



**ENVIRONMENT
AGENCY**

Permit with introductory note

Pollution Prevention and Control Regulations 2000

**UPM-Kymmene (UK) Ltd
Weighbridge Road
Shotton
Deeside
Flintshire
CH5 2LL**

Permit number

BT4885

	DETAILS	DATE
OK FOR PUBLIC REGISTER	ef	6/2/3
OK FOR PUBLIC REGISTER	ef	6/2/3

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Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I.2000 No.1973) ("the PPC Regulations") to operate an installation carrying out one or more of the activities listed in Part 1 to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(10) of the PPC Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Brief description of the installation regulated by this permit

The main purpose of the activities at the installation is the manufacture of newsprint.

UPM-Kymmene (UK) Ltd produces approximately 460,000 tonnes of newsprint per annum at the Deeside Paper Mill, almost all of which is destined for the domestic UK market.

The newsprint is manufactured from a blend of 65% recycled fibre produced on site from the recycling of used newspapers and magazines, and 35% virgin fibre produced on site from the refining of sawmill residue wood chips and spruce roundwood grown in the UK.

The woodyard has a storage capacity in excess of 40,000 tonnes of roundwood and has a processing capacity of about 1900 tonnes per day. The logs are debarked in a rotating drum. The stripped logs are washed and chipped. The bark from the de-barker is burned in the fluidised bed boiler. The wash water is normally recycled effluent which is returned to the effluent treatment plant.

Thermo Mechanical Pulp (TMP) is produced from wood chips in electrically driven disc refiners consisting of a grooved rotating disc and a static disc. The wood chips are broken down to individual fibres by reducing the gap between the discs and applying high energy loads. The TMP Plant has a capacity of 1200 bone dry tonnes (BDT) per day. The average production in 2001 was 600 BDT per day. Steam generated in the refiners is passed through a heat recovery system to produce clean steam for the papermachine dryers. Almost 50% of the mill steam requirement can be produced in the heat recovery system. The chip pre-heaters and the heat recovery system exhaust to atmosphere through the TMP steam stack. The exhaust is mainly steam and contains Volatile Organic Compounds (VOC).

Recycled Fibre Pulp (RCF) pulp is produced from waste newspaper and magazines. The waste is stored in a 4.5 acre covered warehouse from which it is weighed into a batch pulper with water and processing chemicals to produce a 15% fibre pulp. The raw pulp is screened to remove contaminants such as staples and plastics. The screenings are dewatered and compacted before being sent to landfill. Ink is removed from the pulp in air agitated flotation cells. Assisted by the addition of sodium soap, the ink and soap bubbles rise to the surface and flows over a weir. The deinked pulp is passed on to another four stages of flotation. The ink waste is centrifuged and burned in the boiler or used for spreading on suitable land. The liquid waste is treated in the effluent plant. The raw pulp is further refined and diluted to 1% fibre before passing to the paper machines.

Paper is produced on two machines, PM1 producing 220,000 tonnes per year and PM2 producing 240,000 tonnes per year. The pulp is spread over a wire mesh web where free water is removed by a combination of gravity, suction and inertia. The remaining water is removed by a series of heated rollers and a drying hood. Water used in the papermaking process is recirculated through various stages, with a bleed of contaminated unusable water being treated in the effluent plant prior to discharge to the Dee Estuary.

The paper from the papermaking machines is rewound onto smaller reels for delivery to the customer. Finished reels are wrapped and stored in the warehouse.

The effluent treatment plant receives waste from the TMP, paper mill and RCF mill. The TMP and paper mill stream is held in two primary clarifiers where 90% of the solid waste is removed and pumped to a sludge tank. The RCF stream is treated in screw presses. The liquor from the primary clarifiers and screw presses overflows into the aerated lagoon and the sludge is dewatered. Nutrients are added to the liquor streams before they enter the aerated activated sludge lagoon which has a residence time of 30-40 hours. The effluent discharges to two secondary clarifiers where the biomass sludge is settled and returned to the aerated lagoon with the excess sludge being passed to the sludge thickener tank and then the sludge tanks for dewatering. The sludge is burned in the fluidised bed boiler or spread on suitable agricultural land. The effluent from the secondary clarifiers flows to two lagoons with a residence time of 9 days. The final treated effluent is discharged to the Dee Estuary for two four-hour periods per day at high tide.

Process steam is produced by the TMP heat recovery system, with the remaining 50% and the stand-by capacity being provided by the three site boilers, including the fluidised bed boiler used to burn the site derived fuel produced from the effluent plant sludge and the debarking waste. The Combined Heat and Power (CHP) system installed and operated by TXU is intended to provide power and steam as required by the paper mill, to supplement the steam supply from the TMP and boiler 2, using site derived fuel. The existing boiler system will provide stand-by capacity for occasional periods when the CHP system is not available. Any excess power generated by TXU is supplied to the national grid. A description of the CHP system can be found in Permit number BJ6429.

