ENVIRONMENT AGENCY

DECISION DOCUMENT FOR BJ9576

DETERMINATION OF AN APPLICATION FOR A PERMIT UNDER REGULATION 10(2) OF THE POLLUTION PREVENTION AND CONTROL (ENGLAND AND WALES) REGULATIONS 2000

OPERATOR: - NESTLE UK LIMITED

PREMISES TO WHICH APPLICATION APPLIES: -Marston Lane, Tutbury, Burton-on-Trent, Staffordshire, DE13 9LY

DESCRIPTION OF ACTIVITIES: - Operation of a combustion process, being a process prescribed under paragraph (b)(iii) of Part (A)1 of Section 1.1 of Schedule 1 to the Pollution Prevention and Control (England and Wales) Regulation 2000

Permit No: - BJ9576

Date of issue :-

Signed:-

C Evans

PIR/RSR Inspector
Upper Trent Area
Permit Author

Date:-

Signed:-

M R Haslam

PIR/RSR Team Leader
Middle Trent Area

Date:-

Contents

PART A – INTRODUCTION

A1: Administrative Information

Operator:	Nestle UK Limited
Installation:	Marston Lane, Tutbury, Burton-on-Trent, Staffs, DE13 9LY
Permit Number:	BJ9576
Account Manager:	Colin Evans (PIR/RSR)
Permit Author:	Colin Evans
Permit Team Member(s);	Trevor Howard (Scientific Support) Christia Killen (Tactical Planning) Mark Smith (Environmental Protection) Rob Matthews (Water Quality Consents) Joanne Issac (Conservation) James Smith (Tech. Administrator)

A2: Regulatory History

The installation is an existing process authorised under the IPC section of EPA90 The current IPC authorisation No BG8556 issued to Nestle UK Ltd became effective on 7 February 2000 There have been minor variations to the above authorisation to cover the extended commissioning period.

A3: Determination Procedure

The date of the IPPC application is 20 December 2000 and was received on 29 December 2000 and deemed duly made on that date.

The application was required to be submitted by 31 December 2000 to meet the transitional requirements of transferring new plant regulated under IPC to IPPC regulation.

An Advertisement for the application was placed in the Burton Mail on 2 February 2001 and the London Gazette on the same date.

A copy of the application was sent to the following consultees:

External :-
South Derbyshire District Council
Southern Derbyshire Health Authority
Severn Trent Water plc
English Nature
Food Standards Agency
Internal :-
Scientific Support
Tactical Planning
Environmental Protection
Water Quality
Conservation

Responses from internal and external consultees are summarised in Appendix 'D' of this document

No application was made to exclude any information from the public registers on the grounds of commercial confidentiality. There was no direction issued by the Secretary of State to exclude any information, which in his opinion would be contrary to the interests of national security.

During the commissioning of the fluidised bed boiler problems were encountered in meeting the required NO_x emission limit. This resulted in a significant delay in the issue of the permit because it could not be issued knowingly containing conditions which the Operator could not meet. Improvement conditions were considered to be inappropriate due to this being a new and novel process. Extensive trials were undertaken which resulted in the installation of urea injection equipment to control NO_x emissions.

In addition new cooling water equipment was installed in the instant coffee production process. Water from this equipment is now also used for cooling duties on the fluidised bed boiler which has negated the need to use river water.

A new reverse osmosis water treatment plant has also been installed which can be used for treating boiler feed water.

The applicant had the opportunity to comment on the draft permit. The comments made have been taken into consideration in this document and in the permit, where appropriate.

A copy of the draft permit was not sent to any of the statutory consultees – all comments made have been considered and addressed where relevant (see appendix).

Permit approved for issue on ----------

A4: Consideration of Regulation 10(3) and 10(4)

Regulation 10(3): Competence

The Regulations require that the Agency is satisfied the applicant is the person who will have control over the operation of the installation and that he will be able to operate the installation so as to comply with the conditions, which would be included in the permit.

The application was produced by the Operator of the installation.

The Operator is the body that will make decisions upon matters such as investments, emergency closure staff etc., and has been compliant with the requirements of the existing IPC authorisation.

