking into account the flow conditions of the Afon Bradley. The BAT assessment shall include a review of the existing emission limit values and whether any of the existing limits can be reduced, in the case where there are no existing emission limit values the Operator shall propose limits ensuring these have been assessed in the risk assessment completed in NRW IC50. A summary of the assessment shall be sent to Natural Resources Wales in writing together with a timetable to implement any necessary changes identified to meet this target.	04 January 2024
NRW IC52	The Operator shall carry out a BAT assessment of the current drainage systems in place at the site, paying particular attention to segregation of site drainage water from formaldehyde plant effluent. The Operator shall ensure all relevant BAT conclusions have been considered including but not limited to: • BAT Conclusion 8 of the Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector BRef A summary of the assessment shall be sent to Natural Resources Wales in writing together with a timetable to implement any necessary changes identified.	04 January 2024
NRW IC53	The Operator shall review their emissions to water monitoring at emission point W1 in this permit with the intent to achieve MCERTS certification or MCERTS accreditation (as appropriate) or an equivalent standard that is acceptable to Natural Resources Wales, where confirmation has been agreed in writing beforehand. Measurement methods shall be to appropriate standards (examples in BAT Conclusions for Large Volume Organic Chemicals and Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector), particularly with intent to implement continuous or at very least proportional composite sampling. Techniques should be in accordance with Technical Guidance Note M18 'Monitoring of discharges to water and sewer'. Proposals for a revised emissions monitoring programme shall be sent to Natural Resources Wales together with an implementation date.	04 January 2024

The existing improvement condition **IC41** has been reworded to include assessment against the CWW BAT Conclusions, the submission date remains the same.

IC50 has been included as the Operator did not provide a response to one aspect of the Regulation 61(1) Notice. See Annex 3 for further detail.

IC51 has been included to ensure compliant with the relevant CWW BAT conclusions including but not limited to BATc 10, 11 and 12. See Annex 2 for further detail.

IC52 has been included to ensure compliance with BATc 8 of the CWW BAT conclusions. See Annex 2 for further detail.

IC53 has been included to investigate implementation of MCERTS monitoring of the emission to water, this is considered BAT for monitoring of emissions to water at all installations.

Operational and other changes
There are no operational changes at the site during this permit review.

There have been the following other changes to the permit that are not related to the BAT review:

- Existing improvement condition **IC35** has been reworded and the deadline date extended by 3 months to reflect an agreement made with the NRW regulatory compliance officer
- Emission point A32 – the emission limit value for TVOC has been changed from 130 mg/m^3 to 200 mg/m^3 to reflect an agreement made with the NRW regulatory compliance officer
- Hydrogen fluoride air emissions monitoring – the monitoring standard for HF has been updated to the most up to date version

Emissions to Water
There is one emission (emission point W1) direct to a receiving waterbody (Afon Bradley) from the site. The source of the discharge is surface water run-off from the whole installation and small amount of process effluent from the formaldehyde plant, the site drainage system drains into 3 surface water settlement lagoons, process emissions and site drainage is mixed. The discharge from the lagoons is a batch discharge via a penstock valve to the Afon Bradley, which is a minor tributary of the River Dee.

There are other multiple emissions of process effluents from the manufacturing process to foul sewer. Small volumes of effluent from the resin activity are either reused in the process or collected for disposal off-site via transfer.

In both BRefs emissions to water are categorised as direct or indirect emissions:

(a) A direct emission is a discharge to a receiving water body without further downstream treatment
(b) An indirect emission is a discharge which is not a direct discharge

The emission (W1) to the Afon Bradley is therefore considered a direct emission and the emissions to foul sewer are considered indirect emissions as they undergo further downstream treatment.

There are no BAT-AELs for emissions to water contained within the LVOC BRef. There are BAT-AELs contained within the CWW BRef for direct emissions to water however the BAT-AELs only apply to direct emissions to a receiving water body from:

(i) The activities specified in Section 4 of Annex I to Directive 2010/75/EU;
(ii) Independently operated waste water treatment plants specified in Section 6.11 of Annex I to Directive 2010/75/EU provided that the main pollutant originates from activities specified in Section 4 of Annex I to Directive 2010/75/EU;
(iii) The combined treatment of waste water from different origins provided that the main pollutant load originates from activities specified in Section 4 of Annex I to Directive 2010/75/EU.

The direct emission (W1) does not fall within any of the three (i – iii) above as the main pollutant load originates from the site surface water drainage and therefore the BAT-AELs within the CWW BRef do not apply. There are no BAT-AELs for indirect emissions in the CWW BRef.

We consider improvements could be made regarding the water segregation, water re-use and waste water treatment at the site, see Annex 1 and 2 for further detail. We also consider the impact of the direct emission to the Afon Bradley (W1) needs to be reassessed against new water quality standards, see Annex 3 for further detail.

