

# Permit with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

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Dagenham Combustion Plant

Ford Motor Company Limited  
Thames Avenue  
Ford Industrial Estate  
Dagenham  
Essex  
RM9 6SA

Permit number  
VP3736SB

# Dagenham Combustion Plant Permit Number VP3736SB

## Introductory note

### ***This introductory note does not form a part of the permit***

A non-technical description of the installation is given in the Application, but the main features of the installation are as follows.

The installation is located on Thames Avenue, Dagenham Essex, RM9 6SA. The centre of the site is located at National Grid Reference (NGR) 549475, 181558. The site lies within the estuarine / alluvial plain of the lower reaches of the Thames. The site is located south of Dagenham town and North of the River Thames. Ford is the sole occupant of the site. Ground levels across the lower sections of the site are between 1 m and 5 m above Ordinance Datum (mAOD).

The surrounding land uses for the site include a mix of residential and commercial property to the north, west and east, whilst the south is bound by the River Thames. The installation within the site is surrounded on the north, south and west by site buildings and hardstanding, whilst the east is bounded by the River Beam, with a landfill beyond it.

The site ground conditions consist of approximately 17 m of made ground and drift deposits overlying the Woolwich and Reading Beds of the Lambeth Group. These overlie the Thanet Sand formation, which then overlies the cretaceous Upper Chalk.

The installation is situated on a minor aquifer, with the chalk beneath it identified as a major aquifer. The near surface soils beneath the site are identified as having a high leaching potential. The installation is not located within a groundwater source protection zone.

The installation contains four 57 MWth Foster Wheeler boilers, however one of these has been decommissioned and is therefore not included in the permit. The boilers burn natural gas with gas oil as a back up. The boilers are fitted with Hamworthy low-nitrogen oxide (low-NO<sub>x</sub>) burners and CODEL flue gas monitoring equipment that conforms to MCERTS standards. Under normal circumstances only two boilers are operated at any one time, and occasionally only one boiler is operated due to reduced demand for steam on the site. The site does not run the Foster Wheeler boilers at all for the 3 months of summer due to there being no need for heat generation during this period.

Emissions from the boilers pass via individual flues to an 80 m common windshield where they are released to atmosphere. There are no air abatement systems fitted for the point source emissions to air (boiler stack). Emissions are controlled through fuel selection, combustion control and the use of low-NO<sub>x</sub> burners.

Natural gas is supplied to the installation on an interruptible supply. Approximately 700,000 litres of gas oil are stored on site in a single skinned steel tank of 1.8 million litre capacity, which is bunded. The site also stores ferric sulphate, sulphuric acid, sodium hydroxide, klaraid and effluent in bulk for the water demineralisation plant and trade effluent plant (TEP). Ferric sulphate, sulphuric acid, sodium hydroxide are stored within a concrete bund divided into three separate cells with sumps in each within the TEP. Ferric sulphate is in a single skin fibreglass tank, sulphuric acid is a single skin steel tank, and sodium hydroxide is a single skin lagged fibreglass tank. Klaraid is stored within a plastic tank with a plastic bund and is situated on concrete hardstanding within the TEP. The effluent tanks are of single skin steel construction with open tops, and the sludge tanks are of single skin steel construction and are lagged and fitted with internal steam heating coils, located within the TEP.

The site maintains two gas-fired water boilers with a thermal capacity of 2098KW each. These boilers are maintained to provide cover for the Wheel Plant house in the summer months when the site shuts down the Main Boiler House.

Directly associated activities that have been identified on the site include:

- Trade effluent plant
- Water demineralisation plant

The installation discharges surface water and storm water discharges from outside of the boiler house, under consent, into the site's surface water drainage system (SW1 in the permit). The surface water drainage system in turn discharges into an interceptor system prior to release under consent to the River Beam, and is not included within the installation boundary.

The site discharges to sewer via two routes (S1 and S2 in the permit). Internal boiler house discharges, which include boiler-blow down, process cooling water and internal surface drains, discharge to sewer via a common three-stage grit and oil interceptor. The regenerate waste water stream from the water demineralisation plant discharges to the internal trade effluent sewers, which transfer the waste to the TEP where it is treated before being discharged to sewer. Effluent from the installation is treated at the Thames Water Utilities Ltd Riverside Sewage Treatment Works.