There is no reason to suppose that the Operator will not be able to comply with the conditions of the IPPC permit.

Regulation 10(4): Requirement for specified waste management activities

The Regulations require that for these activities the operator must be a fit and proper person and planning permission must be in force.

The application does not include specified waste management activity and therefore this regulation does not apply.

PART B – DETERMINATION OF PERMIT CONDITIONS

B1: Part 1 of the Permit

Part 1 of the Permit deals with the activities comprised in the installation and its geographical extent.

Condition 1.1.1: The Permitted Installation

The definition of "installation" is contained in R2 of the Regulations and Government guidance on its interpretation is provided in "IPPC: A Practical Guide".

The Applicant has responded to question B1.1 of the application with a consideration of :-

The combustion of waste coffee grounds under Section 1.1 A(1)(b)(iii) of Schedule 1 of the Regulations, as the listed activity.

Directly associated activities are :-.

Abatement of particulate and gaseous emissions.

All the listed and associated activities will be included within table 1.1.1 of the permit, along with: -

Water discharges to sewer

There will be no other PPC permits relating to this installation.

Condition 1.1.2: The Permit Plan/Site Report

The permit plan/site report area includes all land over which the activities comprised within this part of installation are carried out, in so far as they relate to this application.

The site plan submitted identifies the installation as being only part of the Tutbury Factory site.

The PPC Regulations require that an Applicant submit a site report as part of the permit application to operate a Part installations or Part A mobile plant. Where this guidance refers to installation this includes both Part A installation and Part A mobile plant.

This site report is required to describe the condition of the site and must, in particular, identify any substance in on or under the land that may constitute a pollution risk. The site report therefore needs to set out the "initial" condition at the site including contamination

preset prior to operation of the installation and to allow an effective reference point for comparison with the condition of the site at cessation of operations.

The response to question B1.3 (Site Report) was deemed unsatisfactory and a request for further information was progressed via a Schedule 4 Notice. The response was sent for internal assessment and no further queries were raised.

No specific conditions will be prescribed within the permit to reflect this work, in accordance with Agency practise apart from requirements detailed under Surrender of Permit and condition 6.2.2 under Emissions to Land.

Condition 1.1.3: Pre-Operation Conditions

Regulation 12(9)(d) allows the imposition of conditions in respect of 'steps to be taken prior to the operation of the installation'.

This is an existing operation previously regulated under IPC Authorisation BG8556. Consequently there are no pre-operating conditions

B2: Part of the Permit

General Note

The determination of BAT under Regulation 3 should be based on an assessment of a range of techniques for the prevention or reduction of emissions from the installation, taking account of their "costs and advantages" and considering in particular, the factors set out in Schedule 2 of the Regulations. When setting emission limit values ("ELVs" based on BAT, the technical characteristics of the particular installation, its geographical location and the local environmental conditions" (R9(7)), should also be considered. Consideration should also be given to whether any EC EQSs "require" stricter ELVs to be imposed. This will depend on the extent to which the proposals contribute to any breach or overloading of an EQS (see IPPC: A Practical Guide). In addition to the requirement to set ELV's or "equivalent parameters or technical measures" based on BAT the PPC Regulations require a consideration of whether it is also appropriate to set further conditions to deliver the general principles described in Regulation 12 and the particular matters identified in Regulation 12(9).

Any Technical Guidance which is available for an IPPC sector will have already involved a BAT assessment, based on the above principles, sufficient to set indicative BAT standards in terms of both ELVs/benchmarks and the technical measures which underpin them. {The same is true for the cross-sectoral "General Technical Guidance"}. Considerable research and consultation on these assessments will have been undertaken at both European (in terms of the development of the BREFS) and UK levels. The Technical Guidance (section 2) divides the techniques, measures and issues to be considered in determining an IPPC application into 16 main sections. The IPPC application form also requires applicants to provide information on the proposals for their installation in accordance with these 16 subject areas. Operators are required to address all of the issues set out in the relevant sections of the Technical Guidance in each case and to justify their proposals against any indicative requirements contained in the Guidance and against the other requirements of the Regulations.

