



ENVIRONMENT
AGENCY

Permit with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

Uskmouth Power Plant
Uskmouth Power Company Limited
West Nash Road
Newport
Gwent
NP18 2BZ

Permit number
LP3131SW

Uskmouth Power Plant Permit Number LP3131SW

Introductory note

This introductory note does not form a part of the permit

The main features of the installation are as follows. Uskmouth Power Company Limited applied for a permit under Section 1.1 part A(1)(a) of the Pollution Prevention and Control Regulations 2000 burning any fuel in an appliance with a rated thermal input of 50 megawatts or more. The plant is owned by Uskmouth Power Company who also carries out operation and maintenance. The station is coal fired and consists of three 121MW steam turbine driven alternators, each having a dedicated boiler and associated plant. Whilst the station is predominantly coal-fired, there is small percentage of biomass burned and the boilers are capable of burning fuel oil for the purpose of start-up and for flame stabilisation under low-load operation. The station is situated on 212 acres of land between the Severn Estuary, the River Usk and the Caldicot Levels, all of which are designated habitats sites at this location. The main emissions from the installation are to air, comprising combustion products, mainly oxides of nitrogen, sulphur dioxide, carbon dioxide and carbon monoxide, and to water, comprising cooling water and surface water drainage. Abatement equipment includes flue gas desulphurisation and use of low NO_x burners. Product from the flue gas desulphurisation process is conditioned with water and either sold or disposed of.

Table S1.3 contains an improvement condition, IC11, requiring the operators to produce a plan showing how the installation will contribute to total emissions of SO₂ from existing major coal and oil-fired power stations in England and Wales being minimised and not exceeding 70kt/year from 2020. The plan will be periodically updated. If the proposals do not meet the 70kt in aggregate the Agency will give each station a transferable allocation of the total.

Status Log of the permit			
Detail	Date	Response Date	
Application LP3131SW	Duly made 30/03/06		
Schedule 4	26/04/06	22/06/06, 22/06/06, 22/05/06	
Additional Information Received	04/09/06		
Schedule 4	15/09/06	23/10/06, 14/11/06, 27/11/06	
Additional Information Received	01/03/07		
Additional Information Received	09/08/07		
Permit determined	24/10/07		

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation			
Holder	Reference Number	Date of Issue	Fully or Partially Superseded
Uskmouth Power Plant	BA9436 and all subsequent variations (IPC permit)	15/10/98	Fully superseded

Other existing Licences/Authorisations/Registrations relating to this site		
Holder	Reference Number	Date of issue
Uskmouth Power Company Limited (water discharge consent)	AN0285201	07/10/98

End of Introductory Note

Permit

Pollution Prevention and Control
(England and Wales) Regulations 2000

Permit

Permit number

LP3131SW

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby authorises

Uskmouth Power Company Limited ("the operator"),

whose registered office is

Uskmouth Power Company Limited

West Nash Road

Newport

Gwent

NP18 2BZ

company registration number 05104786

to operate an installation at

Uskmouth Power Plant

West Nash Road


Newport

Gwent

NP18 2BZ

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

Signed



Date

24th October 2007

B. Price

Authorised to sign on behalf of the Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accident management plan

- 1.2.1 The operator shall:
- (a) maintain and implement an accident management plan;
 - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
 - (c) make any appropriate changes to the plan identified by a review.

1.3 Energy efficiency

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.4 Efficient use of raw materials

- 1.4.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

- (d) take any appropriate further measures identified by a review.

1.5 Avoidance, recovery and disposal of wastes produced by the activities

1.5.1. The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every 4 years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

1.6 Site security

- 1.6.1. Site security measures shall prevent unauthorised access to the site, as far as practicable.

2. Operations

2.1 Permitted activities

- 2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 2 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1 table S1.2, unless otherwise agreed in writing by the Agency.
- 2.3.2 No raw materials or fuels listed in schedule 3 table S3.1 shall be used unless they comply with the specifications set out in that table.
- 2.3.3 Waste shall only be accepted if:
 - (a) it is of a type and quantity listed in schedule 3 table S3.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.4 Records shall be kept of all waste accepted onto the site.
- 2.3.5 The following condition applies until 31st December 2007:

- 2.3.5.1 Where the activities include any boiler which is fitted with fully commissioned and operational FGD (an "abated unit"), that boiler shall only be operated without the simultaneous operation of its FGD, if this occurs in accordance with "A Protocol for the operation and breakdown of flue gas desulphurisation at coal fired power stations until 31.12.2007" dated 27th October 2006 or any subsequent revision to this protocol agreed in writing with the Agency.
- 2.3.6 From 1st January 2008, where the activities include any boiler which is fitted with fully commissioned and operational FGD, that boiler shall only be operated without the simultaneous operation of its FGD, if this occurs in accordance with "A Protocol for dealing with malfunction or breakdown of abatement equipment at coal fired power stations from 1st January 2008 to 31st December 2015" dated 15 November 2006 or any subsequent revision to this protocol agreed in writing with the Agency
- 2.3.7 From 1st January 2008, the following conditions apply where there is a malfunction or breakdown of any abatement equipment, subject to the provisions of "A Protocol for dealing with malfunction or breakdown of abatement equipment at coal fired power stations from 1st January 2008 to 31st December 2015" dated 15 November 2006 or any subsequent revision to this protocol agreed in writing with the Agency
- 2.3.7.1 The operator shall notify the Agency within 48 hours of any such malfunction or breakdown unless notification has already been made under condition 4.3.1.
- 2.3.7.2 In the case of a breakdown and unless otherwise agreed in writing by the Agency:
- (a) if a return to normal operation is not achieved within 24 hours, the operator shall reduce or close down operations, or shall operate the plant using low polluting fuels; and
 - (b) the cumulative duration of unabated operation in any twelve month period shall not exceed 120 hours.