Process water is supplied by Welsh Water from the River Dee. This non-potable supply is disinfected before use and can be supplemented by mains water. An average of 22,000 m³ is used per day.

There is no sewage connection at the mill. Some site drainage including storm water is handled in the effluent treatment plant, the rest discharges to either lagoon 3 or to soakaways located around the site.

The main releases from the paper mill are the discharge of effluent from the effluent treatment plant, the exhaust stacks from the boilers, the vent stacks from the TMP plant and the paper machine exhausts. All these releases have previously been regulated under an IPC Authorisation number AU7338 and there have been very few exceedances of the Authorised limits. An Environmental Management System (EMS) is in place to ensure that there is an ongoing review of the activities in the installation in order to minimise the environmental impact. An improvement programme is contained within this permit to address a number of specific issues raised by the EMS and contained within the Application.

A project is under way to convert the manufacturing of newsprint at Deeside to use 100% recycled fibre. It is currently planned for this project to take effect from November 2003. This project has received corporate approval and is receiving Government Assistance from the Waste Resources Action Programme. A new Recycled Fibre plant will be built and the following operations will cease when the project is finalised; Round Wood Storage, Purchased Chip Storage, Round Wood Debarking and Chipping, Chip Screening, Thermo Mechanical Pulp Production and TMP Heat Recovery. When the project reaches its conclusion this Permit will require a Variation to allow the operation of the changed Activities.

Further information relating to the activities at the installation can be found in the non technical summary and the main PPC Application documents held on the public registers. Further details of the CHP system can also be found in the Application by TXU and in their permit number BJ6429.

Public registers are located at the following offices;

The Environment Agency, Chester Road, Buckley, Flintshire, CH7 3AJ

Flintshire County Council, County Hall, Mold, Flintshire, CH7 6NN.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
Shotton Combined Heat and Power Ltd	BJ6429	12/03/2001

Superseded Licenses/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
UPM-Kymmene (UK) Limited	AA6408	02/04/1992
UPM-Kymmene (UK) Limited	AU7338	16/10/1996

Talking to us

If you contact the Agency about this Permit please quote the Permit Number.

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) or any other number notified to it to give a notification under condition 5.1.1.

Confidentiality

The Permit requires the Operator to provide information to the Agency. The Agency will place the information onto the public registers in accordance with the requirements of the PPC Regulations. If the Operator considers that any information provided is commercially confidential, it may apply to the Agency to have such information withheld from the register as provided in the PPC Regulations. To enable the Agency to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

This Permit may be varied in the future. The Status Log within the Introductory Note to any such variation will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Agency, in accordance with Regulation 19 of the PPC Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 18 of the PPC Regulations. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a "fit and proper person" to carry out that activity.

Status Log

Detail	Date	Comment
Application BT4885	Received 11/10/2002	
	Duly made 11/11/2002	
Permit BT4885	Determined 7/2/2003	

End of introductory note.

Permit

Pollution Prevention and Control
Regulations 2000



**ENVIRONMENT
AGENCY**

Permit

Permit number

BT4885

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973), hereby authorises

UPM-Kymmene (UK) Limited ("the Operator"),

Whose Registered Office is

Meadowhead Road, Shewalton, Irvine, Scotland, KA11 5AT

Company registration number SC 102969

to operate part of an Installation at

Weighbridge Road

Shotton

Deeside

Flintshire CH5 2LL

to the extent authorised by and subject to the conditions of this Permit.

Signed

Mr D Andrew

Authorised to sign on behalf of the Environment Agency

Date

7 February 2003

Conditions

1 The permitted installation

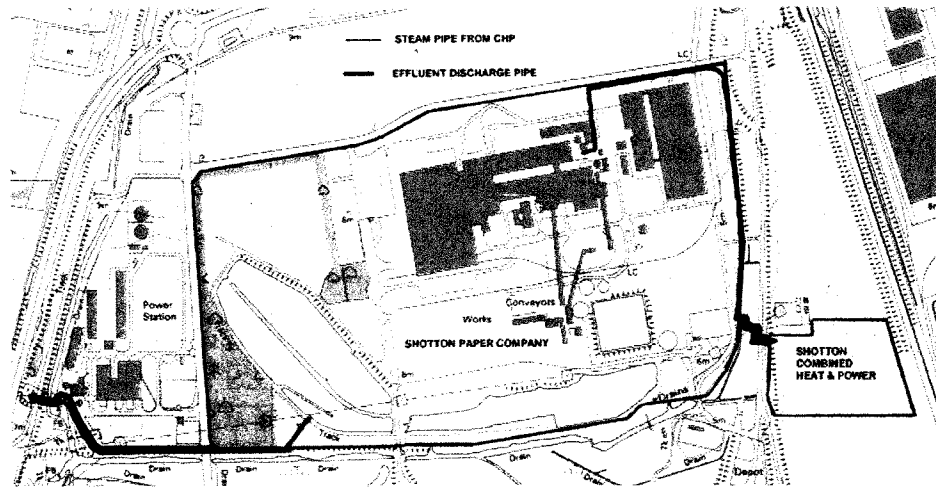
- 1.1.1 The Operator is authorised to carry out the activities and/or the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Schedule 1 Activity Reference (if applicable)	Limits of specified activity
Producing in an industrial plant paper and board where the plant has a production capacity of more than 20 tonnes per day.	Newsprint manufacture from roundwood and recycled fibre, including raw material processing and despatch of finished goods to the customer.	Schedule 1, Chapter 6, Section 6.1 Part (A)1	Roundwood and waste paper delivery to site. Despatch of paper to customer.
Burning any fuel in an appliance with a rated thermal input of 50 MW or more.	Two gas/oil fired boilers and one fluidised bed sludge and bark combustor	Schedule 1, Chapter 1, Section 1.1 Part (A)1	Fuel delivery and storage, discharge stacks and steam distribution system
Effluent treatment plant.	Activated sludge treatment of all liquid effluent from the papermaking activity.	Directly Associated Activity	Effluent flow from papermachine, effluent treatment, lagoons and discharge system.