The conditions in part 2 of the permit also mirror these subject areas and the text below addresses each condition in turn, highlighting the particular parts of the PPC Regulations which are being addressed in each case, and recording the Agency's assessment of the relevant part of the application and reasoning for the imposition of conditions in each case.

Condition 2.1: Management Techniques

Management techniques are one of the available techniques for emission prevention and control and are therefore part of the determination of BAT for the installation.

The Applicant is part of a major international company and operates an internal EMS constructed in such a manner that it is compatible with international standards such as ISO 14001.

A proposed management structure and organisation chart has been supplied in the application.

There will be systems in place, as part of the company policy, to ensure satisfactory training of employees.

There will be procedures in place to deal with such issues as preventative maintenance, reporting of incidents and corrective and preventative actions.

Condition 2.1.6, regarding Regulation 10(4), is not relevant for this permit.

Condition 2.2: Raw Materials (including water)

The use of raw materials and water are some of the available techniques for emission prevention and control and are therefore part of the determination of BAT for the installation. "The consumption and nature of raw materials (including water) used in the process" is also one of factors, which is considered in determining which of the other available techniques for prevention and control of emissions are BAT (see Schedule 2 of the Regulations).

Raw Materials Usage

Section 2.2 deals with all raw-material inputs for the installation. Table 2.1 in the application provides an analysis of the coffee grounds used as fuel for the fluidised bed boiler. The principal raw-materials used are listed in Table 2.2. Table 2.3 lists the composition, fate and any reasonably alternatives available.

Waste Minimisation

The Applicant has clearly defined the main opportunities, in terms of raw materials, for waste minimisation.

Systems and procedures will be in place to assess opportunities for waste minimisation and consequences of environmental impact of alternative practices.

Water Use

The Operator has supplied a detailed list of water usage which includes consideration of water minimisation for operational purposes and also reject water. No additional requirements are considered to be necessary.

Condition 2.3: Operating Techniques

The design of the installation and operating techniques proposed will be key techniques for emission prevention and control and are therefore part of the determination of BAT for the installation.

Response to question B2.3 has been provided for in Section 2.3 of the application

The installation is one of burning waste coffee grounds, generated in the course of producing instant coffee, in a fluidised bed boiler to produce process steam for use in the instant coffee production process. The boiler is capable of burning coffee grounds at a maximum rate of approximately 1850 kg/hr of dry material, together with other coffee liquid waste associated with preparation of the grounds for combustion.

Waste Coffee Grounds Supply and Storage

The instant coffee production process produces waste coffee grounds with an initial moisture content of approximately 76%. Three dewatering presses then reduce the moisture content to approximately 55%. After dewatering the grounds are stored in $4m^3$ fuel feed hopper prior to delivery to the fluidised bed boiler.

Fluidised Bed Boiler

The coffee grounds burning boiler is of the vertical water tube fluidised bed type. The bed comprises sand, aerated by primary air, onto which the coffee grounds are fed at three points using screw feeders and pneumatic distribution systems. Torch type burners are provided to achieve the initial bed temperature required for coffee grounds combustion. Natural gas is used for start-up and if necessary to maintain combustion chamber and bed temperature when burning coffee grounds. Gas oil is available as a standby fuel in the event of an interruption to the gas supply.

A bed sand discharge system is provided to remove sand in the event of clinker formation. A sand feed system replaces sand removed or lost through abrasion within the bed and carried over out of the furnace.

A steam atomisation system enables the injection and atomisation of syrup from the grounds press water to be processed in the boiler.

The design of the combustion chamber is such that the residence time is at least 2 secs after the last injection of air and a minimum combustion temperature of 850 ^{0}C is maintained within the furnace.

Flue gases from the boiler pass through a pair of cyclone separators, an economiser and into a bag-house filter where particulate emissions are reduced to the authorised limit prior to

discharge to atmosphere through a dedicated 50m high steel chimney. A bypass is not provided around the bag filter as hot start-up is achieved by preheating the boiler with steam injection.

Ash Handling and Collection

Ash from the fluidised bed boiler and particulate abatement are conveyed to a bulk storage silo prior to final off-site disposal.