2.4 Off-site conditions

- 2.4.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake monitoring for the parameters, at the locations and at not less than the frequencies specified, in the following tables in schedule 4 to this permit
- (a) ambient air monitoring specified in table S4.6.

2.5 Improvement programme

- 2.5.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.
- 2.5.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

2.6 Pre-operational conditions

There are no pre-operational conditions in this permit.

2.7 Closure and decommissioning

- 2.7.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.

- 2.7.2 The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site to a satisfactory state.
- 2.7.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.
- 2.7.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

2.8 Site protection and monitoring programme

- 2.8.1 The operator shall, within 2 months of the issue of this permit, submit a site protection and monitoring programme.
- 2.8.2 The operator shall implement and maintain the site protection and monitoring programme and shall carry out and record a review of it at least every 4 years.

3. Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 4 tables S4.1, S4.2 and S4.3.
- 3.1.2 The limits given in schedule 4 shall not be exceeded except where otherwise stated in the conditions of this permit.
- 3.1.3 Where a substance is specified in schedule 4 table S4.2 or S4.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

3.2 Transfers off-site

- 3.2.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including those specified in schedule 1 table S1.4, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in schedule 4 to this permit:
- (a) point source emissions specified in tables S4.1, S4.2 and S4.3;
 - (b) annual limits specified in table S4.4;
 - (c) process monitoring specified in table S4.5 and
 - (d) ambient air monitoring specified in table S4.6.
- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Agency.
- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 4 tables S4.1, S4.2 and S4.3 unless otherwise specified in that schedule.
- 3.6.5 Within 6 months of the issue of this permit (unless otherwise agreed in writing by the Agency) the site reference data identified in the site protection and monitoring programme shall be collected and submitted to the Agency.

3.7 Monitoring for the purposes of the Large Combustion Plant Directive

- 3.7.1 All LCP monitoring required by this permit shall be carried out in accordance with the provisions of Annex VIII of the Large Combustion Plant Directive.
- 3.7.2 If the monitoring results for more than 10 days a year are invalidated within the meaning set out in Schedule 4, the Operator shall:
- a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and
 - b) implement the approved measures
- 3.7.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.

- 3.7.4 Unless otherwise agreed in writing by the Agency in accordance with condition 3.7.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.
- 3.7.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Agency.
- 3.7.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Agency in writing, within 28 days of the completion of the check.

3.8 Air Quality Management Plan

- 3.8.1 The emissions from the activities shall not result in exceedance of EU air quality standards or contribute significantly to a failure to meet national air quality standards for sulphur dioxide, oxides of nitrogen and particulate (PM10).
- 3.8.2 The activities shall be operated in accordance with the Air Quality Management Plan dated 02/02/07 (or any subsequent revision to this plan agreed in writing with the Agency), except that the following methodologies (including any subsequent revisions to the methodologies agreed in writing with the Agency) will be used:
- i. Methodology for the Use and Interpretation of Monitoring and Modelling for AQS Management Plans (*Issue 5, January 2002*)
 - ii. Technical Methodology for Dispersion Modelling Related to Power Station AQS Management Plans (*Issue 4, January 2003*)
 - iii. Monitoring To Assess Power Station Compliance With AQS Objectives Technical Methodology (*Issue 6, March 2003*)
 - iv. Generic Methodology for Compiling Station Hourly Emission Datasets from Generation Data (*Issue 4, January 2003*).

4. Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the site protection and monitoring programme.
- 4.1.2 Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.

- 4.1.3 All records required to be held by this permit shall be held on the installation and shall be available for inspection by the Agency at any reasonable time.