The Inner Thames Marshes SSSI is 1.7 km to the southeast of the boiler house. There are no other SSSIs within 2 km or European sites within 10 km of the installation. A CROW Appendix 4 assessment was carried out which concluded that emissions from the installation are not likely to have a significant effect on the interest features of the Inner Thames Marshes SSSI.

The installation is subject to the Control of Major Accident Hazard Regulations (SI 743 1999) (COMAH) although the quantity of gas oil stored at the site is below the COMAH threshold.

Barking and Dagenham Council have declared the A13 corridor, which runs on the Northern boundary of the site, as an Air Quality Management Area (AQMA). At the time of permit issue the Council is in the review phase for drawing up the action plan for the AQMA.

The installation has a Climate Change Agreement through the association of motor industries and is a part of the UK Emission Trading Scheme (UK ETS). It will become party to the EU ETS when it is required to in 2008. There is an externally audited environmental management system in place that is accredited to ISO 14001.

**Status Log of the permit**

<b>Detail</b>	<b>Date</b>	<b>Response Date</b>
Application VP3736SB	28/03/06	
Additional Information Received	08/07/06	21/08/06
Additional Information Received	07/11/06	05/12/06
Request to extend determination	27/07/06	03/08/06
Request to extend determination	29/11/06	07/12/06
Permit determined	14/12/06	

**Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation**

<b>Holder</b>	<b>Reference Number</b>	<b>Date of Issue</b>	<b>Fully or Partially Superseded</b>
Ford Motor Company Ltd	AA3417 (IPC permit)	31/05/1992	Fully-superseded

**Other existing Licences/Authorisations/Registrations relating to this site**

<b>Holder</b>	<b>Reference Number</b>	<b>Date of issue</b>
Ford Motor Company Ltd	8/37/55/91 (Abstraction licence)	22/03/94
Ford Motor Company Ltd	B1405 (Discharge consent)	29/11/91

End of Introductory Note

**Permit**

Pollution Prevention and Control  
(England and Wales) Regulations 2000

## Permit

Permit number

**VP3736SB**

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

**Ford Motor Company Limited** ("the operator"),

whose registered office is

**Eagle Way  
Brentwood  
Essex  
CM13 3BW**

company registration number **00235446**

to operate an installation at

**Dagenham Combustion Plant  
Thames Avenue  
Ford Industrial Estate  
Dagenham  
Essex  
RM9 6SA**

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

Signed

Date

	14/12/06
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P. Butler

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 Accidents that may cause pollution

- 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 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 green 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 Subject to condition 2.3.3 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 Standby fuel (gas oil) may be used but for no more than 1440 hours per year.

## **2.4 Off-site conditions**

There are no off-site conditions under this section.

## **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.
- 3.1.3 From 1 January 2008 the Operator shall inform the Agency in writing of the closure of any LCP within 28 days of the date of closure.

## **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 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;
- 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.

## **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 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 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.
- 4.2.5 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency
- 4.2.6 The results of reviews and any changes made to the site protection and monitoring programme shall be reported to the Agency, within 28 days of the review or change.

## 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 climate change agreement with the Government, the Agency shall be notified within one month of:
  - (a) a decision by the Secretary of State not to re-certify the agreement;
  - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
  - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.
- 4.3.8 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.

## **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**

<b>Activity listed in Schedule 1 of the PPC Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
Section 1.1 A(1) (a) : Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more	Burning natural gas (with gas oil as a backup) in three boilers each with a thermal input of 57 MW and natural gas in 2 boilers with a combined thermal input of 5MW.	From receipt of natural gas and gas oil to the generation of steam and discharge of emissions to air and disposal of wastes arising. Storage of gas oil to a maximum of 1.8 million litres.
<b>Directly Associated Activity</b>		
Directly associated activity	Trade Effluent Plant	From the receipt of influent to discharge of final effluent to sewer and disposal of wastes arising.
Directly associated activity	Water demineralisation	From receipt of town mains water to the transfer of demineralised water to the boilers and discharge of effluent to the Trade Effluent Plant and disposal of wastes arising.