Treatment of Water and Solids from the Dewatering Process

The press water collected from dewatering the coffee grounds is treated by use of sieves and mechanical plant to achieve a reduction in the suspended solids content. Coffee oil is removed in a separator and can be sent for recycling or burnt in the coffee grounds boiler. The remaining liquid is then distilled to produce a clear condensate and thick syrup. The syrup is then burnt in the coffee grounds boiler and the condensate is passed to the factory effluent system for discharge to sewer with the rest of the factory effluent.

Auxiliary Boilers

Two auxiliary natural gas boilers are installed within the installation and are used for process steam generation in the event that the coffee grounds burning boiler is not available. Flue gases from these boilers discharge through a 42.5m high concrete chimney.

Emissions to Air

The Operator has identified the principal emissions to air as being from the coffee grounds boiler via the 50metre stack.

The emissions to air have been identified as :-

- Particulate matter
- Oxides of nitrogen
- Carbon monoxide
- Volatile organic compounds (VOC's)

Abatement of particulate matter is controlled using a combination of cyclone separators and a baghouse filter.

A urea injection system is installed for the abatement of NO_x.

Abatement of carbon monoxide and VOC's is achieved by optimising plant thermal efficiency.

The installation also has limited potential for emissions of SO_x, dioxins and furans. The emissions of these substances are considered to be minimal. However, the installation has been constructed such that the addition of carbonate dosing equipment for reducing SO_x may be made should it prove necessary at a later date. Dioxin and furan abatement could also be added in the form of activated carbon addition upstream of the bag filter.

Emissions to Water

All trade effluent from the installation passes to the instant coffee factory site where it is discharged to a sewage undertaker for treatment off-site.

There are no discharges to controlled waters from the installation.

Fugitive Emissions to Air

The following table indicates potential sources of fugitive emissions to air together with an assessment of the techniques for their prevention :-

Potential Source Points	Activity	Abatement
Bag filter	Potential dust spillage. Release when capping or changing bags	Enclosed system with regular inspection kept under suction by the induced draught fan. Shut down of individual bag cells in sufficient time to allow dust to settle prior to changing bag
Ash transfer system	Potential dust spillage	Enclosed system with regular inspection.
Ash silo	Released during filling and emptying	Water conditioning being considered to reduce potential emissions during loading of containers/vehicles..

The following general techniques will also be employed:-

· Covering of skips
· Enclosure of vessels with filtered vents where appropriate
· Avoidance of outdoor stockpiles
· Regular inspection of potential release points
· Regular housekeeping

Releases to Land

All disposals to land will be via a licensed waste contractor.

Odour

The Operator considers that odours from the permitted installation are minimal and will maintain an Odour Management Plant.

The instant coffee production process receives regular odour complaints but this part of the site does not form part of the permitted installation.

Additional conditions have been included in this Part associated with the use of distillate fuel oil and abnormal operating conditions, namely :-

2.3.2- restricts the use of distillate fuel oil to 45 days per year in the event of interruption to the natural gas supply.

2.3.3- restricts the sulphur content of the distillate fuel oil

2.3.4- imposes restrictions on the use of the installation in the event of failure of abatement and CEM's equipment.

Condition 2.4: Emissions to Groundwater [Groundwater Regulations 1998]

A PPC permit should not be issued unless the relevant requirements of the Groundwater Regulations have been met.

There will be no List 1 or List II substances either directly or indirectly released to groundwater.

The area of the combustion plant and associated plant is concrete covered. Rainwater is re-routed to alternative discharges outside the installation boundary.

Condition 2.5: Waste Handling and Storage

Waste handling and storage techniques are some of the available techniques for emission prevention and control and are therefore part of the determination of BAT for the installation. Regulation 12(9)(b) also requires consideration of appropriate conditions for the management of waste generated by the installation.

Provision has been made to ensure that waste arisings are stored on site securely, prior to offsite disposal. Storage areas are clearly marked and identified.