4.2 Reporting

- 4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the assessment of the impact of the emissions submitted with the application;
 - (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
 - (c) the annual production /treatment data set out in schedule 5 table S5.2;
 - (d) the performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule; and
 - (e) details of any contamination or decontamination of the site which has occurred.
- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 5 table S5.1;
 - (b) for the reporting periods specified in schedule 5 table S5.1 and using the forms specified in schedule 5 table S5.4 ; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.4 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency
- 4.2.5 The results of reviews and any changes made to the site protection and monitoring programme shall be reported to the Agency, within 1 month of the review or change.
- 4.2.6 From 1st January 2008, the operator shall submit revised forms SO₂ and NO₂ (as referred to in Schedule 5, table S5.4) within 28 days of the date of the closure of a relevant LCP.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit;

- (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:
 - (a) as soon as practicable prior to the permanent cessation of any of the activities;
 - (b) cessation of operation of part or all of the activities for a period likely to exceed 1 year; and
 - (c) resumption of the operation of part or all of the activities after a cessation notified under (b) above.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.5 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
 - (a) any change in the operator's trading name, registered name or registered office address;
 - (b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); and
 - (c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- 4.3.7 Where the operator has entered into a direct participant agreement in the emissions trading scheme which covers emissions relating to the energy consumption of the activities, the operator shall notify the Agency within one month of:
 - (a) a decision by the operator to withdraw from or the Secretary of State to terminate that agreement.
 - (b) a failure to comply with an annual target under that agreement at the end of the trading compliance period.

Notification of Closure of Large Combustion Plant

- 4.3.8 From 1st January 2008, the operator shall inform the Agency of the closure of a relevant LCP within 28 days of the date of closure.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

Schedule 1 - Operations

Table S1.1 activities

Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
Section 1.1 Part A(1)(a).	Burning any fuel in an appliance with a rated thermal input of 50MW or more in three generating units.	Receipt of coal and biomass at the coal mills, and the supply of oil to the combustion unit and any associated activities necessary to maintain the operation of the plant and fuel supplies through to the discharge of exhaust gases from the stack, ash removal from the combustion process and the export of steam to the steam systems.
Section 3.5 Part B(f)	Pulverised fuel ash (PFA) handling and storage	Removal of ash from the combustion process to despatch from site.
Section 4.2 Part A(1)(a)(iv)	Operation of six Flue Gas Desulphurisation (FGD) units	Receipt of calcium oxide to despatch of FGD end product.
Directly Associated Activity		
Directly associated activity	Surface water drainage	Handling and storage of site drainage until discharge to the site surface water system.
Directly associated activity	Water treatment	From receipt of raw materials and raw water to dispatch of demineralised water to the process and chemical effluent to the drainage system via cooling system.
Directly associated activity	The generation and export of electricity	The receipt of steam at the steam turbine to the export of electricity to the national grid station and the direct generation of electricity.
Directly associated activity	Fuel Storage	Receipt and handling of coal, oil and biomass up to the delivery of coal and solid biomass to the coal mills and delivery of oil and gas to the combustion units.
Directly associated activity	The use of treated effluent from Welsh Water sewage treatment works to condense steam.	The pumping, filtering (including use of hydrocyclones) and chemical treatment of water, its use in the condenser and the cooling water system to the discharge of the water back to 'Julian's Pill'.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to section 2.1 and 2.2 in the Application.	23/03/06

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC1	A written report shall be submitted to the Agency for approval. The report shall include the results of an assessment of whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution for the activities covered by this permit. The report shall be in sufficient detail to allow a permit review. The report shall also contain a timescale for the implementation of any individual measures identified to improve the performance of the installation, including emissions control performance, as appropriate following the review. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Agency.	01/01/12
IC2	A written report shall be submitted to the Agency for approval. The report shall contain a protocol detailing the methodology for measuring the fraction of PM ₁₀ and PM _{2.5} within the release of total particulate matter from the combustion process. The protocol shall include but not be restricted to a variety of operating scenarios including start up and shut down, changes in operating loads and patterns and types of abatement. The report shall also contain a proposed time-scale within which the proposed sampling program contained within the protocol will be completed. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The program shall be implemented by the operator from the date of approval in writing by the Agency.	01/04/09
IC3	A written report shall be submitted to the Agency for approval. The report shall include a detailed assessment, including economic factors, of the options to increase firing of biomass fuels. Where appropriate, the report shall contain dates for the implementation of individual measures. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Agency.	01/04/09
IC4	A written report shall be submitted to the Agency for approval. The report shall include the results of a water efficiency audit in accordance with section 2.4.3 of IPPC Sector Guidance Note for the Combustion Sector. The report shall also contain a timescale for the implementation of any individual measures identified to address any deficiencies. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Agency.	01/11/09
IC5	A written report shall be submitted to the Agency for approval. The report shall include the results of a waste minimisation audit in accordance with section 2.4.2 of IPPC Sector Guidance Note for the Combustion Sector. The report shall also contain a timescale for the implementation of any individual measures identified to address any deficiencies. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Agency.	01/11/09
IC6	Provide a written plan of how this installation will contribute to total emissions of SO ₂ from existing major coal-fired power stations in England and Wales being minimised and in any case not exceeding 70 kt/y by 2020. The report should consider scenarios for electricity demand in 2020 and give the planned arrangements for SO ₂ emissions control at this installation. (Existing coal-fired stations comprise LCP that might still be operating in 2020. These are at Aberthaw, Cottam, Drax, Eggborough, Ferrybridge, Fiddlers Ferry, Ratcliffe, Rugeley, Uskmouth and West Burton). The plan should be implemented after approval by the Environment Agency.	01/04/08 with updated versions by 01/04/12 & 01/04/16
IC7	A written report shall be submitted to the Agency for approval. The report shall contain a protocol for a monitoring programme to assess changes in acidification and eutrophication deposition and ecological effects at appropriate Natura 2000 sites. The protocol will include the selection of the Natura 2000 sites and a time scale for implementation of the programme. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The protocol detailed in the report shall be implemented by the Operator from the date of approval by the Environment Agency.	01/04/08