Emissions to Water – Article 15(4) Derogations
No derogations.

Emissions to Air
There were changes to the emission limit values (ELVs) for emissions to air taking into account the LVOC BAT conclusions. There are no BAT-AELs for emissions to air contained within the CWW BAT conclusions. Emission point A1 is the only emission point from the formalin plant. There are no changes to emission points A5 and A6 from the resin plant as this is not subject to the LVOC BAT conclusions and although it is subject to the CWW BAT conclusions, there are no BAT-AELs for emissions to air contained within the CWW BAT conclusions. The table below outlines the parameters and limits set to implement the BAT-AELs:

Emission point	Parameter	Current ELV	New ELV
A1	Formaldehyde	5 mg/m^3	5 mg/m^3 (no change)
	Total volatile organic carbon (TVOC)	None set	30 mg/m^3

Where BAT-AELs are identified limits may be prescribed at the top end of the range unless the proximity of sensitive receptors requires a tighter limit or if tighter limits are previously on the permit, this ensures no backsliding of emission limits.

Emissions to Air – Article 15(4) Derogations
No derogations.

6. Conclusion

We consider that the installation already employed what used to be BAT, and that the operator has achieved significant improvements in performance since the permit was originally granted. The revised BRef and its BAT-AELs provide the opportunity to consider further environmental improvements.

Coupled with the consolidation and modernisation of the permit, we believe this variation provides a sound basis for ongoing regulation of the installation and we are satisfied that the operator is currently achieving or will be achieving all relevant BAT via the improvement conditions.

We believe that we have ensured compliance with all relevant legal requirements in carrying out this review and making our determination on the variation.

Annex 1: Decision checklist regarding relevant LVOC BAT Conclusions

BAT Conclusions for the Production of Large Volume Organic Chemicals were published as Commission Implementing Decision EU 2017/2117 in the Official Journal of the EU on 7 December 2017. There are 90 BAT Conclusions. This checklist 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.

All BAT Conclusions arising are listed by number in order below;

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
1	**BAT is to monitor channelled emissions to air from process furnaces/heaters in accordance with EN standards and with at least the minimum frequency given in the table below. 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.**		
	CO	Total rated thermal input >50 MWth – continuous Total rated thermal input (2) 10 – 50 MWth – Once every 3 months (4) Generic EN standards or EN 15058	Not Applicable There are no process furnace heaters associated with the formalin plant.
	Dust (5)	Total rated thermal input >50 MWth – continuous Total rated thermal input (2) 10 – 50 MWth – Once every 3 months (4) Generic EN standards or EN 13284-1 or EN 13284-2	
	NH3 (6)	Total rated thermal input >50 MWth – continuous Total rated thermal input (2) 10 – 50 MWth – Once every 3 months (4) Generic EN standards / no EN standard available	
	NOx	Total rated thermal input >50 MWth – continuous Total rated thermal input (2) 10 – 50 MWth – Once every 3 months (4) Generic EN standards / EN 14792	