**Table S1.2 Operating techniques**

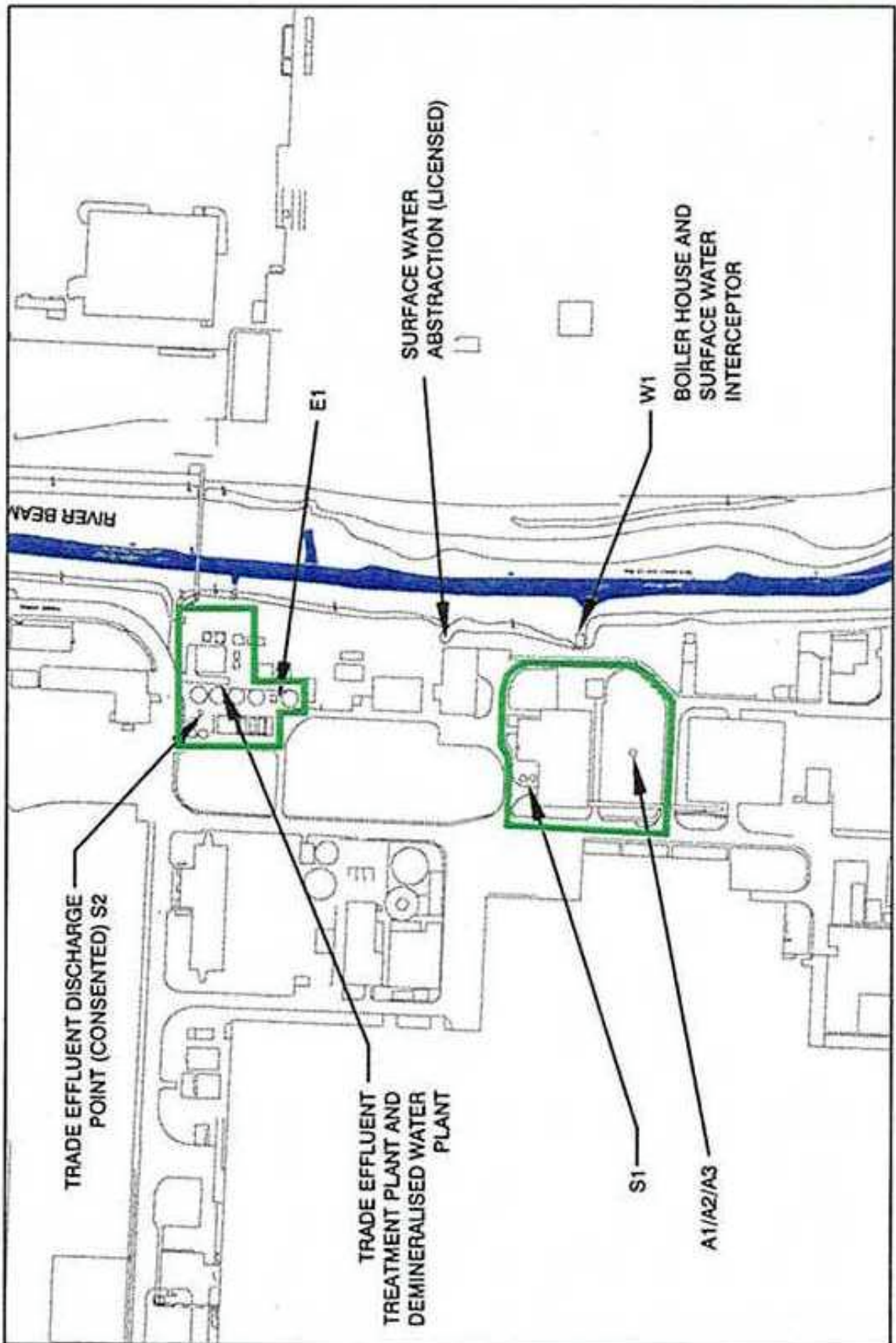
Description	Parts	Date Received
Application	The response to section 2.1, excluding 2.1.3 and 2.1.5, and 2.2 in the Application.	28/03/06
Schedule 4 Notice Request dated 08/07/06	Response to question 1 detailing process control.	21/08/06