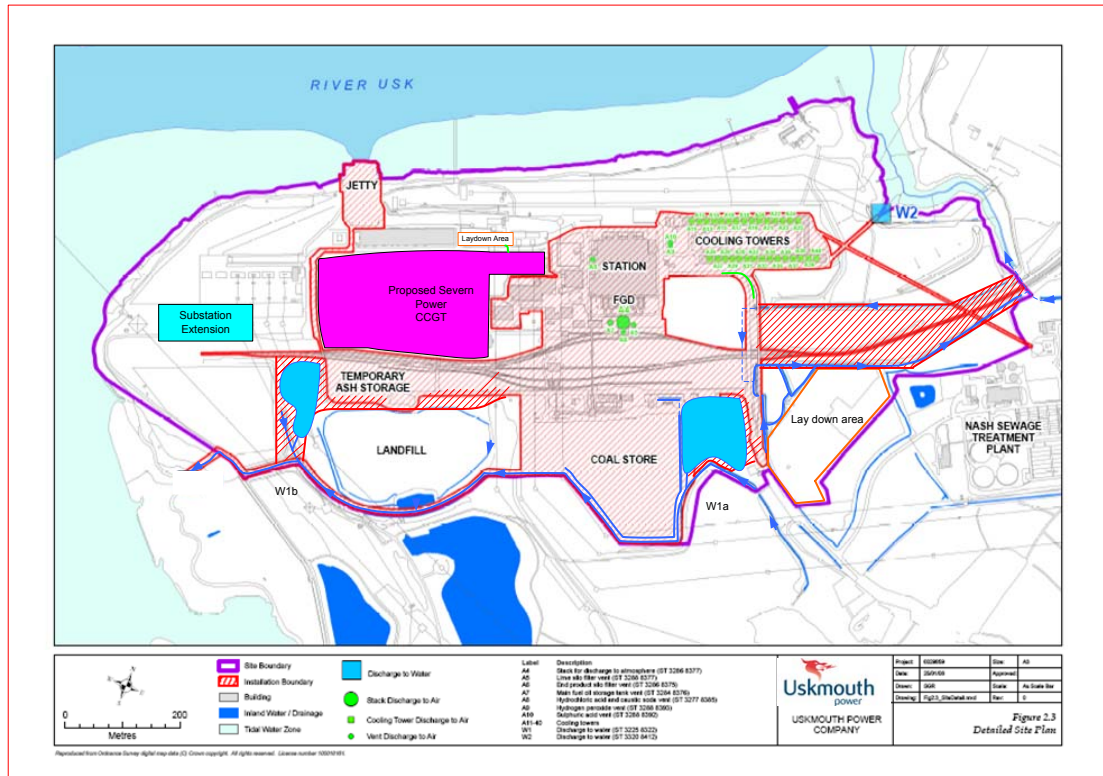
Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC8	A written procedure shall be submitted to the Agency detailing the measures to be used so that monitoring equipment, personnel and organisations employed for the emissions monitoring programme shall have either MCERTS certification or accreditation in accordance with condition 3.6.3. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented by the operator from the date of approval in writing by the Agency.	01/04/09
IC9	A written report shall be submitted to the Environment Agency for approval to detail how emissions to water from the coal and ash handling areas shall be minimised through the construction of a lined coal storage facility, lined lagoon system and lined drainage facility to replace existing gravel drainage system. This shall include an environmental assessment on completion of the project. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the summary. The proposals shall be implemented by the Operator from the date of approval in writing by the Agency.	01/06/08
IC10	A written plan shall be submitted to the Agency for approval detailing the results of a survey of hard-standing, kerbing, and secondary containment for raw material, intermediate, product and waste storage areas and the measures to comply with the requirements of Section 2.2.5 of the Agency Guidance Note IPPC Sector Guidance Note Combustion Activities V2.03. Where appropriate, the plan shall contain dates for the implementation of individual measures. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan.	01/08/08

Table S1.4 Appropriate measures for fugitive emissions

Measure	Dates
A fugitive emission management plan shall be submitted to the Agency, detailing the measures to be used to control fugitive emissions from the site in general but to include specifically emissions of dust from ash storage and, transport and handling, fuel storage and site roadways. This plan shall be in accordance with section 2.2.8 and 2.2.9 of Agency Guidance Note IPPC Sector Guidance Note Combustion Activities V2.03.	Plan dated 01/11/08
The plan shall be implemented by the operator from the date of approval in writing by the Agency	

