Environment Agency

Review of an Environmental Permit for an Installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2010 (as amended)

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

The Permit number is: EPR/BJ7468IC
The Operator is: DS Smith Paper Ltd
The Installation is: Kemsley Paper Mill
This Variation Notice number is: EPR/BJ7468IC/V008

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 BAT conclusions.

We have reviewed the permit for this installation against the revised BAT Conclusions for the production of pulp, paper and board industry sector published on 30 September 2014 in the Official Journal of the European Union. Where appropriate, we also considered other relevant BAT Conclusions published prior to this date but not previously included in a permit review for the Installation. 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. This review has been undertaken with reference to the decision made by the European Commission establishing best available techniques (BAT) conclusions (BATc) for production of pulp, paper and board as detailed in document reference EU Official Journal (L 284) of Commission implementing decision 2014/687/EU of 26 September 2014. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. It also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

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 philosophy 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 and any changes to the operation of the installation.

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 2a – Review and assessment of derogation request(s) made by the operator in relation to BAT Conclusions which include an Associated Emission Level (AEL) value.
6. Annex 2b - Consultation responses
7. Annex 3 – Improvement Conditions
8. Annex 4– Review and assessment of changes that are not part of the BAT Conclusions derived permit review.
9. Annex 5 - Priority Compliance Issues

1 Our decision

We have decided to issue the Variation Notice to the Operator. This will allow it 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 that 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 60(1) of the Environmental Permitting (England and Wales) Regulations 2010 (a Regulation 60 Notice) on 21 November 2014 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 30 September 2018, which will then ensure that operations meet the revised standard, or
- justifies why standards will not be met by 30 September 2018, and confirmation of the date when the operation of those processes will cease within the installation or an explanation of why the revised BAT standard is not applicable to those processes, or
- justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard 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 60 Notice required 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.

The Regulation 60 Notice response from the Operator was received on 31 March 2015.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review

The Operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 60 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. See Annex 1 for details.

2.3a Water Framework Directive (WFD)

Water Framework Directive (WFD)/Dangerous Substance Screen has been reviewed and amended to include priority pollutants under the WFD Hazardous pollutants regime. We have required all Operators to monitor both their discharge to water and the incoming water twice annually for these substances to help better assess the issue and potential sources of any elevated results.

A report has been produced detailing a monitoring programme conducted to assess the chemicals present in waste water and waste paper sludge from permitted paper mill sites to gather further information for WFD purposes and to assess compliance with restrictions. This report along with a review of historically monitored parameters has been used to rationalise the requirement for inclusion of these substances in this standard suite within the permit:

Table 1. Review of historic monitoring within paper & pulp sector

Substance	Action (remove, retain or add)	Justification
Aldrin	Remove	Limited usage in wood treatment, banned since 1980's across UK & EU. No recent detects
Atrazine	Remove	Agricultural herbicide with little relevance to the sector other than in background water quality. Banned in 2004 across EU. No recent detects.
Azinphos-methyl	Remove	Agricultural insecticide with little relevance to the sector other than in background water quality. Banned in 2006 across EU. No recent detects.
Chlorpyriphos	Retain	OP insecticide with various approvals in UK, some usage in forestry and a recent detect in sludge samples.
Cypermethrin	Retain	SP insecticide still approved for use in forestry applications in UK. PHS/ PS under WFD across EU. Recent detects in effluent samples
Dichlorvos	Remove	OP insecticide removed from market gradually from 2002 in UK and 2012 in EU. Limited direct relevance to the sector and no recent detects.
Dieldrin	Remove	OP insecticide with historic usage for wood treatment. Restrictions and bans since 1970's. Very limited recent detects and no direct relevance to sector.
Endosulphan (Alpha & Beta)	Retain	Organochlorine pesticide whilst recently banned in EU, still in use in many other non-EU countries. Recent detects.
Endrin	Remove	Organochlorine insecticide. Numerous restrictions in place since 1970's. No recent detects.
Fenitrothion	Remove	OP mainly used as an insecticide.EU wide authorisations withdrawn from 2007 and of limited relevance to the sector. No recent detects.
Hexachlorobenzene	Remove	Previous approvals as a fungicide, banned in UK from 1975 and EU since 1998. No recent detects.
Nonylphenols (and NPE's)	Add	Whilst severely restricted across EU for many years. NPE's were detected in 70% of samples in recent study. NP was detected at 6/9 sites. Potential sources unknown.
PCP	Retain	No current approval in UK/EU, but still in use elsewhere as a wood preservative. Several recent detects.
Simazine	Remove	Herbicide no longer authorised across EU and of little relevance to sector. No recent detects.
TBT	Retain	Range of historic uses including wood preservative and is still likely to be in use in a wide range of applications across the world including as is wood preservative. Several recent detects.
Trifluralin	Remove	Main use as agricultural herbicide, no longer approved for use in UK /EU. No recent detects.