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
IC1	<p>The operator shall carry out a review of the hardstanding and containment measures within the installation, having regard to the requirements of Box 5 of the Agency's H7 Horizontal Guidance Note.</p> <p>The review shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• The gas oil tank and associated bunding, with specific note of the bund drainage point;</li> <li>• The Boiler House hardstanding and hardstanding joints;</li> <li>• The water dosing chemical transfer pumps in the Boiler House;</li> <li>• Storage of oil and chemicals within the installation on drip trays; and</li> <li>• The Trade Effluent Plant hardstanding joints.</li> </ul> <p>A written report of the review shall be submitted to the Agency together with a plan for implementation of any improvements identified.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on the submission of the report.</p> <p>The plan shall be implemented by the operator from the date of approval in writing by the Agency.</p>	01/04/07
IC2	<p>The operator shall implement a site inspection and maintenance regime. The regime shall cover as minimum all primary, secondary and tertiary containment measures, including tanks, containers and other storage vessels, bunds, drip trays, hardstanding and subsurface drainage structures. A written report summarising the main elements of the site inspection and maintenance regime shall be submitted to the Agency for approval.</p>	01/04/07
IC3	<p>The operator shall develop a written Accident Management Plan with regard to the requirements set out in Section 2.8 of the Agency's IPPC Sector Guidance Note Combustion Activities. The plan shall include but not be limited to the risk assessment and management of firewater in the event of a fire at the installation. A written summary of the plan shall be submitted to the Agency for approval.</p>	01/07/07
IC4	<p>The operator shall carry out integrity testing of the three sludge holding tanks in the trade effluent plant. A written report of the results of the integrity testing shall be submitted to the Agency and shall include a timetable for any improvements identified.</p>	01/07/07
IC5	<p>The operator shall carry out an assessment of methods that can be used to reduce the quantity of oily sludge for disposal generated by the Trade Effluent Plant. A written report of the review shall be submitted to the Agency together with a plan for implementation of any improvements identified.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on the submission of the report.</p> <p>The plan shall be implemented by the operator from the date of approval in writing by the Agency.</p>	01/01/08







## Schedule 3 - Waste types, raw materials and fuels

**Table S3.1 Raw materials and fuels**

<b>Raw materials and fuel description</b>	<b>Specification</b>
Gas oil until 31/12/2007	Less than 0.2% w/w sulphur content
Gas oil from 01/01/2008	Less than 0.1% w/w sulphur content

## Schedule 4 – Emissions and monitoring

### Note

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 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**

<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [Point A1 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 2 fired on natural gas	200 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	ISO 10849
A1 [Point A1 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 2 fired on natural gas	220 mg/m <sup>3</sup>	95% of all the 48 hourly mean values	Continuous	ISO 10849
A1 [Point A1 on Site Plan in Schedule 2]	Particulate Matter	Boiler 2 fired on natural gas	5 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	BS EN 13284-2
A1 [Point A1 on Site Plan in Schedule 2]	Particulate Matter	Boiler 2 fired on natural gas	5.5 mg/m <sup>3</sup>	97% of all the 48 hourly mean values	Continuous	BS EN 13284-2
A1 [Point A1 on Site Plan in Schedule 2]	Oxides of Sulphur	Boiler 2 fired on natural gas	35 mg/m <sup>3</sup>	Hourly average	Every 6 months	BS EN 14791
A1 [Point A1 on Site Plan in Schedule 2]	Carbon Monoxide	Boiler 2 fired on natural gas	50 mg/m <sup>3</sup>	Daily average	Continuous	ISO 12039
A1 [Point A1 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 2 fired on gas oil	300 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	ISO 10849
A1 [Point A1 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 2 fired on gas oil	330 mg/m <sup>3</sup>	95% of all the 48 hourly mean values	Continuous	ISO 10849
A1 [Point A1 on Site Plan in Schedule 2]	Particulate Matter	Boiler 2 fired on gas oil	15 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	BS EN 13284-2
A1 [Point A1 on Site Plan in Schedule 2]	Particulate Matter	Boiler 2 fired on gas oil	16.5 mg/m <sup>3</sup>	97% of all the 48 hourly mean values	Continuous	BS EN 13284-2
A1 [Point A1 on Site Plan in Schedule 2]	Oxides of Sulphur	Boiler 2 fired on gas oil	850 mg/m <sup>3</sup>	Hourly average	Every 6 months	BS EN 14791
A1 [Point A1 on Site Plan in Schedule 2]	Carbon Monoxide	Boiler 2 fired on gas oil	150 mg/m <sup>3</sup>	Daily average	Continuous	ISO 12039