Schedule 2 - Site plan



Schedule 3 - Waste types, raw materials and fuels

Table S3.1 Raw materials and fuels

Raw materials and fuel description	Specification
Gas Oil until 31/12/2007	≤ 0.2% sulphur w/w
Gas Oil from 01/01/08	≤ 0.1% sulphur w/w
Biomass fuels	As defined in Article 2(11) of EU Directive 2001/80/EC and included in the application or otherwise agreed in writing with the Agency

Table S3.3 Permitted waste types and quantities for use as fuels

Waste codes	
EWC Code	Description
Relevant exempt biomass	Biomass fuels exempt from the requirements of the Waste Incineration Directive and Large Combustion Plant Directive (as defined in Article 2(11) of EU Directive 2001/80/EC and Article 2 of EU Directive 2007/76/EC) and included in the application or otherwise agreed in writing with the Agency
Relevant exempt waste	Other fuels exempt from the requirements of the Waste Incineration Directive 2000/76/EC and included in the application or otherwise agreed in writing with the Agency for use in the installation.

Schedule 4 – Emissions and monitoring

For the purposes of this Schedule, the following interpretations shall apply:

- For the continuous measurement systems fitted to the LCP release points defined in Table S4.1 the validated hourly, monthly, 48hourly, monthly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval.
- The 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%.
- The 95% confidence interval for dust releases of a single measured result shall be taken to be 30%
- An invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. However, to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least two thirds of the period (40 minutes). Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing.
- Any day, in which more than three hourly average values are invalid, shall be invalidated.

Table S4.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit ^a (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Until 31/12/07 the monitoring requirements below will apply						
A4 Point A4 on site plan in Schedule 2. Measured on each separate boiler FGD flue discharging at A4.	Particulate Matter	Boiler Plant with FGD	25 mg/m ³	Monthly average	Continuous	BS EN13284-2 ^{1,2}
A4 Point A4 on site plan in Schedule 2. Measured on each separate boiler FGD flue discharging at A4.	Particulate Matter	Boiler Plant with FGD	50 mg/m ³	Hourly average as 97%ile	Continuous	BS EN13284-2 ^{1,2}
A4 Point A4 on site plan in Schedule 2. Measured on each separate boiler FGD flue discharging at A4.	Particulate Matter	Boiler Plant with FGD	25 mg/m ³	As per extractive method	Annual extractive test	BS EN13284-1 ^{1,2}
FROM 01/01/08 the monitoring requirements below will apply						
A4 Point A4 on site plan in Schedule 2.	Particulate Matter	Large Combustion Plant	55 mg/m ³	48 hour mean as 97%ile	Continuous	BS EN13284-2 ^{1,2}
A4 Point A4 on site plan in Schedule 2.	Particulate Matter	Large Combustion Plant with FGD	25 mg/m ³	Calendar monthly average	Continuous	BS EN13284-2 ^{1,2}
A4 Point A4 on site plan in Schedule 2.	Sulphur dioxide	Large Combustion Plant	400 mg/m ³ ^{b, c}	Calendar monthly average	Continuous	BS EN 14181 ^{1, 2}
A4 Point A4 on site plan in Schedule 2.	Sulphur dioxide	Large Combustion Plant	440 mg/m ^{3b, c}	48hour mean as 97%ile	Continuous	BS EN 14181 ^{1, 2}
A4 Point A4 on site plan in Schedule 2.	Oxides of nitrogen	Large Combustion Plant	500 mg/m ³ ^{d, e}	Calendar monthly average	Continuous	BS EN 14181 ^{1, 2}
A4 Point A4 on site plan in Schedule 2.	Oxides of nitrogen	Large Combustion Plant	550 mg/m ³ ^d	48hour mean as 95%ile	Continuous	BS EN 14181 ^{1, 2}
A5 Point A5 on site plan in Schedule 2.	-	Lime Silo	-	-	-	-
A6 Point A6 on site plan in Schedule 2.	-	End product silo vent filter	-	-	-	-
A7 Point A7 on site plan in Schedule 2.	-	Main fuel oil storage tank vent	-	-	-	-
A8 Point A8 on site plan in Schedule 2.	-	Hydrochloric acid vent	-	-	-	-
A9 Point A9 on site plan in Schedule 2.	-	Hydrogen peroxide tank vent	-	-	-	-

¹ Subject to the detailed requirements and interpretations agreed with the Environment Agency in the Joint Environmental Programme, Joint Industry/Environment Agency Working Group In stack monitoring, publication **“Monitoring SO₂ and NO_x and Dust Emissions from Power Stations – A Guide to Current Best Practice for the Operators of Coal and Oil Fired Boilers”** PT/06/BE1916/R, D.P.Graham, December 2006 (or any subsequent revision to this agreed in writing with the Environment Agency)

² Subject to the detailed requirements and interpretations agreed with the Environment Agency in the Joint Environmental Programme, Joint Industry/Environment Agency Working Group In stack monitoring publication **“Use of CEMs for Reporting Emissions of SO₂, NO_x and Dust under PPC and the LCPD. A Guide to Current Best Practice for the Operators of Coal and Oil Fired Boilers”** Graham, D.P., Salway, G, PT/06/BE1917/R, December 2006 “ (or any subsequent revision to this agreed in writing with the Environment Agency)

^a Excludes start up and shut down.