Metals

Various metals are required to be monitored within the Pulp & Paper BREF.

The BREF states “relevant metals” and provides the following as examples: Zinc (Zn), Copper (Cu), Cadmium (Cd), lead (Pb), Nickel (Ni).

Our Data would indicate adding mercury (Hg) is warranted due to its widespread presence in the environment and some effluents. We have therefore included a twice annual screen for the following metals: Zn, Cu, Cd, Pb, Ni & Hg.

2.3b Assessment of substances liable to pollute

The WFD requires Member States to prior regulate, all substances in a discharge which are “liable to cause pollution”. Previously discharges from the Paper and Pulp Industry were controlled on a “liable to contain” approach set by the Dangerous Substances Directive through either numeric limits, or descriptive conditions. Under the “liable to cause pollution” approach numeric emission limits are only applied to those pollutants calculated to have the potential to cause pollution.

We have used this permit review to regulate discharges to surface waters from this installation using the “liable to cause pollution” approach, details of which is set out in our Horizontal Guidance Note H1 Annexe D1.

The H1 methodology uses a number of sequential steps to determine if a substance warrants detailed modelling and hence any emission limits being required, namely

- Screen out insignificant emissions that do not warrant further investigation;
- Determine if significant load test is failed;
- Decide if detailed water modelling is needed;
- Assess emissions against relevant standards and set limits where required.

Monitoring data has been subjected to checks and review prior to running through the screening process. Here we deal with such issues as results that are consistently at or below the limit of detection (LOD), waters abstracted and returned to the same environment and applying standard percentages of Environmental Quality Standard (EQS) if no upstream/ background water quality data is available. See H1 Annex D1 for the detailed procedures.

A summary of the assessment for liable to pollute for substances regulated at this installation is provided in Table 2 below. Assessments are based on the last three years of data submitted under the existing Environmental Permit

Table 2. Outcome of hazardous substances review process

Substance	Control of Substance under Previous Regime (ug/l)	Data Review	Screening Stage Screening for Insignificance / Significant Load	Setting Emission Limit	Control under (WFD)
PCP	4.0	Mean 0.28 ug/l and max 0.453 ug/l are above EQS of 0.4 AA & 1.0 MAC. Take forward to screening	Screens out as Insignificant	N/a	Remove from Permit
Copper	200	Mean 3.1 ug/l max 5.08 ug/l are above Annual Average EQS of 5.0 ug/l (up to 31/12/2015) and 3.76 (from 01/01/2016) Take forward to Screening.			
Cholorform	4.3	Substances below limit of detection	N/a	N/a	
Total Hexachlorohexane	0.2				
Hexachlobenzene	0.06				
Dieldrin	0.02				
Zinc	200				
Mercury	No Limit				
Cadmium	10				

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 production of pulp, paper and board, were published by the European Commission on 30 September 2014. There are 53 BAT Conclusions. 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