<table>
<tr><th colspan="2">BATc number</th><th>Summary of BAT Conclusion requirement</th><th>Status/comment
One of the following:
Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant</th></tr>
<tr><td></td><td>SO2 (7)</td><td>Total rated thermal input >50 MWth – continuous
Total rated thermal input (2) 10 – 50 MWth – Once every 3 months (4)
Generic EN standards / EN 14791</td><td></td></tr>
<tr><td rowspan="5">2</td><td colspan="3">BAT is to monitor channelled emissions to air other than from process furnaces/heaters in accordance with EN standards and with at least the minimum frequency given in the table below. 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.</td></tr>
<tr><td colspan="3">See BAT 2 table: COMMISSION IMPLEMENTING DECISION (EU) 2017/ 2117 - of 21 November 2017 - establishing best available techniques (BAT) conclusions, under Directive 2010/ 75/ EU of the European Parliament and of the Council, for the production of large volume organic chemicals - (notified under document C (2017) 7469) (europa.eu)</td><td rowspan="3">The following parameter monitoring are not relevant to the formalin plant as they are not present in the waste gas: dust, sulphur dioxide, benzene and gaseous chlorides. As per note 1 in the BAT conclusion monitoring of these parameters applies where the pollutant is present in the waste gas based on the inventory specified by the CWW BAT conclusions.</td></tr>
<tr><td colspan="3">The following parameters are relevant to formalin plant:</td></tr>
<tr><td>Substance / parameter</td><td>Processes / sources</td><td>Standard</td><td>Minimum monitoring frequency</td></tr>
<tr><td></td><td>Formaldehyde</td><td>Formaldehyde</td><td>No EN standard available</td><td>Once every month (2)</td><td>Currently compliant
The emission point from the formalin plant is A1. In the existing permit emission point A1 currently has periodic monitoring of formaldehyde with an annual frequency. As per Note 2 the frequency can be reduced to once every year if the emissions levels are proven to be sufficiently table. The Operator has provided periodic results from the last 11 years which demonstrate the formaldehyde emissions are stable and below the BAT-AEL in all but one case. The monitoring methods used are appropriate and robust. Therefore, we consider</td></tr>
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BATc number		Summary of BAT Conclusion requirement			Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
					periodic monitoring with an annual frequency can continue and we consider it not justified to increase the monitoring frequency.
	Total volatile organic compounds (TVOC)	Formaldehyde	EN 12619	Once every month (2)	Compliant in the future There is currently no TVOC monitoring required from emission point A1. Therefore, TVOC monitoring with a frequency of once every month will be implemented in the varied permit.
	Note (2)	*The minimum monitoring frequency for periodic measurements may be reduced to once every year, if the emission levels are proven to be sufficiently stable.*			
	Emissions to air from process furnaces/heaters				
	In order to reduce emissions to air of CO and unburnt substances from process furnaces/heaters, BAT is to ensure an optimised combustion				
3	Optimised combustion is achieved by good design and operation of the equipment which includes optimisation of the temperature and residence time in the combustion zone, efficient mixing of the fuel and combustion air, and combustion control. Combustion control is based on the continuous monitoring and automated control of appropriate combustion parameters (eg. O2, CO, fuel to air ratio, and unburnt substances)				Not Applicable There are no process furnace heaters associated with the formalin plant.
4	**In order to reduce NOx emissions to air from process furnaces/heaters, BAT is to use one or a combination of the techniques given below:**				
	a.	Choice of fuel			Not Applicable There are no process furnace heaters associated with the formalin plant.
	b.	Staged combustion			
	c.	Flue-gas recirculation (external)			
	d.	Flue-gas recirculation (internal)			
	e.	Lox-NOx burner or ultra-low-NOx burner			
	f.	Use of inert diluents			
	g.	Selective Catalytic Reduction			