1.1.2

The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the area shown edged in red on the plan below



"Reproduced from the Ordnance Survey map with the permission of the Controller of Her Majesty's Stationery Office © Crown Copyright 2000. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings."

1.1.3 There are no pre-operation conditions

2 Operational Matters

2.1 Management techniques and control

- 2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency.

Table 2.1.1 : Management and control

Description	Parts	Date Received
Application	The response to question 2.1 given in section 2.1 of the Application, excluding Table 2.1, and in Appendix 2	11/10/02
Response to Schedule 4 Part 1 Notice	Response to question 5	11/10/02

- 2.1.2 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.
- 2.1.3 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.1.4 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.
- 2.1.5 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.2 Raw materials (including water)

- 2.2.1 The Operator shall, subject to the conditions of this Permit, use raw materials (including water) as described in the documentation specified in Table 2.2.1, or as otherwise agreed in writing by the Agency.

Table 2.2.1 : Raw materials (including water)

Description	Parts	Date Received
Application	The response to question 2.2 given in section 2.2 of the Application excluding Tables 2.2.2.1 and 2.2.3.1	11/10/02
Response to Sch-4 Notice	Item 6, Item 7	11/10/02

2.3 **Operating Techniques**

- 2.3.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Agency.

Table 2.3.1: Operating techniques

Description	Parts	Date Received
Application	The response to question 2.3 given in the Application section 2.3 excluding Tables 2.3.1, 2.3.3, 2.3.8, 2.3.9, 2.3.10, 2.3.12 and 2.3.13	11/10/02
Response to Sch 4 Notice	Item 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	11/10/02

2.4 **Groundwater protection**

- 2.4.1 The Permitted Installation shall, subject to the conditions of this Permit, be controlled as described in the documentation specified in Table 2.4.1, or as otherwise agreed in writing by the Agency.

Table 2.4.1: Groundwater protection

Description	Parts	Date Received
Application	The response to question 2.4 given in the Application section 2.4 excluding Table 2.4.1	11/10/02
Response to Schedule 4 Part 1 Notice	Response to questions 1 and 2	11/10/02
Supplementary Information	Response to item 4	11/10/02

2.5 **Waste handling and storage**

- 2.5.1 The Operator shall, subject to the conditions of this Permit, handle and store waste as described in the documentation specified in Table 2.5.1, or as otherwise agreed in writing by the Agency.

Table 2.5.1: Waste handling and storage

Description	Parts	Date Received
Application	The response to question 2.5 given in the Application section 2.5 excluding Table 2.5.4	11/10/02

- 2.5.2 Waste materials specified in Table 2.5.2 shall only be stored on the site in the location and manner specified in that table

Table 2.5.2: Waste stored on site

Description of Waste	Location of Storage on Site	Manner of Storage	Storage Conditions
Effluent Sludge	[1]	Storage Pile	Storage area with impermeable base. To be disposed of as soon as practicable
Boilerhouse Fly & Bed Ash	[2]	Covered Skip	Storage area with impermeable base. To be disposed of as soon as practicable
Rejects from RCF 1 & 2	[4]	Skip	Storage area with impermeable base. To be disposed of as soon as practicable
Woodyard Reject	[5]	Skip	Storage area with impermeable base. To be disposed of as soon as practicable
Waste Oil	[7]	Tanks	Bunded storage area with impermeable base. To be disposed of as soon as practicable
Waste Oil	[8]	Drums & Bins	Drums & Bins to be clearly marked and held in a storage area with impermeable base. To be disposed of as soon as practicable
General Site Waste	[10]	Compactor & Skip	Covered Storage area with impermeable base. To be disposed of as soon as practicable
Scrap Metal	[13]	Skip	Storage area with impermeable base. To be disposed of as soon as practicable
Reject & Damaged Cores	[14]	Skip	Storage area with impermeable base. To be disposed of as soon as practicable
Waste Paper	[15]	Covered Skip	Storage area with impermeable base. To be disposed of as soon as practicable

2.6**Waste recovery and disposal****2.6.1**

The Operator shall, subject to the conditions of this Permit, recover and dispose of waste as described in the documentation specified in Table 2.6.1, or as otherwise agreed in writing by the Agency.