Table 3. Decision checklist for relevant BAT Conclusions

Summary of BAT Conclusion requirement for production of pulp, paper and board	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
BAT Conclusions that are not applicable to this installation	**NA**	Pulp & Paper Production BAT Conclusions; BAT conclusions for Kraft Pulping 19 - 32 inclusive; BAT conclusions for Sulphite Pulping 33 -39 inclusive; BAT conclusions for Mechanical / Chemical Pulping 40 and 41; BAT Conclusions 3, 4, 9, 11, 47, 48, 49, 50, 51
BAT Conclusions where we accept the operator's Reg 60 notice response that they are currently compliant and no further explanation is required.	**CC**	Pulp & Paper Production BAT Conclusions: General BAT Conclusions for the Pulp and Paper Industry 1, 2, 5, 7, 8, 10, 12, 13, 14, 15, 16, 17, 18 BAT Conclusions Processing Paper for Recycling 43, 44, 45, 46, BAT Conclusions for Papermaking and Related Processes 52,
BAT Conclusions where improvements will be undertaken on site within the 4 year period in order to achieve compliance with the narrative and/or BATAEL prior to the 4 year deadline	**FC**	BAT Conclusions 6, 42, 53
BAT Conclusions where the Operator has responded that they are not compliant and have not submitted any plans to become compliant	**NC**	Pulp & Paper Production BAT Conclusions; None

Key Issues

The Mill has previously indicated that they operate RCF production with, and without de-inking and as such fall into both Table 18 and Table 19 of thePaper and Pulp BREF BAT Conclusions.

We have therefore agreed a site specific ELV to impose these annual BAT AEL's via a mixing calculation in accordance with page 3 of the BATC chapter. 30% of the operations relate to de-inked RCF and 70 % are RCF without de-inking. We have agreed the figures involved with the Operator and included an additional permit condition as note 1 underneath table S3.4 requiring the Operator to inform us if the operations change in the future by more than 10% in any one direction. At that point the mixing calculation will need to be re-done.

We have set the BAT AEL's as annual emission limits within table S3.4

In this case we have accepted that the current annual emissions are well within the applicable range. Total Suspended Solids however are right at the very top of that range and so whilst we have accepted it as "compliant" we have highlighted the fact within the priority compliance issues table; Annex 5.

BAT 45 Weighted Apportionment

Substance	**BAT AEL`s for Installation (kg/t)**	**BREF Source**	**Performance at time of Permit Review (kg/t)**	**Based on data from:**
Chemical Oxygen Demand	0.55 – 1.88	Weighted apportionment of 30% de-inked RCF (Table 19) and 70% RCF without de-inking (Table 18)	0.958	2014 Nb Total Phosphorous result from sampling analysis for Phosphate
Total Suspended Solids	0.038 - 0.23		0.23	
Total Nitrogen	0.0086 - 0.093		0.021	
Total Phosphorus	0.0013 - 0.0086		0.001	
AOX			Not Detected	
Biochemical Oxygen Demand			8 mg/l	

BATC 5 also sets what is termed a BAT AEPL (BAT Associated Environmental Performance Level) for the amount of waste water the site should generate per tonne of paper produced.

In this case although the current waste water flow is within the applicable range it is near the top of that range and so whilst we have accepted it as "compliant" we have highlighted the fact within the priority compliance issues table; Annex 5.

BAT Associated Waste Water Flow (m3/Adt)		Performance at time of Permit Review (m3/Adt)
RCF paper mill weighted flows 70% RCF without de-inking, 30% de-inked RCF	3.45-11.5m3/t.	8.6 – 9.1

Where relevant and appropriate, we have incorporated the techniques described by the Operator in their Regulation 60 Notice response as specific operating techniques required by the permit, through their inclusion in Table S1.2 of the Consolidated Variation Notice.

Annex 2a: Assessment, determination and decision where an application(s) for Derogation from BAT Conclusions with associated emission levels (AEL) has been requested.

The IED enables a competent authority to allow derogations from BAT AEL's stated in BAT Conclusions under specific circumstances as detailed under Article 15(4):

'By way of derogation from paragraph 3, and without prejudice to Article 18, the competent authority may, in specific cases, set less strict emission limit values. Such a derogation may apply only where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

(a) the geographical location or the local environmental conditions of the installation concerned; or

(b) the technical characteristics of the installation concerned.

The competent authority shall document in an annex to the permit conditions the reasons for the application of the first subparagraph including the result of the assessment and the justification for the conditions imposed. '

The Operator did not request derogation from compliance with any AEL included within the BAT Conclusions as part of their Regulation 60 Notice response.