^b A desulphurisation rate of **90%** will replace the ELV where the LCP cannot meet the ELV due to characteristics of the fuel as set out in the application or as a result of an unforeseeable fluctuation in fuel quality.

^c Until 31 December 2015 plants of a rated thermal input greater than 400MW, which from 1st January 2008 onwards do not operate more than 2 000 hours a year (rolling average measured over a period of 5 years), shall be subject to a monthly limit value for sulphur dioxide of 800mg/m³ and a 48 hourly mean as a 97thile of 880mg/m³.

^d Until 31 December 2015 plants of a rated thermal input greater than 500 MW, which from 1st January 2008 onwards do not operate more than 2 000 hours a year (rolling average over a period of five years), shall be subject to a monthly limit value for nitrogen oxide emissions (measured as NO₂) of 600 mg/Nm³ and a 48 hourly mean as a 95thile of 660mg/m³.

^e Until 1 January 2018 in the case of plants that in the 12 month period ending on 1 January 2001 operated on, and continues to operate on, solid fuels whose volatile content is less than 10 %, 1 200 mg/Nm³ shall apply.

Table S4.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method¹
W1a on site plan in schedule 2 ²	Total suspended solids	Surface Water	75 mg/l	Spot	Weekly	BS EN 872:2005
W1a on site plan in schedule 2 ²	pH	Surface Water	6-9	Spot	Weekly	BS 6068-2.50:1995
W1a on site plan in schedule 2 ²	Cadmium	Process effluent, surface water	0.01 mg/l	Spot	Every three months	ISO, BS EN or SCA Blue Book Method
W1a on site plan in schedule 2 ²	Mercury	Process effluent, surface water	0.005 mg/l	Spot	Every three months	ISO, BS EN or SCA Blue Book Method
W1b on site plan in schedule 2 ³	Total suspended solids	Surface Water	75 mg/l	Spot	Weekly	BS EN 872:2005
W1b on site plan in schedule 2 ³	pH	Surface Water	6-9	Spot	Weekly	BS 6068-2.50:1995
W1b on site plan in schedule 2 ³	Cadmium	Process effluent, surface water	0.01 mg/l	Spot	Every three months	ISO, BS EN or SCA Blue Book Method
W1b on site plan in schedule 2 ³	Mercury	Process effluent, surface water	0.005 mg/l	Spot	Every three months	ISO, BS EN or SCA Blue Book Method
W2 on site plan in schedule 2	Total Suspended Solids	Process effluent, surface water	150mg/l	Spot	Weekly	BS EN 872:2005
W2 on site plan in schedule 2	pH	Process effluent, surface water	6-9	Instantaneous	Continuous	ISO, BS EN or SCA Blue Book Method
W2 on site plan in schedule 2	Temperature	Process effluent, surface water	30°C	Instantaneous	Continuous	ISO, BS EN or SCA Blue Book Method
W2 on site plan in schedule 2	Biological Oxygen Demand	Process effluent, surface water	100 mg/l	Spot	Weekly	BS EN 1899-1
W2 on site plan in schedule 2	Zinc	Process effluent, surface water	2mg/l	Spot	Weekly	BS 6068-2.29:1987
W2 on site plan in schedule 2	Copper	Process effluent, surface water	0.8 mg/l	Spot	Weekly	BS 6068-2.29:1987
W2 on site plan in schedule 2	Nickel	Process effluent, surface water	0.4 mg/l	Spot	Weekly	BS 6068-2.29:1987
W2 on site plan in schedule 2	Lead	Process effluent, surface water	0.8 mg/l	Spot	Weekly	BS 6068-2.29:1987
W2 on site plan in schedule 2	Chromium	Process effluent, surface water	0.8 mg/l	Spot	Weekly	BS EN 1233:1997
W2 on site plan in schedule 2	Flow	Process effluent, surface water	210Litres /second max	Instantaneous	Continuous	ISO, BS EN or SCA Blue Book Method

Table S4.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements

W2 on site plan in schedule 2	Flow	Process effluent, surface water	19872 m ³ /day	Instantaneous	Continuous	ISO, BS EN or SCA Blue Book Method
W2 on site plan in schedule 2	Cadmium	Process effluent, surface water	0.01 mg/l	Spot	Weekly	ISO, BS EN or SCA Blue Book Method
W2 on site plan in schedule 2	Mercury	Process effluent, surface water	0.005 mg/l	Spot	Weekly	ISO, BS EN or SCA Blue Book Method
W3 on site plan in schedule 2	No parameters set	Surface water	-	-	-	-

¹Or other ISO, BS EN or SCA Blue Book Method as approved by the Environment Agency in writing.

²To commence on completion of Improvement Condition IC9 in Table S1.3.