Table 2.6.1: Waste recovery and disposal

Description	Parts	Date Received
Application	The response to question 2.6 given in the Application section 2.6 excluding Table 2.6.1	11/10/02

2.7 **Energy Efficiency**

2.7.1 The Operator shall, subject to the conditions of this Permit, use energy as described in the documentation specified in Table 2.7.1, or as otherwise agreed in writing by the Agency.

Table 2.7 1: Energy efficiency

Description	Parts	Date Received
Application	The response to question 2.7 given in the Application section 2.7.	11/10/02
Response to Schedule 4 Part 1 Notice	Response to questions 16 and 22	11/10/02
Additional information provided by letter	Sankey diagram.	11/10/02

2.7.2 The Operator shall produce a report annually on the energy consumption of the installation. This report shall be sent to the Agency and shall be incorporated in any programme brought about by the requirement reference 25 and 32 in Table 9.1.1.

2.7.3 The Operator shall have an energy efficiency plan which shall be updated annually.

2.8 **Accident prevention and control**

2.8.1 The Operator shall, subject to the conditions of this Permit, prevent and limit the consequences of accidents as described in the documentation specified in Table 2.8.1, or as otherwise agreed in writing by the Agency.

Table 2.8.1 : Accident prevention and control

Description	Parts	Date Received
Application	The response to question 2.8 given in the Application section 2.8 excluding Table 2.8.1.	11/10/02
Response to Schedule 4 Part 1 Notice	Response to questions 8, and 18	11/10/02

2.9 Noise and vibration

- 2.9.1 The Operator shall, subject to the conditions of this Permit, control noise and vibration as described in the documentation specified in Table 2.9.1, or as otherwise agreed in writing by the Agency.

Table 2.9.1 : Noise and vibration

Description	Parts	Date Received
Application	The response to question 2.9 given in the Application section 2.9 excluding Table 2.9.1.	11/10/02

- 2.9.2 The Operator shall implement the Noise Management Plan produced in accordance with the Improvement Programme Requirement 29.

2.10 Monitoring

- 2.10.1 The Operator shall, subject to the conditions of this Permit, carry out, evaluate and assess monitoring as described in the documentation specified in Table 2.10.1, or as otherwise agreed in writing by the Agency.

Table 2.10.1 : Monitoring

Description	Parts	Date Received
Application	The response to question 2.10 given in the Application section 2.10 excluding Table 2.10.8.	11/10/02
Response to Schedule 4 Part 1 Notice	Response to question 14.	11/10/02

- 2.10.2 Where requested in writing by the Agency, the Operator shall provide at least 14 days advance notice of undertaking monitoring/spot sampling.

- 2.10.3 There shall be provided:

- a** safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2, unless otherwise specified in that Schedule; and
- b** safe means of access to other sampling/monitoring points when required by the Agency.

2.11 Decommissioning

- 2.11.1 The Operator shall, subject to the conditions of this Permit, make provision for decommissioning the installation as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1 : Decommissioning

Description	Parts	Date Received
Application	The response to question 2.11 given in the Application section 2.11.	11/10/02

- 2.11.2 The Operator shall maintain an up to date site closure plan during the life of the installation.

2.12 Multi-operator installations

- 2.12.1 The Operator shall, subject to the conditions of this Permit, use the techniques and measures described in the documentation specified in Table 2.12.1, or as otherwise agreed in writing by the Agency.

Table 2.12.1: Multi-operator Installations

Description	Parts	Date Received
Application	The response to question 2.12 given in the Application section 2.12. excluding Table 2.12.1.	11/10/02

3

Records

- 3.1.1 A record (a "Specified Record") shall be made of:-
- a** any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, has had or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;
 - b** all monitoring and sampling taken or carried out in accordance with the conditions of this permit and any assessment or evaluation made on the basis of such data.;
- 3.1.2 There shall be made available for inspection by the Agency at any reasonable time:
- a** Specified Records;
 - b** any other records made by the Operator in relation to the operation of the Permitted Installation ("Other Records").
- 3.1.3 A copy of any Specified or Other Records shall be supplied to the Agency on demand and without charge.
- 3.1.4 Specified Records and Other Records shall:-
- a** be legible;
 - b** be made as soon as reasonably practicable; and
 - c** indicate any amendments which have been made and shall include the original record wherever possible.
- 3.1.5 Specified Records and Other Records shall be retained for a minimum period of 4 years from the date when the records were made.
- 3.1.6 For all waste received at or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of 4 years)
- a** its composition, or as appropriate, description;
 - b** the best estimate of the quantity produced;
 - c** its disposal routes; and
 - d** the best estimate of the quantity sent for recovery.
- 3.1.7 A record shall be made at the Permitted Installation of any complaints concerning the Installation's effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