Annex 2b: Advertising and Consultation on the draft decision

This section is not applicable as no derogations from BAT AEL`s have been considered.

Annex 3: Improvement Conditions

Based on the information in the Operator's Regulation 60 Notice response and our own records of the capability and performance of the installation at this site, we consider that we need to set improvement conditions so that the outcome of the techniques detailed in the BAT Conclusions are achieved by the installation. These improvement conditions are set out below - justifications for them is provided at the relevant section of the decision document (Annex 1 or Annex 2).

We also consider that we need to set improvement conditions relating to changes in the permit not arising from the review of compliance with BAT conclusions. The justifications for these are provided in Annex 5 of this decision document.

If the consolidated permit contains existing improvement conditions that are not yet complete or the opportunity has been taken to delete completed improvement conditions then the numbering in the table below will not be consecutive as these are only the improvement conditions arising from this permit variation.

Table 4. Record of improvement conditions set

Reference	Improvement Condition	Completion date
IC 1	The operator shall submit a report on the implementation of a formal Energy Management System. The report shall include details of the gap analysis referenced in response to BATc 6 and BATc 53. In particular the report shall identify the extent to which the following techniques are used at the installation and provide details where further application of techniques are proposed before 30 September 2018. BATc 6 f, g, h BATc 53 e, g, h, i, n	01/06/17
IC 2	The operator shall submit for approval, a sampling programme designed to assess the composition of surface water run-off associated with RCF storage at "the marsh". The programme shall identify sample locations, sampling frequency, and an appropriate analysis suite. Upon agreement with the environment agency the operator shall implement the sampling programme.	01/01/17

IC 3	The operator shall submit the results of the sampling programme undertaken under IC2 along with further information on the practicality of implementing technique BATc 42 (b) at the Installation.	01/06/2017
IC 4	Prior to changes in Heat and Power supply to the Mill from the activities permitted in Environmental Permit EPR/SP3431KJ the operator, in conjunction with the other operators of the Regulated Facility (Kemsley Paper Mill), shall submit a report detailing how those changes; • may impact on the emissions from and performance of the Kemsley Mill CHP facility; • may impact in meeting the provisions of the Industrial Emissions Directive and any published BAT Conclusions Documents relevant to those activities.	12 months before commissioning of the activities permitted in EPR/SP3431KJ

Annex 4: Review and assessment of changes that are not part of the BAT Conclusions derived permit review.

Fire Prevention

Having reviewed the Operators response to the Regulation 60 Notice it is clear that appreciable quantities of combustible waste materials are stored on site prior to re-pulping and therefore we have included the standard conditions contained in our current generic permit template, requiring the Operator to produce a Fire Prevention Plan on request.

Impacts of Changes to Energy Supply

The multi-permit installation includes the Kemsley Sustainable Energy Plant (SEP) which has the ability to supply steam and power to the paper making operations. The current heat and power supply through the Gas Turbine Combined Heat and Power station, has recently been re-permitted to implement Chapter III if the Industrial Emissions Directive. Part of the compliance assessment for Chapter III is based on efficiency of the Gas Turbine, which may alter when the SEP is commissioned. We have therefore set an improvement condition, which is to be set in all the permits in the Kemsley Mill Installation, requiring all operators to review whether heat and power supply from the SEP will affect the Gas Turbine CHP`s compliance options.

Waste Operation

We have introduced additional waste codes in Table S2.3 to allow more waste produced at the installation to be treated to improve recovery. We have added

EWC 20 01 11 to include machine clothing and felts
EWC 03 03 10 to include screening from the Kemsley Crossing Influent screening process to allow for additional fibre to be recovered

ETP Bypass Operation

We have revised the terms when buffer storage by-pass needs to be notified to incidents only greater than 1 hour to allow the site operational flexibility.