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
	h.	Selective Non-catalytic reduction	
5	**In order to prevent or reduce dust emissions to air from process furnaces/heaters, BAT is to use one or a combination of the techniques given below**		
	a.	Choice of fuel	Not Applicable There are no process furnace heaters associated with the formalin plant.
	b.	Atomisation of liquid fuels	
	c.	Fabric, ceramic or metal filter	
6	**In order to prevent or reduce SO2 emissions to air from process furnaces/heaters, BAT is to use one or both of the techniques given below**		
	a.	Choice of fuel	Not Applicable There are no process furnace heaters associated with the formalin plant.
	b.	Caustic scrubbing	
7	**Emissions to air from the use of SCR or SNCR**		
	In order to reduce emissions to air of ammonia which is used in SCR or SNCR for the abatement of NOx emissions, BAT is to optimise the design and/or operation of SCR or SNCR		Not Applicable There is no SCR or SNCR abatement in place for the formalin plant.
8	**Techniques to reduce emissions from other processes/sources**		
	In order to reduce the load of pollutants sent to the final waste gas treatment, and to increase resource efficiency, BAT is to use an appropriate combination of the techniques given below for process off-gas streams		
	a.	Recovery and use of excess or generated hydrogen	Currently compliant The Operator has stated the use of technique (b) is in place although there is raw material left in the product it does not cause production problems, the conversion yield of the formaldehyde process is already relatively high already at up to 94% methanol conversion. Approximately 70% of the air flow from the final gas treatment is recycled back into the process with 30% venting to atmosphere via
	b.	Recovery and use of organic solvents and unreacted organic raw materials	
	c.	Use of spent air	
	d.	Recovery of HCl by wet scrubbing for subsequent use	
	e.	Recovery of H2S by regenerative amine scrubbing for subsequent use	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
	f.	Techniques to reduce solids and/or liquids entrainment	the abatement system. We consider the arrangement in place is appropriate and no further techniques are considered justified.
9	In order to reduce the load of pollutants sent to the final waste gas treatment, and to increase energy efficiency, BAT is to send process off-gas streams with a sufficient calorific value to a combustion unit. Bat 8a and 8b have priority over sending process off-gas streams to a combustion unit.		Not Applicable The Operator has stated the process off-gas stream does not have sufficient calorific value to be sent to a combustion unit.
10	**In order to reduce channelled emissions of organic compounds to air, BAT is to use one or a combination of the techniques given below**		
	a.	Condensation	Currently compliant The Operator has stated a catalytic oxidiser is in place.
	b.	Adsorption	
	c.	Wet scrubbing	
	d.	Catalytic oxidiser	
	e.	Thermal oxidiser	
11	**In order to reduce channelled dust emissions to air, BAT is to use one or a combination of the techniques given below**		
	a.	Cyclone	Currently compliant The Operator has stated a fabric filter is in place on the inlet air.
	b.	Electrostatic precipitator	
	c.	Fabric filter	
	d.	Two-stage dust filter	
	e.	Ceramic/metal filter	
	f.	Wet dust scrubbing	
12	**In order to reduce emissions to air of sulphur dioxide and other acid gases (eg HCl), BAT is to use wet scrubbing**		Not Applicable The Operator has stated there is no emissions to air of sulphur dioxide or other acid gases from the formalin plant.
13	**Techniques to reduce emissions from a thermal oxidiser**		
	a.	Removal of high levels of NOx precursors from the process off-gas streams	Not Applicable The Operator has stated there is no thermal oxidiser in place.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
	b.	Choice of support fuel	
	c.	Low-NOx burner	
	d.	Regenerative thermal oxidiser	
	e.	Combustion optimisation	
	f.	Selective Catalytic Reduction	
	g.	Selective Non-catalytic reduction	
EMISSIONS TO WATER			
14	**In order to reduce the waste water volume, the pollutant loads discharged to suitable final treatment and emissions to water, BAT is to use an integrated waste water management and treatment strategy that includes an appropriate combination of process-integrated techniques, techniques to recover pollutants at source, and pre-treatment techniques, based on the information provided by the inventory of waste water streams specified in the CWW BAT conclusions.**		Compliant in the future We consider the current arrangement at the site for waste water treatment and discharges may not constitute BAT for the site. There is an existing improvement condition (IC42) which requires the operator to carry out a BAT assessment of water usage at the site. The improvement condition remains valid and will inform further BAT considerations.
RESOURCE EFFICIENCY			
15	**In order to increase resource efficiency when using catalysts, BAT is to use a combination of the techniques given below**		
	a.	Catalyst selection	Currently compliant The Operator has stated that all techniques are in place.
	b.	Catalyst protection	
	c.	Process optimisation	
	d.	Monitoring of catalyst performance	
16	**In order to increase resource efficiency, BAT is to recover and reuse organic solvents**		Currently compliant The Operator has stated that there is a small amount of unreacted methanol that is present in the product (<1.5%) and there is no requirement to recover this as does not give rise to any quality or production issues. Production processes are optimised to ensure as much methanol as possible is converted to formalin.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
RESIDUES			
17	**In order to prevent or, where that is not practicable, to reduce the amount of waste being sent for disposal, BAT is to use an appropriate combination of the techniques given below**		
	a.	Addition of inhibitors to distillation systems	Compliant in the future The Operator has stated that technique (d) is in place and spent catalysts are returned to the supplier for regeneration. No further detail has been provided by the Operator so we consider there may be potential for improvements to be made and other techniques to be explored. There is an existing improvement condition (IC35) which requires the operator to carry out a BAT assessment of wastage at the site. The improvement condition remains valid and will inform further BAT considerations.
	b.	Minimisation of high-boiling residue formation in distillation systems	
	c.	Material recovery	
	d.	Catalyst and adsorbent regeneration	
	e.	Use of residues as a fuel	
18	**OTHER THAN NORMAL OPERATING CONDITIONS**		
	In order to prevent or reduce emissions from equipment malfunctions, BAT is to use all of the techniques given below		
	a.	Identification of critical equipment	Currently compliant The Operator has stated (a) and (b) techniques are in place. As per the BAT conclusion technique (c) is not applicable if (b) is applied.
	b.	Asset reliability programme for critical equipment	
	c.	Back-up systems for critical equipment	
19	**In order to prevent or reduce emissions to air and water occurring during other than normal operating conditions, BAT is to implement measures commensurate with the relevance of potential pollutant releases for:**		
	i.	Start-up and shut-down operations	Currently compliant The Operator has stated procedures are in place for the start-up and shut-down operations. There is an emergency shutdown procedure in place that ensures the plant is in a safe condition and ensures no process emissions occurs during emergencies. Maintenance and/or
	ii.	Other circumstances including those that could affect the proper functioning of the installation	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
			cleaning operations are subject to systems that ensure adequate controls are in place prior to commencement of the operations. The drainage from the entire formalin plant is contained by a penstock valve which is closed, the waters are then tested prior to discharge, therefore any discharges during emergencies are not discharge immediately. All air emissions from the plant during emergency are channelled through the abatement system.
2 BAT CONCLUSIONS FOR LOWER OLEFINS PRODUCTION – not applicable			
3 BAT CONCLUSIONS FOR AROMATICS PRODUCTION – not applicable			
4 BAT CONCLUSIONS FOR ETHYLBENZENE AND STYRENE MONOMER PRODUCTION – not applicable			
5 BAT CONCLUSIONS FOR FORMALDEHYDE PRODUCTION			
EMISSIONS TO AIR			
45	**In order to reduce emissions of organic compounds to air from formaldehyde production and to use energy efficiently, BAT is to use one of the techniques given below**		
	a.	Send the waste gas stream to a combustion unit	Not Applicable – as per BAT conclusion this is only applicable to the silver process which is not in place.
	b.	Catalytic oxidiser with energy recovery	Currently compliant The Operator has stated there are two sub plants within the formalin plant that operate slightly differently: • Plant 1 – the waste gas heats water in a gas cooler to produce low-pressure steam, that is then passed back as heating into the vapour • Plant 2 – sends the waste gas directly to the vaporiser Both then leave the vaporiser and pass to the absorber where they are collected and dissolved into water to create formalin solution. The