³To be removed on completion of Improvement Condition IC9 in Table S1.3

Table S4.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
-	-	-	-	-	-	-

Table S4.4 Annual limits (Excluding start up and shut down except where otherwise stated).

Substance	Medium	Limit (including unit)		Emission Points
Sulphur dioxide	Air	Assessment year	Installation A Limit (includes start up and shut down)	A4 Point A4 on site plan in Schedule 2.
		01/10/06-31/12/07	4550 tonnes	
		01/01/08-31/12/08 and subsequent years	3500 tonnes	
Sulphur dioxide	Air	Assessment year	Operator B limit ^a	A4 Point A4 on site plan in Schedule 2
		01/10/06-31/12/07	4550 tonnes	
		01/01/08-31/12/08 and subsequent years	3267 tonnes	
Sulphur dioxide	Air	Process B limit		A4 Point A4 on site plan in Schedule 2.
Sulphur dioxide	Air	2.88 tSO ₂ /GWh averaged across each assessment year until 31/12/07		Boiler plant fitted with FGD ^b
Sulphur dioxide	Air	2.4 tSO ₂ /GWh averaged across each assessment year until 31/12/07		Average across all boiler plant fitted with FGD at all Relevant processes ^b
Oxides of nitrogen	Air	Assessment year	Installation Annual Emission Limit (Includes start up and shut down)	A4 Point A4 on site plan in Schedule 2.
		01/10/06-31/12/07	4550 tonnes	
		01/01/08 and subsequent years	3500 tonnes	
Oxides of nitrogen	Air	Assessment year	Operator B Limit	A4 Point A4 on site plan in Schedule 2.
		01/01/08 –31/12/08 and subsequent years	4610 tonnes	
Oxides of nitrogen	Air	Process B limit		A4 Point A4 on site plan in Schedule 2.

^a or such other limit for that year as has been approved by the Agency following notification by the operators on form SO1(as referred to in Schedule 5, table S5.4).

^b In the case of an installation which contains boiler plant with and without FGD fitted in any assessment year the tSO₂/GWhr limit shall apply on the basis of an appropriate pro-rating, subject to prior approval by the Agency of the basis of the calculation.

Table S4.5 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
W1a ¹ , W1b ² and W2	Oil and grease	Daily	-	Visual inspection for oil.
Coal delivery	-	-	-	Coal shall be delivered by sea or rail only.
W2	Free chlorine	-	-	Cooling water shall not be released to water when free chlorine levels are above 0.1mg/l.

¹To commence on completion of Improvement Condition IC9 in Table S1.3.

²To be removed on completion of Improvement Condition IC9 in Table S1.3

Table S4.6 Ambient air monitoring requirements

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Lowlands Farm monitoring station	Nitrogen dioxide	Continuous	As approved by the Environment Agency	To be operated as detailed in Annex M of the Application: Section 1. Uskmouth Ambient Monitoring.
Lowlands Farm monitoring station	Sulphur dioxide	Continuous	As approved by the Environment Agency	To be operated as detailed in Annex M of the Application: Section 1. Uskmouth Ambient Monitoring.
New House Farm monitoring station	Sulphur dioxide	Continuous	As approved by the Environment Agency	To be operated as detailed in Annex M of the Application: Section 1. Uskmouth Ambient Monitoring.

Schedule 5 - Reporting

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

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Extractive sampling for SO ₂ dust and NO _x	A4	Annually	24/10/07
Discontinuous monitoring of NO _x , SO ₂ & dust	A4	Annually	24/10/07
Mass emission data for SO ₂ , NO _x and dust	A4	Monthly	24/10/07
Emission to water sample and analysis results	W1, W2	Monthly	24/10/07
SO ₂ , NO _x , and dust compliance	A4	Monthly	24/10/07
Sulphur dioxide Operator B Limit	Combustion plant	When an Operator wishes to make a transfer	24/10/07
Sulphur dioxide Process B Limit	Combustion plant	Required with Form SO1	24/10/07
Nitrogen oxides Operator B Limit	Combustion plant	When an Operator wishes to make a transfer	01/01/08
Nitrogen oxides Process B Limit	Combustion plant	Required with Form NO1	01/01/08

Table S5.2: Annual production/treatment

Parameter	Units
Power generated	GWh

Table S5.3 Performance parameters

Parameter	Frequency of assessment	Units
Water usage	Annually	m ³
Coal usage	Annually	MJ related to net cv
Coal usage	Monthly	T
Gas usage	Annually	MJ related to net cv
Gas usage	Monthly	T
Oil usage	Annually	MJ related to net cv
Oil usage	Monthly	T
Biomass usage	Annually	MJ related to net cv
Biomass usage	Monthly	T

Table S5.4 Reporting forms

Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air/Fuel use and total release data	ESI01	Permit issue	SI & Central Office	24/10/07
Air/Mass emission data for SO ₂ ,NO _x and Dust	ESI02	Permit issue	SI & Central Office	24/10/07
Air/Mean concentrations and annual percentiles emission data for SO ₂ , NO _x and dust	ESI03	01/01/08	SI & central office	24/10/07
Air/Energy Input and mass emissions	ESI04	Permit issue	SI and Central Office	24/10/07
Air/Discontinuous monitoring results	ESI05	Permit issue	SI	24/10/07
Water/ Emission to water sample and analysis results	W1	1/1/08	SI	24/10/07
Sulphur dioxide Operator B Limit	SO1	Permit issue	SI & central office	24/10/07
Sulphur dioxide Process B Limit	SO2	Permit issue	SI & central office	24/10/07
Nitrogen oxides Operator B Limit	NO1	1/1/08	SI & central office	24/10/07
Nitrogen oxides Process B Limit	NO2	1/1/08	SI & central office	24/10/07

Schedule 6 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall 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.