Annex 5: Priority Compliance Issues & Detailed assessment of Reg 60 responses where future action likely

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
Environment Management System: BAT 1	**1.1.1**	**CC**	**CC**	**Operator maintains externally certified EMS to ISO 14001.** **Evidence provided in Regulation 60 response of how techniques are applied in the management system**	**Validate compliance by Inspection**
Raw materials: BAT 2	**1.3.1**	**CC**	**CC**	**Extensive evidence provided in response to Regulation 60 Notice. EMS Procedure 4.4.6 (22) submitted details procedures around chemical addition. Operator identifies technique (b) input / Output analysis to be implemented by 2018.** **Evidence a range of techniques applied at the installation.**	**Validate compliance by Inspection** **Check implementation of technique (b)**
Raw materials: BAT 3	1.3.1	NA	NA	Regulation 60 response confirmed Hydrogen	None

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
				Peroxide is used, but chelating agents are not	
Raw materials handling: BAT 4	1.1.1	NA	NA	Regulation 60 response confirmed no wood pulping occurs	None
Water usage: BAT 5	**1.3.1**	**CC**	**CC**	**BAT AEPL average 8.9m3/t over last 4 years so it at top of BAT AEL range.** **Flows through effluent plant include site drainage, estimated to be 20% of flows** **Regulation 60 response details inline-treatment, clarified water use, recovery of sealing water, long loop effluent recovery and management process for water minimisation are in place.** **Super-clarified water not produced.**	**Current performance is in the upper part of the applicable BAT AEPL Range as detailed in Annex 1 Key Issues.** **Recommend undertaking water audit to validate compliance and identify future opportunities for water reduction.**

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
Energy consumption: BAT 6	**1.2.1**	**CC**	**FC**	**Regulation 60 response identifies techniques currently used, including incineration of wastes, thermo-compressors on 2 of the 3 paper machines and those where further gap analysis is to be undertaken as the site develops ISO 15001.** **Current management of energy systems limited to EMS** **Further work on lagging and pump efficiency identified**	Track improvements via IC 1 Review implementation of ISO 50001 and gap analysis for techniques (f), (g), and (h)
Odour control: BAT 7	3.3.1	CC	CC	Response identifies use of Biocides, effective management of tanks, use of kidney treatment and effective management of the effluent plant.	Validate Compliance via Inspection

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
				Odour is not a particular issue with the site	
Monitoring process: BAT 8	3.5.1	CC	CC	Evidence provided that relevant process monitoring is undertaken as specified in BATC 8	Validate Compliance Via Inspection
Monitoring air: BAT 9	3.5.1	NA	NA	Regulation 60 response confirms no chemical pulping occurs	None
Monitoring water: BAT 10	**3.5.1**	**CC**	**CC**	**Evidence provided that relevant monitoring is undertaken as specified in BATC 10** **Nickel was not identified in the response but will be part of Table S3.2 requirements** **Wet strength products not produced**	**Validate Compliance via Inspection**
Odour control: BAT 11	3.3.1	NA	NA	Regulation 60 response confirms no pulping occurs	None

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
Waste management: BAT 12	**1.4.1**	**CC**	**CC**	**Evidence of appropriate segregation and pre-treatment of process wastes, including pulping rejects to apply waste hierarchy**	Validate Compliance via Inspection
Emissions to water: BAT 13	1.3.1	NA	NA	Regulation 60 response states high nutrient chemicals not used in process. Nutrients added to aid Effluent treatment	None
Emissions to water: BAT 14	**1.3.1 & 2.3.1**	**CC**	**CC**	**Operation primary settlement and secondary effluent treatment by activated sludge**	**None**
Emissions to water: BAT 15	2.3.1	CC	N/A	Tertiary treatment not necessary	None
Emissions to water: BAT 16	2.3.1	CC	CC	Evidence provided on design and control of effluent treatment process to confirm compliance with BATc	Validate compliance via inspection

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
Noise control: BAT 17	**3.4.1**	**CC**	**CC**	**Regulation 60 response identifies limited techniques used across the installation. Noise survey and assessment of appropriate remedial action (ranking) has been undertaken.** **Isolated noise incidents do occur, we accept the operator assessment against BAT but should target a review of Noise abatement measures to identify if there are solutions to the isolated noise complaints within the Kemsley Village**	Validate compliance via inspection Target Inspection to review results of noise assessment
Decommissioning: BAT 18	3.1.4	CC	CC	Operator maintains active site closure plan detailing how techniques are applied	Validate compliance via inspection
Recycled Fibre raw materials: BAT 42	**1.3.1**	**FC**	**FC**	**The response confirms both internal and external storage of**	**Validate compliance Via Inspection**