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
			waste gas stream leaving the absorbers is split, where 70% is recycled back to the vaporiser via the air blowers and fresh air make-up system. The remainder vents to atmosphere via the catalytic oxidiser. Excess heat from the reactors is captured by heat transfer fluid which is then condensed and recycled back to the reactor shell. The heat generated is then used to raise steam that is used in other parts of the site.
	c.	Thermal oxidiser with energy recovery	Not Applicable – as per BAT conclusion this is only applicable to the silver process which is not in place.
	BAT-AELs for emissions of TVOC and formaldehyde to air from formaldehyde production (daily average or average over the sampling period, mg/Nm^3, no correction for oxygen content) – monitoring given in BAT 2		
	TVOC	<5 – 30 mg/Nm^3 (1)	Compliant in the future The Operator has no previous TVOC monitoring data, although have stated they are currently compliant. The upper end of the TVOC BAT-AEL range will be implemented in the varied permit and the Operator will be required to comply with it. The Operator has not requested a derogation. There is no thermal oxidiser in place on the formalin plant.
	Formaldehyde	2 – 5 mg/Nm^3	Currently compliant The Operator has demonstrated using previous monitoring results they can currently comply with upper end of the BAT-AEL range - 5 mg/Nm^3. The emission limit value (ELV) in the current permit for formaldehyde from emission point A1 is 5 mg/Nm^3. There is no change to the current permitted ELV.
	Note 1	*The lower end of the range is achieved when using a thermal oxidiser in the silver process*	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
EMISSIONS TO WATER			
46	**In order to prevent or reduce waste water generation (e.g. from cleaning, spills and condensates) and the organic load discharged to further waste water treatment, BAT is to use one or both of the techniques given below**		
	a.	Reuse of water	Compliant in the future We consider the current arrangement at the site for waste water treatment and discharges may not constitute BAT for the site. There is an existing improvement condition (IC42) which requires the operator to carry out a BAT assessment of water usage at the site. The improvement condition remains valid and will inform further BAT considerations.
	b.	Chemical pre-treatment	
RESIDUES			
47	**In order to reduce the amount of paraformaldehyde-containing waste being sent for disposal, BAT is to use one or a combination of the techniques given below**		
	a.	Minimisation of paraformaldehyde generation	Currently compliant The Operator has stated that under normal operating conditions paraformaldehyde is not produced and technique (a) is in place. The Operator has stated the plant is maintained and operated to ensure that adequate heating, insulation and flow circulation are in place throughout the process and thus paraformaldehyde formation is minimised. Temperatures and flow rates are continuously monitored through the control system, alarms would be activated if either are outside of normal operating parameters. The Operator has also stated technique (b) and (c) is not applicable as when paraformaldehyde is produced this is generally during tank clean out and its contamination prevents its reuse or use as a fuel.
	b.	Material recovery	
	c.	Use of residues as a fuel	

BATc number	Summary of BAT Conclusion requirement	Status/comment **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
		The Operator also stated the other following techniques are in place to prevent and minimise paraformaldehyde production: • Keeping storage time of formalin low • Addition of stabiliser in line with manufacturers guidelines to reduce paraformaldehyde generation We consider the techniques currently in place at the site to prevent and/or minimise paraformaldehyde production appropriate.
6 BAT CONCLUSIONS FOR ETHYLENE OXIDE AND ETHYLENE GLYCOLS PRODUCTION – not applicable		
7 BAT CONCLUSIONS FOR PHENOL PRODUCTION – not applicable		
8 BAT CONCLUSIONS FOR ETHANOLAMINES PRODUCTION – not applicable		
9 BAT CONCLUSIONS FOR TOLUENE DIISOCYANATE (TDI) AND METHYLENE DIPHENYL DIISOCYANATE (MDI) PRODUCTION – not applicable		
10 BAT CONCLUSIONS FOR ETHYLENE DICHLORIDE AND VINYL CHLORIDE MONOMER PRODUCTION – not applicable		
11 BAT CONCLUSIONS FOR HYDROGEN PEROXIDE PRODUCTION – not applicable		

Annex 2: Decision checklist regarding relevant BAT Conclusions

BAT Conclusions for the Common Waste Water and Waste Gas Treatment / management systems in the chemical sector were published as Commission Implementing Decision EU 2016/902 in the Official Journal of the EU on 9 June 2016. There are 23 BAT Conclusions. This checklist 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.