**Table S4.1 Point source emissions to air**

<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A2 [Point A2 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 3 fired on natural gas	200 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	ISO 10849
A2 [Point A2 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 3 fired on natural gas	220 mg/m <sup>3</sup>	95% of all the 48 hourly mean values	Continuous	ISO 10849
A2 [Point A2 on Site Plan in Schedule 2]	Particulate Matter	Boiler 3 fired on natural gas	5 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	BS EN 13284-2
A2 [Point A2 on Site Plan in Schedule 2]	Particulate Matter	Boiler 3 fired on natural gas	5.5 mg/m <sup>3</sup>	97% of all the 48 hourly mean values	Continuous	BS EN 13284-2
A2 [Point A2 on Site Plan in Schedule 2]	Oxides of Sulphur	Boiler 3 fired on natural gas	35 mg/m <sup>3</sup>	Hourly average	Every 6 months	BS EN 14791
A2 [Point A2 on Site Plan in Schedule 2]	Carbon Monoxide	Boiler 3 fired on natural gas	50 mg/m <sup>3</sup>	Daily average	Continuous	ISO 12039
A2 [Point A2 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 3 fired on gas oil	300 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	ISO 10849
A2 [Point A2 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 3 fired on gas oil	330 mg/m <sup>3</sup>	95% of all the 48 hourly mean values	Continuous	ISO 10849
A2 [Point A2 on Site Plan in Schedule 2]	Particulate Matter	Boiler 3 fired on gas oil	15 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	BS EN 13284-2
A2 [Point A2 on Site Plan in Schedule 2]	Particulate Matter	Boiler 3 fired on gas oil	16.5 mg/m <sup>3</sup>	97% of all the 48 hourly mean values	Continuous	BS EN 13284-2
A2 [Point A2 on Site Plan in Schedule 2]	Oxides of Sulphur	Boiler 3 fired on gas oil	850 mg/m <sup>3</sup>	Hourly average	Every 6 months	BS EN 14791
A2 [Point A2 on Site Plan in Schedule 2]	Carbon Monoxide	Boiler 3 fired on gas oil	150 mg/m <sup>3</sup>	Daily average	Continuous	ISO 12039

**Table S4.1 Point source emissions to air**

<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A3 [Point A3 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 4 fired on natural gas	200 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	ISO 10849
A3 [Point A3 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 4 fired on natural gas	220 mg/m <sup>3</sup>	95% of all the 48 hourly mean values	Continuous	ISO 10849
A3 [Point A3 on Site Plan in Schedule 2]	Particulate Matter	Boiler 4 fired on natural gas	5 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	BS EN 13284-2
A3 [Point A3 on Site Plan in Schedule 2]	Particulate Matter	Boiler 4 fired on natural gas	5.5 mg/m <sup>3</sup>	97% of all the 48 hourly mean values	Continuous	BS EN 13284-2
A3 [Point A3 on Site Plan in Schedule 2]	Oxides of Sulphur	Boiler 4 fired on natural gas	35 mg/m <sup>3</sup>	Hourly average	Every 6 months	BS EN 14791
A3 [Point A3 on Site Plan in Schedule 2]	Carbon Monoxide	Boiler 4 fired on natural gas	50 mg/m <sup>3</sup>	Daily average	Continuous	ISO 12039
A3 [Point A3 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 4 fired on gas oil	300 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	ISO 10849
A3 [Point A3 on Site Plan in Schedule 2]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Boiler 4 fired on gas oil	330 mg/m <sup>3</sup>	95% of all the 48 hourly mean values	Continuous	ISO 10849
A3 [Point A3 on Site Plan in Schedule 2]	Particulate Matter	Boiler 4 fired on gas oil	15 mg/m <sup>3</sup>	Calendar monthly mean	Continuous	BS EN 13284-2
A3 [Point A3 on Site Plan in Schedule 2]	Particulate Matter	Boiler 4 fired on gas oil	16.5 mg/m <sup>3</sup>	97% of all the 48 hourly mean values	Continuous	BS EN 13284-2
A3 [Point A3 on Site Plan in Schedule 2]	Oxides of Sulphur	Boiler 4 fired on gas oil	850 mg/m <sup>3</sup>	Hourly average	Every 6 months	BS EN 14791
A3 [Point A3 on Site Plan in Schedule 2]	Carbon Monoxide	Boiler 4 fired on gas oil	150 mg/m <sup>3</sup>	Daily average	Continuous	ISO 12039
A4 [Point A4 on site plan in schedule 2]	-	Summer boiler 1 in wheel plant	-	-	-	-
A5 [Point A5 on site plan in schedule 2]	-	Summer boiler 2 in wheel plant	-	-	-	-