4 Reporting

- 4.1.1 All reports and notifications required by this Permit, or by Regulation 16 of the PPC Regulations, shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall report the parameters listed in Table S2 to Schedule 2 as follows:
- a** in respects of the emission points specified;
 - b** for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - c** giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - d** sending the report to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall, within 36 months of the issue of this Permit, submit a report on potential environmental improvements to the Permitted Installation. For each of the subject areas identified in Section 2 of the appropriate technical guidance, the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in guidance. The methodologies used should be based on those given in Agency guidance note IPPC H1 (Environmental Assessment and Appraisal of BAT) and should justify, against the Best Available Techniques criteria, where potential improvements are not planned to be implemented. As part of their management system the Operator shall submit an updated report every 36 months.
- 4.1.4 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.5 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them.

5

Notifications

5.1.1

The Operator shall notify the Agency **without delay** of:-

- a** the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;
- b** the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;
- c** the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and
- d** any accident which has caused or may have the potential to cause pollution.

5.1.2

The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1 of this Permit by sending:-

- a** the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
- b** the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;

and such information shall be in accordance with that Schedule.

5.1.3

The Operator shall give written notification as soon as practicable, of any of the following:

- a** permanent cessation of the operation of any part of or all of the Permitted Installation;
- b** cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1 year; and
- c** resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.1.3(b).

5.1.4

The Operator shall notify the following matters to the Agency, in writing, within 14 days of their occurrence:

- i** any change in the Operator's trading name, registered name or registered office address;
- ii** a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);
- iii** any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

5.1.5

Where the Operator has entered into a Climate Change Levy Agreement with the Government, the Operator shall, within 14 days, notify the Agency, in writing, in the event that the Secretary of State has not re-certified that agreement.

6

Emissions

6.1

Emissions into air

6.1.1

Emissions to air from the emission point(s) specified in Table 6.1.1 shall only arise from the source(s) specified in that Table.

Table 6.1.1: Emission points into air

Emission point reference/description	Source	Location of emission point
A1	PM1 Hood Exhaust	Point 1 on Fig 2.3.10.2
A2	PM1 Vacuum Pump Exhaust	Point 2 on Fig 2.3.10.2
A3	TMP Reject Pulper Exhaust	Point 3 on Fig 2.3.10.2
A4	TMP Pulper 1 and 2 Exhaust	Point 4 on Fig 2.3.10.2
A5	TMP Pulper 3 Exhaust	Point 5 on Fig 2.3.10.2
A6	TMP Storage Tank Vent	Point 6 on Fig 2.3.10.2
A7	TMP Steam Stack Preheat	Point 7a on Fig 2.3.10.2
A8	TMP Steam Stack Non-condensable	Point 7b on Fig 2.3.10.2
A9	RCF1 Pulper Vent	Point 8 on Fig 2.3.10.2
A10	PM2 Hood Exhaust	Point 9 on Fig 2.3.10.2
A11	PM2 Vacuum Pump Exhaust	Point 10 on Fig 2.3.10.2
A12	RCF2 Pulper Vent	Point 11 on Fig 2.3.10.2
A13	Boiler 1 Stack	Point 12 on Fig 2.3.10.2
A14	Boiler 2 Stack	Point 12 on Fig 2.3.10.2
A15	Boiler 3 Stack	Point 12 on Fig 2.3.10.2
A16	Boiler 4 Stack	Point 13 on Fig 2.3.10.2
A17	Boiler 5 Stack	Point 13 on Fig 2.3.10.2

6.1.2

The limits for emissions into air for the parameters and emission points set out in Table 6.1.3 shall not be exceeded.

6.1.3

The Operator shall carry out monitoring of the parameters listed in Table 6.1.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.1.3: Emission limits into air

Parameters	Emission Point			
	A13 Boiler 1	A14 Boiler 2	A15 Boiler 3	A1 and A10
Oxides of nitrogen (as NO ₂) mg m ⁻³ (½ hourly average)	450	300	150	NA
Frequency of monitoring	quarterly	quarterly	quarterly	
Volatile Organic Compounds (as carbon) mg m ⁻³ (½ hourly average)	NA	-	NA	-
Frequency of monitoring		quarterly		annually
Sulphur dioxide mg m ⁻³ (½ hourly average)	NA	500	NA	NA
Frequency of monitoring		quarterly		
Particulate mg m ⁻³ (min 4 hour sample)	NA	100	NA	NA
Frequency of monitoring		quarterly		
Dioxins nm ⁻³ TEQ	NA	-	NA	NA
Frequency of monitoring		annually		

The limits in Table 6.1.3 apply when using the normal fuel mix.

6.1.4

Where an annual mass limit for a substance is stated in Table 6.1.4, the aggregate emission of such substance from the Permitted Installation into air from the emission points A13, A14, A15 specified in Table 6.1.2 shall not exceed that limit in any year.