All BAT Conclusions arising are listed by number in order below;

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
ENVIRONMENAL MANAGEMENT SYSTEM			
1	**In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:**		
	See BAT 1: COMMISSION IMPLEMENTING DECISION (EU) 2016/ 902 - of 30 May 2016 - establishing best available techniques (BAT) conclusions, under Directive 2010/ 75/ EU of the European Parliament and of the Council, for common waste water and waste gas treatment/management systems in the chemical sector - (notified under document C(2016) 3127) (europa.eu)		Currently compliant The Operator has stated currently compliant with all the requirements of BAT 1.
2	**In order to facilitate the reduction of emissions to water and air and the reduction of water usage, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the EMS that incorporates all of the following features:**		
	(i)	Information about the chemical production processes including:	Currently compliant The Operator has stated currently compliant with all the requirements of BAT 2, they make up part of the sites Environment Management System.
	a.	Chemical reaction equations, also showing side products	
	b.	Simplified process flow sheets that show the origin of the emissions	
	c.	Descriptions of process-integrated techniques and waste water / waste gas treatment at source including their performance	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
	(ii)	Information as comprehensive as is reasonably possible, about the characteristics of the waste water streams such as:	
	a.	Average values and variability of flow, pH, temperature and conductivity	
	b.	Average concentrations and load values of relevant pollutants/parameters and their variability	
	c.	Data on Bioeliminability	
	(iii)	Information as comprehensive as is reasonably possible, about the characteristics of the waste gas streams, such as:	
	a.	Average values and variability of flow and temperature	
	b.	Average concentration and load values of relevant pollutants/parameters and their variability	
	c.	Flammability, lower and higher explosive limits, reactivity	
	d.	Presence of other substances that may affect the waste gas treatment system or plant safety	
	MONITORING		
3	For relevant emissions to water as identified by the inventory of waste water streams, BAT is to monitor key process parameters at key locations		Currently compliant There is emission to water from the formalin activity are blow down steams and from waters collected from within the chemical tank bunds. The Operator does not discharge the waste water until testing is completed to ensure compliance with consented limits. Testing is completed for flow, formaldehyde, pH, oil and grease prior to discharge. There is no emissions to water from the resin activity, small amounts of waste water are generated but are either reused in the process or sent off site for disposal in IBCs.

BATc number		Summary of BAT Conclusion requirement	Status/comment **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
4	**BAT is to monitor emissions to water in accordance with EN standards with at least the minimum frequency given below. 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.**		
	TOC	EN 1484 Daily	Not applicable The emission to water from the site is made up of both surface water drainage and small amounts from the formalin process. The main pollutant load is not from the chemical activities on site and rather from surface water drainage therefore the BAT-AELs do not apply. This is further explained in Section 5 'emissions to water' above. As the monitoring is associated with the BAT-AELs to demonstrate compliance with the BAT-AELs we do not consider the monitoring requirements applicable either. The main pollutant load of the discharge is from the wood panels activities therefore the applicant BAT-AELs from the BRef covering wood panels activities apply.
	COD	No EN standard available Daily	
	TSS	EN 872 Daily	
	Total nitrogen	EN 12260 Daily	
	Total inorganic nitrogen	Various EN standards available Daily	
	Total phosphorus	Various EN standards available Daily	
	Absorbable organically bound halogens (AOX)	EN ISO 9562 Daily	
	Metals	Various EN standards available Daily	
	Toxicity	Risk based decision	
5	**BAT is to periodically monitor diffuse VOC emissions to air from relevant sources by using an appropriate combination of the techniques below, or, where large amounts of VOC are handles all of the techniques below**		
	i.	Sniffing methods associated with correlation curves for key equipment	Compliant in the future The Operator has stated a review of the techniques in this BATc will be completed, following the review monitoring will be completed based on a risk assessment of the plant and equipment. There is an existing improvement condition (IC41) which has been reworded to include review against this BAT conclusion not only the Wood Panels BAT conclusions.
	ii.	Optical gas imaging methods	
	iii.	Calculation of emissions based on emissions factors, periodically validated by measurements	
6	**Applicability: the applicability is restricted to cases where odour nuisance can be expected or has been substantiated**		