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

<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (incl. unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
-	-	-	-	-	-	-

**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
S1 on Site Plan in Schedule 2; emission to Thames Water Utilities Ltd Riverside Sewage Treatment Works	No parameters set	Effluent emissions from the boiler house (boiler blow-down, process water cooling and internal surface water drains)	-	-	-	-
S2 on Site Plan in Schedule 2; emission to Thames Water Utilities Ltd Riverside Sewage Treatment Works	No parameters set	Effluent emissions from the TEP.	-	-	-	-
E1 on Site Plan in Schedule 2; emission to installation's trade effluent plant	No parameters set	Effluent emissions from the water demineralisation plant to the TEP	-	-	-	-
SW1; emission to site's surface water system	No parameters set	Surface water from boiler house area	-	-	-	-

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

Substance	Medium	Limit (including unit)	Release Points
Particulate Matter, Sulphur dioxide and Oxides of nitrogen	Air	Assessment year	LCP NERP Limit
		01/01/08-31/12/08 and subsequent years until 31/12/15	Limit defined in UK NERP <sup>a</sup>

<sup>a</sup> or such other limit for that year as has been approved by the Agency following notification by the operators to the Agency on form TO1N, as referred to in schedule 5, table S5.4.

## 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
Oxides of nitrogen Parameters as required by condition 3.6.1.	A1, A2, A3	Every 3 months	01/01/07
Carbon monoxide Parameters as required by condition 3.6.1	A1, A2, A3	Every 3 months	01/01/07
Particulate matter Parameters as required by condition 3.6.1	A1, A2, A3	Every 3 months	01/01/07
Oxides of sulphur Parameters as required by condition 3.6.1	A1, A2, A3	Every 6 months	01/01/07

**Table S5.2: Annual production/treatment**

Parameter	Units
Steam generated	tonnes

**Table S5.3 Performance parameters**

Parameter	Frequency of assessment	Units
Mains water usage	Annually	m <sup>3</sup>
Abstracted water usage	Annually	m <sup>3</sup>
Natural gas usage	Annually	MWh
Gas oil usage	Annually	MWh
Electricity from public supply	Annually	MWh



**Table S5.4 Reporting forms**

<b>Media/ parameter</b>	<b>Reporting format</b>	<b>Starting Point</b>	<b>Agency recipient</b>	<b>Date of form</b>
Air	Form Air 1A – continuous monitoring or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Air	Form Air 1 – LCPD discontinuous monitoring or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Air	Form Air 2– LCPD continuous monitoring or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Air	Form Air 3 – LCPD continuous monitoring invalidation log or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Air	Form Air – 4 NERP reporting or other form as agreed in writing by the Agency	01/01/2008	Site Inspector and central office	14/12/2006
Energy usage	Form Air 5 – LCPD energy usage summary or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Air	TO1N – LCP allocation in the NERP or other form as agreed in writing by the Agency	01/01/2008	Site Inspector and central office	14/12/2006
Air	TO2N – Company allocation in the NERP or other form as agreed in writing by the Agency	01/01/2008	Site Inspector and central office	14/12/2006
Water usage	Form Water usage 1 or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Energy usage	Form Energy 1 or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006
Performance	Form Performance 1 or other form as agreed in writing by the Agency	14/12/2006	Site Inspector	14/12/2006

## 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	<b>VP 3736 SB</b>
Name of operator	<b>Ford Motor Company Ltd</b>
Location of Installation	<b>Thames Avenue Ford Industrial Estate Dagenham Essex RM9 6SA</b>
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**

<b>To be notified within 24 hours of detection</b>	
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**

<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
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	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* authorised to sign on behalf of Ford Motor Company Limited

# Schedule 7 - Interpretation

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

"*annually*" means once every year.

"*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.

"*calendar monthly mean*" means the value across a calendar month of all validated hourly means.

"*Combustion Technical Guidance Note*" means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27<sup>th</sup> July 2005 published by Environment Agency.

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

"*fugitive emission*" means an emission to air, water or land from the activities which is not controlled by an emission 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 windshield 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 Environment Agency's Monitoring Certification Scheme.

"*Natural gas*" means naturally occurring methane with no more than 20% by volume of inert or other constituents.

"*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.

"*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.

"*reference conditions*" means:

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.