Table 6.1.4 Annual mass limits

Substance	Limit – Tonnes
Oxides of nitrogen	650
Oxides of sulphur	350
Particulate matter	30

6.1.5

There shall be no odour from the activities at the installation detectable beyond the site boundary.

6.2 Emissions to land

6.2.1 Emissions into or onto land from the emission points specified in Table 6.2.2 shall only arise from the sources and shall be emitted only to the soakaway specified in that Table.

Table 6.2.2 Emission points into land

Emission point reference/description	Source	Soakaway
W2	Site drainage from main car park	North -west side of site
W3	Site drainage from northern half of main production area	North side of site
W4	Site drainage from HGV carpark and interior of the northern section of the finished paper warehouse	North side of site and adjacent to Gatehouse
W5	Site drainage from the roundwood storage area	South side of site
W5	Site drainage from south end of waste paper storage warehouse	East side of site

6.2.2 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the Site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

6.3

Emissions to water [other than emissions to sewer]

Emissions to water from the emission point specified in Table 6.3.1 shall only arise from the source specified in that Table.

Table 6.3.1: Emission points into water

Emission Point Reference.	Source	Receiving Water
W1	Treated effluent from the Effluent Treatment Plant	Dee Estuary

6.3.1

Limits for the emissions to water for the parameter(s) and emission point(s) set out in Table 6.3.3 shall not be exceeded.

6.3.2

The Operator shall carry out monitoring of the parameters listed in Table 6.3.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.3.3: Emission limits into water

Parameter	Emission Point W1	Monitoring Frequency
Biological Oxygen Demand(measured after 5 days at 20 ° C with nitrification suppressed by the addition of alyl-thiourea) mg/l	50	Weekly (Note 1)
Suspended Solids mg/l	60	Daily
pH max	9	(Note 2)
pH min	6	(Note 2)
Ammoniacal Nitrogen mg/l	4	Daily
Temperature degrees Celsius	25	Continuous
Dissolved Oxygen mg/l	Note 6	Continuous
Maximum instantaneous Flow rate l/s	800	Continuous (Note 3)
Maximum Daily Flow m3/day	22,000	Daily (Note 4)
Maximum Tidal Flow m3/tide	11,000	Daily (Note 5)

Note 1 – Monitoring based on flow weighed composite sample

Note 2 – Frequency to be set subject to improvement condition 6

Note 3 – Flows of the discharge shall be measured at the outlet NGR SJ 30057 71141.

Note 4 – Maximum daily flow calculated from continuous monitoring of instantaneous flow

Note 5 – Maximum tidal flow calculated from continuous monitoring of instantaneous flow during a tidal discharge

Note 6- A limit will be established following a period of monitoring.

6.3.3 There shall be no emission into water from the Permitted Installation of any substance prescribed for water for which no limit is specified in Table 6.3.3 except in a concentration which is no greater than the background concentration.

6.3.4 Where an annual mass limit for a substance is stated in Table 6.3.5, the aggregate emissions of such substance from the Permitted Installation into water from the emission point(s) specified in Table 6.3.1 shall not exceed that limit in any year.

Table 6.3.5 Annual mass emission limits

Substance	Limit – kg
No limits have been set	

6.4 Emissions to sewer

6.4.1 No emission shall be made into any sewer from the Permitted Installation

6.5 **Emissions of heat**

6.5.1 No conditions are specified.

6.6 **Emissions of noise and vibration**

6.6.1 No conditions are specified.

7

Transfer to effluent treatment plant

No transfers to effluent treatment plant are controlled under this part of this Permit. Emissions to water are controlled under 6.3.

8 **Off site conditions**

8.1.1 **There are no off site conditions.**

9 Improvement programme

- 9.1.1 The Operator shall complete the requirements specified in Table 9.1.1 by the date specified in that Table, and shall send written notification of the date of completion of each requirement to the Agency, at the Reporting Address, within 14 days of the completion of each such requirement.