BATc number	Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
	BAT is to periodically monitor odour emissions from relevant sources in accordance with EN standards	Compliant in the future Odour monitoring procedures are part of the odour management plan. There is an existing improvement condition (IC39) in the permit that requires the Operator to update and submit their odour management plan to NRW. Therefore, assessment of the Operator's OMP will not be considered in this review.
	EMISSIONS TO WATER	
7	**In order to reduce the usage of water and the generation of waste water, BAT is to reduce the volume and/or pollutant load of waste water streams, to enhance the reuse of waste water within the production process and to recover and reuse raw materials**	Compliant in the future We consider the current arrangement at the site for waste water treatment and discharges may not constitute BAT for the site. There is an existing improvement condition (IC42) which requires the operator to carry out a BAT assessment of water usage at the site. The improvement condition remains valid and will inform further BAT considerations.
8	**In order to prevent the contamination of uncontaminated water and to reduce emissions to water, BAT is to segregate uncontaminated waste water streams from waste water streams that require treatment**	Compliant in the future Currently the site drainage and the effluent from the formaldehyde plant tank are mixed before discharge to the Afon Bradley, therefore no segregation is in place. We are not currently satisfied that this arrangement constitutes BAT for this site. Therefore, an improvement condition (IC52) has been set in order for the Operator to investigation segregation of these waste water streams.
9	**In order to prevent uncontrolled emissions to water, BAT is to provide an appropriate buffer storage capacity for waste water incurred during other than normal operating conditions based on a risk assessment and to take appropriate further measures**	Currently compliant There is little waste water generated from the chemical activities, there is an effluent tank (100 m^3 volume) available to collected waste water from the chemical activities. There are a further two settlement

BATc number		Summary of BAT Conclusion requirement	Status/comment **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
			lagoons (2x 2022 m^3) which could act as a buffer storage capacity with testing of the water prior to discharge.
10	**In order to reduce emissions to water, BAT is to use an integrated waste water management and treatment strategy that includes an appropriate combination of the techniques in the priority order given below**		
	a.	Process integrated techniques	Compliant in the future We consider the current arrangement at the site for waste water treatment and discharges may not constitute BAT for the site. Therefore, an improvement condition (IC51) has been set in order for the Operator to investigation segregation of these waste water streams.
	b.	Recovery of pollutants at source	
	c.	Waste water pre-treatment	
	d.	Final waste water treatment	
11	**In order to reduce emissions to water, BAT is to pre-treat waste water that contains pollutants that cannot be dealt with adequately during final waste water treatment by using appropriate techniques**		Compliant in the future We consider the current arrangement at the site for waste water treatment and discharges may not constitute BAT for the site. We have included an improvement condition (IC51) which requires the operator to carry out a BAT assessment of the discharge including treatment techniques.
12	**In order to reduce emissions to water, BAT is to use an appropriate combination of final waste water treatment techniques** **Includes BAT-AELs for direct emissions to a receiving water body**		Compliant in the future We consider the current arrangement at the site for waste water treatment and discharges may not constitute BAT for the site. We have included an improvement condition (IC51) which requires the operator to carry out a BAT assessment of the discharge including treatment techniques. The BAT-AELs are not applicable as there is no direct emissions to a receiving water body of process effluent. See 'Section 5 emissions to water' section above for explanation.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
WASTE			
13	**In order to prevent or, where that is not practicable, to reduce the quantity of waste being sent for disposal, BAT is to set up and implement a waste management plan as part of the EMS that, in order or priority, ensures that waste is prevented, prepared for reuse, recycled or otherwise recovered**		Compliant in the future There is an existing improvement condition (IC35) which requires the operator to carry out a BAT assessment of wastage at the site. The improvement condition remains valid and will inform further BAT considerations.
14	**In order to reduce the volume of waste water sludge requiring further treatment or disposal, and to reduce its potential environmental impact, BAT is to use one or a combination of the techniques given below**		
	a.	Conditioning	Not applicable The operator has confirmed there are no waste water sludge produced as part of the formalin production process.
	b.	Thickening/dewatering	
	c.	Stabilisation	
	d.	Drying	
EMISSIONS TO AIR			
15	**In order to facilitate the recovery of compounds and the reduction of emissions to air, BAT is to enclose the emission sources and to treat the emissions, where possible**		Currently compliant The emissions from the formalin plant are treated by abatement using catalytic oxidation. The emissions from the resin activity are treated by wet scrubbers prior to release.
16	**In order to reduce emissions to air, BAT is to use an integrated waste gas management and treatment strategy that includes process-integrated and waste gas treatment techniques**		Currently compliant Both emissions from the formalin plant and resin production are treated via different abatement techniques prior to release to atmosphere. Due to the location of the two plants it is not feasible to have the emissions integrated.
17	**In order to prevent emissions to air from flares, BAT is to use flaring only for safety reasons or non-routine operational conditions (e.g. start-ups, shutdowns) by using one or both of the techniques given below**		
	a.	Correct plant design	Not Applicable No flaring activities on site.
	b.	Plant management	