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

"*year*" means calendar year ending 31 December.

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.

(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



**ENVIRONMENT  
AGENCY**

## **Variation Notice with introductory note**

**Pollution Prevention and Control (England & Wales) Regulations 2000**

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**Dagenham Combustion Plant**

**Ford Motor Company Limited  
Thames Avenue  
Ford Industrial Estate  
Dagenham  
Essex  
RM9 6SA**

**Variation Notice Number  
RP3830XV**

**Permit number  
VP3736SB**

# Dagenham Combustion Plant Permit Number VP3736SB

## Introductory note

### *This introductory note does not form a part of the permit*

The following notice is issued under regulation 17 of The Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No. 1973 (as amended) (the Regulations) to vary the conditions of a permit issued under the Regulations to operate an installation. The notice comprises schedule 1 containing conditions to be deleted, schedule 2 conditions to be amended and schedule 3 conditions to be added.

This notice implements the requirements of the National Emission Reduction Plan as set out in the Large Combustion Plants(National Emissions Reduction Plan) Regulations 2007 and the Pollution Prevention and Control(Combustion Plants)(England) Directions 2007.

#### Status Log of the permit

Detail	Date	Response Date
Application VP3736SB	Duly made 28/03/06	
Additional Information received	08/07/06	21/08/06
Additional Information received	07/11/06	05/12/06
Request to extend determination	27/07/06	03/08/06
Request to extend determination	29/11/06	07/12/06
Permit determined	14/12/06	
Variation notice RP3830XV Issued	17/12/07	

#### Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Date of Issue	Fully or Partially Superseded
Ford Motor Company Ltd	AA3417 (IPC permit)	31/05/1992	Fully superseded

#### Other existing Licences/Authorisations/Registrations relating to this site

Holder	Reference Number	Date of issue
Ford Motor Company Ltd	7/37/55/91 (Abstraction Licence)	22/03/1994
Ford Motor Company Ltd	B1405 (discharge Consent)	29/11/1991

End of Introductory Note

**Variation Notice**

Pollution Prevention and Control  
(England and Wales) Regulations 2000

## Variation Notice

Permit number

**VP3736SB**

Variation number

**RP3830XV**

The Environment Agency (the Agency) in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby varies the permit held by you

**Ford Motor Company Limited** ("the operator"),

whose registered office is

**Eagle Way**

**Brentwood**

**Essex**

**CM13 3BW**

company registration number **00235446**

to operate an installation at

**Dagenham Combustion Plant**

**Thames Avenue**

**Ford Industrial Estate**

**Dagenham**

**Essex**

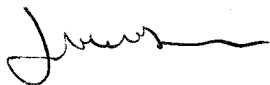
**RM9 6SA**

to the extent set out in schedules 1 to 3 of this variation notice .

The notice shall take effect from 17<sup>th</sup> December 2007

Signed

Date

	17 <sup>th</sup> Dec 2007
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**J M Ingram**

Authorised to sign on behalf of the Agency



**SCHEDULE 1 – CONDITIONS TO BE DELETED**

1. The following conditions are deleted

Table S4.4 footnote a.

<sup>a</sup> or such other limit for that year as has been approved by the Agency following notification by the operators to the Agency on form TO1N, as referred to in schedule 5, table S5.4.

Table S5.4 references to the NERP reporting forms

Air	TO1N – LCP allocation in the NERP or other form as agreed in writing by the Agency	01/01/2008	Site Inspector and central office	14/12/2006
Air	TO2N – Company allocation in the NERP or other form as agreed in writing by the Agency	01/01/2008	Site Inspector and central office	14/12/2006

**SCHEDULE 2 – CONDITIONS TO BE AMENDED**

2. The following conditions are amended as follows

Table S4.4 shall read:

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

Substance	Medium	Limit (including unit)	Emission Points
Particulate Matter, Sulphur dioxide and Oxides of nitrogen	Air	Assessment year	LCP NERP Limit
		01/01/08-31/12/08 and subsequent years until 31/12/15	Emission allowance figure shown in the NERP Register as at 30 April the following year
			Windshield 1

**SCHEDULE 3 – CONDITIONS TO BE ADDED**

3. The following definition should be added to Schedule 7

“NERP Register “ means the register maintained by the Environment Agency in accordance with regulation 6(1) of the Large Combustion Plants (National Emission Reduction Plan) Regulations 2007.