Table 9.1.1: Improvement programme requirements

Reference	Requirement	Date
1	The Operator shall produce a publicly available environmental report covering the activities of Shotton Paper Company on the Deeside Paper Mill installation.	30/4/2003
2	The Operator shall integrate the requirements of the PPC Regulations into the design and review process for all new facilities, engineering and other capital projects.	30/4/2003
3	The Operator shall integrate the requirements of the PPC Regulations into the capital approval process.	30/4/2003
4	The Operator shall assess the opportunities for the minimisation and reuse of rejected log ends and oversize purchased chips. Consideration shall be given to the potential for use as site derived fuel on boiler 2. A report shall be submitted to the Environment Agency.	30/4/2003
5	The Operator shall submit details of the continuous flow monitoring and recording system on emission point W1, including proposals for upgrading the system in accordance with the Environment Agency's Self Monitoring of Effluent Flow Policy.	31/10/2003
6	The Operator shall assess the requirement to provide continuous pH monitoring at emission point W1 and shall submit a report to the Environment Agency.	30/4/2003
7	The Operator shall establish risk assessment procedures for the determination of the significance of the environmental aspects of all site activities.	30/4/2003
8	The Operator shall link the "Register of Significance of Environmental Aspects" to corresponding environmental legislation.	30/4/2003
9	The Operator shall establish the environmental fate of all raw materials and chemicals, including contaminants contained within them. A report shall be submitted to the Environment Agency.	30/4/2003
10	The Operator shall incorporate a procedure to recycle damaged metal core inserts.	30/4/2003
11	The Operator shall investigate methods to reduce the temperature of the Boiler 2 fly ash, using the existing equipment, and shall carry out a BAT assessment for the cooling of the ash. A risk assessment shall be carried out into the handling of the ash. A report shall be submitted to the Environment Agency.	30/4/2003
12	The Operator shall repeat the fauna study undertaken in Whitesands Gutter in 2000. A report shall be submitted to the Environment Agency.	30/4/2003
13	The Operator shall propose an extended monitoring programme for the waste sludge which is landspread to establish the presence of contaminants i.e. heavy metals and persistent organic compounds taking into account outcomes from improvement condition 9. A report shall be submitted to the Environment Agency.	31/7/2003
14	The Operator shall propose a timetable for adopting the relevant standards, including MCERTS, for the monitoring of air and water emissions. A report shall be submitted to the Environment Agency.	31/7/2003
15	The Operator shall establish training for and regular testing of spillage control procedures.	30/4/2003
16	The Operator shall propose a programme for groundwater monitoring. The Operator shall implement the programme as approved with the Environment Agency. A report, in accordance with the Environment Agency's agreement on the programme shall be submitted on an annual basis.	30/4/2003 31/5/2003
17	The Operator shall assess the potential for the integration of all	30/4/2004

	management audits and shall submit a report to the Environment Agency.	
18	The Operator shall assess the available techniques for the reduction of noise from mobile plant and external conveyors.	31/12/2003
19	The Operator shall establish a programme for periodic surveying of the integrity of underground pipework and services.	31/1/2004
20	The Operator shall undertake an assessment to determine whether any of the aqueous emissions are liable to contain any of the specified List I and List II Substances (as defined in the Dangerous Substances Directive 76/464/EEC). A report shall be provided to the Environment Agency.	31/7/2003
21	The Operator shall identify all indirect aqueous emissions to controlled waters, both surface and groundwaters and assess how these discharges address the requirements of the Groundwater Regulations with regards to List I and List II substances. A report shall be provided to the Environment Agency.	30/4/2003
22	The Operator shall undertake an assessment on the risk of fugitive and process emissions entering controlled waters. A report together with an action plan shall be provided to the Environment Agency.	30/4/2003
23	The Operator shall incorporate the purchasing of raw materials within the Environmental policy. A report shall be provided to the Environment Agency.	31/7/2003
24	The Operator shall assess the opportunities for sourcing raw materials and chemicals with reduced environmental impact. A report shall be presented to the Agency every two years.	30/4/2004
25	The Operator shall optimise the operation of the current Aqua Heat Recovery system, with regard to both energy recovery and the suppression of plumes from the Paper Machine exhausts. A report shall be provided to the Environment Agency.	31/10/2003
26	The Operator shall improve access to the TMP and Paper Machine Exhausts in order to allow more reliable and accurate monitoring of point source emissions to atmosphere.	31/10/2003
27	The Operator shall produce an odour management plan covering all activities carried out by Shotton Paper Company on the site of the Deeside Paper Mill Installation.	31/10/2003
28	The Operator shall periodically assess the viable reuse alternatives for the disposal of all waste material, including sludge, fly ash and machine clothing. A report shall be submitted to the Agency every two years.	31/8/2003
29	The Operator shall prepare a Noise Management Plan, in conjunction with other operators within the installation. A copy of the draft shall be submitted to the Agency for agreement before implementation of the plan. The plan shall be implemented.	30/6/2004 31/10/04
30	The Operator shall assess the requirements for external doors to be left open, and identify the opportunities for reducing off site noise by keeping doors closed.	31/3/2004
31	The Operator shall assess the requirements for silencers to be fitted to external steam system relief valves.	31/3/2004
32	The Operator shall carry out a BAT assessment for the recovery of energy and the suppression of plumes from the Paper Machine exhausts. A report shall be submitted to the Environment Agency.	31/12/2004
33	The Operator shall establish a site closure plan within the EMS.	31/12/2004
34	The Operator shall carry out a review of the operations of boilers 1,2 and 3 in light of the operation of the Shotton CHP plant and the proposed construction of the RCF plant. A BAT assessment shall be carried out, including a programme for its implementation. The BAT review shall include, but not be restricted to; the use of imported bark on boiler 2, the	31/12/2003

operating hours for boiler 1 and any modifications necessary to meet the requirements of the Waste Incineration (England and Wales) Regulations 2002. SI 2002 No. 2980.