BATc number		Summary of BAT Conclusion requirement	Status/comment **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
18	**In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use one or both of the techniques given below**		
	a.	Correct design of flaring devices	Not Applicable No flaring activities on site.
	b.	Monitoring and recording as part of flare management	
DIFFUSE VOC EMISSIONS			
19	**In order to prevent or, where that is not practicable, to reduce diffuse VOC emissions to air, BAT is to use a combination of the techniques given below**		
	a.	Limit the number of potential emission sources	Compliant in the future There is an existing improvement condition (IC41) which has been reworded to include review against this BAT conclusion not only the Wood Panels BAT conclusions.
	b.	Maximise process-inherent containment features	
	c.	Select high-integrity equipment	
	d.	Facilitate maintenance activities by ensuring access to potentially leaky equipment	
	e.	Ensure well-defined and comprehensive procedures for plant/equipment construction and assembly. This includes using the designed gasket stress for flanged joint assembly	
	f.	Ensure robust plant/equipment commissioning and handover procedures in line with the design requirements	
	g.	Ensure good maintenance and timely replacement of equipment	
	h.	Use a risk based leak detection and repair programme (LDAR)	
	i.	As far as it is reasonable, prevent diffuse VOC emissions, collect them at source and treat them	
ODOUR EMISSIONS			
20	**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 plant, as part of the EMS, that includes all the following elements:**		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
	i.	A protocol containing appropriate actions and timelines	Compliant in the future There is an existing improvement condition (IC39) in the permit that requires the Operator to update and submit their odour management plan to NRW. Therefore, assessment of the Operator's OMP will not be considered in this review.
	ii.	A protocol for conducting odour monitoring	
	iii.	A protocol for response to identified odour incidents	
	iv.	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	
	Applicability – applicability is restricted to cases where odour nuisance can be expected or has been substantiated		
21	**In order to prevent or, where that is not practicable, to reduce odour emissions from waste water collection and treatment and from sludge treatment, BAT is to use one or a combination of the techniques given below**		
	a.	Minimise residence times	Currently compliant Although there is small volume of waste water generated from the chemical processes, they are stored enclosed in an effluent tank or IBCs, therefore technique (d) is being utilised at the site. There is no sludge produced from these waste waters.
	b.	Chemical treatment	
	c.	Optimise aerobic treatment	
	d.	Enclosure	
	e.	End-of-pipe treatment	
NOISE EMISSIONS			
22	**In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to set up and implement a noise management plan as part of the EMS, that includes all of the following elements:**		
	i.	A protocol containing appropriate actions and timelines	Compliant in the future There is an existing improvement condition (IC40) in the permit that requires the Operator to update and submit their noise management plan to NRW. Therefore, assessment of the Operator's NMP will not be considered in this review.
	ii.	A protocol for conducting noise monitoring	
	iii.	A protocol for response to identified noise incidents	
	iv.	A noise prevention and reduction programme designed to identify the source(s), to measure/estimate noise exposure,	

BATc number		Summary of BAT Conclusion requirement	Status/comment **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (via an improvement condition), Not Compliant
		to characterise the contributions of the sources and to implement prevention and/or reduction measures	
	Applicability: applicability is restricted to cases where noise nuisance can be expected or has been substantiated		
23	**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	Currently compliant The Operator has stated specific to the chemical processes the following techniques are employed: (a) Appropriate location of the plant, the formalin plant is located 200 m from the boundary with earth bunding acting as noise abatement (b) Operational measures such as no use of skips during anti-social hours (c) Silencers and/or acoustic booths are fitted on the formalin plant blower and emissions control system. (d) Cooling tower fans have silencers (e) Process gas blowers are enclosed
	b.	Operational measures	
	c.	Low-noise equipment	
	d.	Noise-control equipment	
	e.	Noise abatement	

Annex 3: Decision Checklist regarding additional requested items

Item as listed in Regulation 61(1) Notice and Section 3 above	Comment on Operator's response to request
A – Discharges to surface waters and/or sewers	The Operator has not provided a response in relation to the request within the Regulation 61(1) Notice, therefore an improvement condition (IC50) has been set in the varied permit.
B – Soil and groundwater contamination – baseline report	The Operator did not provide a response in relation to the request within the Regulation 61(1) Notice, however we consider the request was suitably addressed during the previous consolidation (V008) and we do not need to ask the Operator for any further information regarding this item.