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
				waste paper. External storage supported by litter fencing and stock control techniques, however surface run off occurs to marsh ditches. **We have set an IC to investigate whether this run-off is contaminated to require technique (b) to be more fully considered**	**Assess suitability of technique (b) through IC 2 and 3**
Recycled Fibre water emissions: BAT 43	**1.3.1**	**CC**	**CC**	**The operator uses the techniques listed.** **Future work could include assessment of practicality of introducing super clarified water**	**Validate Compliance via inspection**
Recycled Fibre water management: BAT 44	1.3.1	CC	N/A	The operator doesn`t have high levels of closure on the water circuits and therefore only implements one of	Validate Compliance by Inspection Review techniques (a) and (c) as part of a water audit as may become applicable in future.

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
				the techniques (b). Further assessment of the techniques will be needed depending on water reduction techniques which may come out a water audit. Attention to be paid to implementing technique (a) in any instance	
Recycled Fibre water AEL's: BAT 45	1.3.1 & 3.5.1	CC	CC	BAT AEL`s are detailed in table in Annexe 1 Key Issues  The operator is within the range for annual BAT AEL`s but has very high TSS from the single years (2014) results. The operator has installed in line fibre recovery plant which will help reduce TSS emissions	Validate via compliance Monitor compliance with TSS BAT AEL and intervene if necessary
Recycled Fibre energy: BAT 46	1.2.1	CC	CC	High consistency pulping restricted to RCF plant and C line. Other four pulping lines use low consistency pulping.	Validate Compliance via inspection Upon implementation of ISO50001 review whether pulping rotor

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				Response identifies potential to review rotor design and screening / fractionation on stock prep. BAT is accepted as improvements would relate to upgrade of plant	design and screening upgrades should be considered
Paper making waste water: BAT 47	**1.3.1**	**NA**	**NA**	**Covered under BATc 43**	**None**
Paper making water usage: BAT 48	**1.3.1**	**NA**	**NA**	**Applicable only to Speciality Mills**	**None**
Paper making water management: BAT 49	1.3.1	NA	NA	No Coating	None
Paper making water emissions: BAT 50	1.3.1 & 3.5.1	NA	NA	Covered under BAT 45	None
Paper making Volatile Organic Compounds: BAT 51	3.2.1	NA	NA	Regulation 60 response detailed not applicable	None

Compliance Issue Priority BAT indicated in **Bold Text**	Relevant Permit Condition	Compliance stated by Operator CC/FC/ NC/NA	Compliance assessment conclusion CC/FC/ NC/NA	Summary of Permitting Officer Assessment against BATc techniques	Compliance Action to Implement BAT Conclusions
Paper making waste generation: BAT 52	**1.4.1**	**CC**	**CC**	**Evidence provided that filler and broke recovery use. Colour coating recovery limited to PM3 and single colours on PM4and are kept in dedicated short loop water circuits**	**Validate Compliance via Inspection**
Paper making energy consumption: BAT 53	**1.2.1**	**CC**	**FC**	**The response identifies a range of techniques are used, although many BAT techniques are not currently installed fully across the installation.** **Implementing 50001 management system will include gap analysis and should identify future opportunities to improve energy efficiency**	**IC 1**
Response to Question 4 of Reg 60: ability of site	3.1.4	CC	CC	Response indicated that current site report has been kept up to date and	Validate compliance by Inspection to ensure Operator amends site report where necessary, including

Compliance Issue Priority BAT indicated in **Bold Text**	**Relevant Permit Condition**	**Compliance stated by Operator** **CC/FC/ NC/NA**	**Compliance assessment conclusion** **CC/FC/ NC/NA**	**Summary of Permitting Officer Assessment against BATc techniques**	**Compliance Action to Implement BAT Conclusions**
report to be considered as a site condition report under IED				will be reviewed and amended in order to comply with IED	the requirement for periodic monitoring where justified.
Note permit condition 2.3.1 will require Operate to operate as per Regulation 60 response documents referenced in Table S1.2.					