35	The Operator shall review techniques for the minimisation of the sulphur content of the site derived fuel used on boiler 2.	30/6/2004
36	The operator shall carry out a programme of quarterly monitoring for dioxins and furans in the exhaust stack on boiler 2.	31/12/2003

10

Interpretation

10.1.1

In this Permit, the following expressions shall have the following meanings:

"Authorised Officer"

means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, powers specified in Section 108(4) of that Act.

"Background concentration"

means the same as "background quantity" as defined in paragraph 11 to Part 2 to Schedule 1 of the PPC Regulations.

"Fugitive emission"

means an emission from any point other than those specified in the Tables in part 6 of this Permit.

"LAeq"

means the A-weighted equivalent continuous equal energy level (dBA)

"Monitoring"

includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"Permitted Installation"

means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"PPC Regulations"

means the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit.

"Staff"

includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"Substances prescribed for water"

means those substances mentioned in paragraph 13 of Part 2 of Schedule 1 to the PPC Regulations.

"Year"

means calendar year ending 31 December.

10.1.2

Where a minimum limit is set for any emission parameter, references to exceeding the limit shall mean that the parameter shall not be less than that limit.

10.1.3

Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;

- a** in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- b** in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

11

Written agreement to changes

11.1.1

When the qualification "or as otherwise agreed in writing" is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:

- a** the Operator shall give the Agency written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and
- b** such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.

11.1.2

Any change proposed according to condition 11.1.1 and agreed in writing by the Agency, shall not be implemented until the Operator has given the Agency prior written notice of the implementation date for the change. As from that date, the Operator shall operate the Permitted Installation in accordance with that change, and any relevant documentation referred to in this Permit shall be deemed to be amended.

Schedule 1

Confirmation of condition 5.1.1 notifications, in accordance with condition 5.1.2

This Schedule outlines the information that the Operator must provide to the Agency to satisfy condition 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements must be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Returns should contain:

Part A

- ☐ Name of Operator.
- ☐ Permit Number
- ☐ Location of Installation.
- ☐ Date information provided.
- ☐ Time, date and location of the emission.
- ☐ Identity and details of the substance[s] emitted to include:-
 - ☐ Best estimate of the quantity or the rate of emission, and the time during which the emission took place.
 - ☐ Environmental medium into which the emission took place.
 - ☐ Measures taken, or intended to be taken, to stop the emission.

Part B

- ☐ Date and time of emission
- ☐ Any more accurate information on the matters notified under Part A.
- ☐ Measures taken, or intended to be taken, to prevent a recurrence of the incident.
- ☐ Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission.
- ☐ The dates of any Part A notifications within in the previous 24 months.

- ☐ Name ☐ Post.....
- ☐ Signature ☐ Date
- ☐ Statement that signatory is authorised to sign on behalf of UPM-Kymmene (UK) Ltd.

Schedule 2

Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 of this Permit, are listed below.

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins
Biochemical Oxygen Demand mg/l	W1	Quarterly	1 January 2003
Suspended Solids mg/l	W1	Quarterly	1 January 2003
PH	W1	Quarterly	1 January 2003
Temperature degrees Celsius	W1	Quarterly	1 January 2003
Ammoniacal Nitrogen mg/l	W1	Quarterly	1 January 2003
Flow Rate l/s	W1	Quarterly	1 January 2003
Flow m3/day	W1	Quarterly	1 January 2003
Flow m3/tide	W1	Quarterly	1 January 2003
Cadmium ug/l	W1	Quarterly	1 January 2003
Mercury ug/l	W1	Quarterly	1 January 2003
Organo-tin ug/l	W1	Quarterly	1 January 2003
Microtox	W1	Quarterly	1 January 2003
Dissolved Oxygen mg/l	W1	Quarterly	1 January 2003
Chemical Oxygen Demand mg/l	W1	Quarterly	1 January 2003
Annual Mass Release, kg for Biochemical Oxygen Demand.	W1	Every 12 mths	1 January 2003
Annual Mass Release, kg for Ammoniacal Nitrogen	W1	Every 12 mths	1 January 2003
Oxides of nitrogen (as NO ₂) mg m ⁻³ (½ hourly average)	A13,A14,A15	Quarterly	1 January 2003
Volatile Organic Compounds (as carbon) mg m ⁻³ (½ hourly average)	A14	Quarterly	1 January 2003
	A1,A10	Every 12 mths	
Particulate mg m ⁻³ (min 4 hour sample)	A14	Quarterly	1 January 2003

Schedule 3

Forms to be used

Unless otherwise agreed in writing between Agency and the Operator, the following Agency forms are to be used for reports submitted to Agency.

Table S3: Reporting Forms		
Media/parameter	Form Number	Date of Form
Air	A1	04/02/03
Air	A2	04/02/03
Water	W1	04/02/03
Water	W2	04/02/03
Energy	E1	04/02/03
Waste Return	R1	04/02/03

END OF PERMIT