Part A

Permit Number	
Name of operator	
Location of Installation	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection

Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification 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 which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Uskmouth Power Company Limited

Schedule 7 - Interpretation

"*accident*" means an accident that may result in pollution.

"*annually*" means once every year.

"*assessment year*" means any complete calendar year except that the first assessment year for the purposes of this permit shall run from 1 October 2007 until 31st December 2008.

"*application*" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 4 to the PPC Regulations.

"*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, any power specified in section 108(4) of that Act.

"*background concentration*" means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

"*central office*" means an address for reporting forms for the attention of Agency head office staff, which has been separately notified to the operator.

"*combustion technical guidance note*" means IPPC Sector guidance Note Combustion Activities, version 2.03 dated 27th July 2005 published by the Agency.

"*emissions to land*", includes emissions to groundwater.

"FGD" means flue gas desulphurisation

"*fugitive emission*" means an emission to air, water or land from the activities which is not controlled by an emission or background concentration limit.

"*groundwater*" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"*land protection guidance*", means Agency guidance "H7 - Guidance on the protection of land under the PPC Regime: application site report and site protection monitoring programme".

"*large combustion plant*" or "LCP" is a boiler or group of boilers discharging waste gases through a common windsheld or stack, where the total thermal input is 50 MWth or more, based on gross calorific value.

"*Large Combustion Plant Directive*" means Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants.

"MCERTS" means the Agency's Monitoring Certification Scheme.

"notify without delay/notified without delay" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

"operational hours" of an LCP is the time spent between start up and shut down of the LCP .

"operator B Limit" means the limit for the assessment year in question specified in column 3 of Table S4.4 in Schedule 4 or such other limit for that year as has been approved by the Agency following notification by the operator on form SO1 or NO1, as referred to in Schedule 5, table S5.4.

"process B limit" means such limit for the assessment year in question, as has been approved by the Agency following a notification by the operator on form SO2 or NO2, as referred to in Schedule 5, table S5.4 or for a single station operator *"process B limit"* has the same meaning as *"operator B limit"* .

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"quarter" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"relevant processes" means the combustion processes at Uskmouth Power Plant, West Nash Road, Newport, Gwent NP18 2BZ carried on by Uskmouth Power Company, which is subject to permits requiring compliance with an operator B limit and *"relevant process"* means any one such process carried on by Uskmouth Power Company Limited.

"Shut down" is defined as when the output from last unit within an LCP has fallen below SOP in accordance with with "Principles for Determining MSG and SOP Thresholds for a Unit " Issue 3.0, 23 October 2006 or any subsequent revision to this protocol agreed in writing with the Agency

"site protection and monitoring programme" means a document which meets the requirements for site protection and monitoring programmes described in the Land Protection Guidance.

"Start up" is defined as when the first unit within an LCP has started up in accordance with "Principles for Determining MSG and SOP Thresholds for a Unit " Issue 3.0, 23 October 2006 or any subsequent revision to this protocol agreed in writing with the Agency

"technically competent management" and *"technical competence"* shall have the meanings given to them in the Environmental Protection Act 1990.

"t SO₂/GWh" in Table S4.4 is given by the following equation

$$t.\text{SO}_2/\text{GWh} = \text{Tot}_s/\text{G}_e$$

Where:

Tot_s is the total mass of SO₂ emitted over an Assessment Year.

G_e is the total electricity generated using fuels combusted at the power station expressed as GWh over an Assessment Year.

In the absence of an agreed protocol based on the continuous measurement of sulphur dioxide or other method agreed in writing with the Agency, the emission of sulphur dioxide shall be calculated in accordance with the formula:

$$\text{Sulphur dioxide emitted (Tot}_s\text{)(tonnes) = }[(\text{Sc} \times \text{Tc} \times 0.95) + (\text{So} \times \text{To}) + (\text{Sg} \times \text{Tg})] \times 0.02$$

where -

Sc	=	sulphur content of solid fuel (% w/w);
So	=	sulphur content of liquid fuel (% w/w);
Sg	=	sulphur content of gas (% w/w);
Tc	=	solid fuel burned (tonnes);
To	=	liquid fuels burned (tonnes);
Tg	=	gaseous fuel burned (tonnes)

“year” means calendar year ending 31 December.

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

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

- (a) in relation to emissions 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 emissions 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

END OF PERMIT