Condition 2.6: Waste Disposal and Recovery

Regulation 11 requires a consideration of appropriate conditions to ensure that "waste production is avoided or where waste is produced it is recovered where technically and economically possible, or if not disposed of while avoiding or reducing any impact of the environment".

The nature of the coffee grounds combustion process is to prevent landfilling of the spent grounds.

Particulate from the fluidised bed boiler is the main waste arising from the installation and this is insignificant compared with the quantity of coffee grounds initially produced from the instant coffee process. Currently there is no alternative to landfilling this waste.

Condition 2.7: Energy Efficiency

The efficient use of energy would be an available technique for the prevention and reduction of emissions (i.e. a BAT technique). Energy efficiency is also one of the factors listed in Schedule 2, which should be taken into account in determining which is the best of the range of techniques for prevention and reduction of emissions. In addition Regulation 11 requires appropriate conditions to be imposed in order to secure that "energy is used efficiently". However, in the case of installations which are the subject of climate change levy or trading

agreements, some of these requirements are met through those agreements and not through permit conditions.

The whole instant coffee production site is subject to a climate change levy agreement.

The potential energy from all fuel sources and their end uses have been identified in the application.

The primary purpose of the installation is the generation of steam for instant coffee production with the resultant saving on burning fossil fuels.

Basic low cost physical energy efficiency techniques such as auto shut-off dampers, water temperature controls, heat recovery systems, thermal insulation etc are installed.

Condition 2.8: Accidents

Regulation 11 requires the consideration of appropriate conditions to secure "the necessary measures are taken to prevent accidents and limit their consequences".

The installation is not subject to COMAH Regulations 1999.

The EMS includes consideration of accidents and consequences. The Operator has identified the relevant hazards and assessed the associated risks.

There are no specific conditions added to the permit.

Condition 2.9: Noise and Vibration

Noise is defined as an emission in the Regulations and therefore BAT should be used to prevent or reduce noise and vibration.

The Applicant has responded to question B2.9 of the application form with part 2.9 of the application. This initial response was deemed unsatisfactory and a request for further information was progressed via Schedule 4 Notices.

The Applicant has carried out a noise survey and the results are shown in Appendix 7 to the application. The nearest noise receptors are shown in Figure 10 to the application and these have been identified as domestic dwellings local to the instant coffee production site boundary. Noise from the instant coffee production process has been the subject of local complaint, but this does not form part of the permitted installation.

There are no specific conditions added to the permit covering Noise and Vibration.

Condition 2.10: Monitoring and Sampling

Regulation 12(9)(f) requires consideration of appropriate conditions to address "emission monitoring requirements specifying measurement methodology, frequency and evaluation procedure". Conditions 2.10.2 and 2.10.3 set standard requirements for provision of access to sampling/monitoring points for the Agency. These conditions are considered to be appropriate in terms of this Regulatory requirement.

The Applicant has responded to question B2.10 of the application form with part 2.10 of the application.

A quality assurance procedure will be in place to ensure regular and accurate calibration of all instruments in accordance with British standards and manufacturers requirements.

Gaseous Emissions

Continuous emissions monitoring systems will be installed to provide readings of NO_x, CO, and particulate matter. Isokinetic spot sampling will also be required for these substances on an annual basis.

Bi-annual periodic spot sampling will be required for SO_x and VOC's

No specific frequency has been included for sampling dioxins and furans. These substances will be sampled as agreed with the Environment Agency.

Actual and trend data will be retrievable on-line.

Conditions have been included in the permit covering :-

- The requirement to give 14 days advance notice before undertaking monitoring/spot sampling.
- Safe and permanent access to emission points

Liquid Emissions

There are no direct releases to controlled waters from the installation

Discharges to sewer will be via the instant coffee production site.

Solid Discharges

The monitoring of solid discharges are considered to meet indicative BAT requirements. Licensed contractors only will be used.

Environmental Monitoring

There are no proposals for offsite monitoring.

Process Variables

Process variables have been identified by the Operator and are detailed in section 2.10.3 of the application.

Monitoring Standards

CEN Standards will be used, if these are available, otherwise National or other agreed International standards will be used.

Isokinetic sampling and monitoring will be undertaken by suitably qualified and accredited companies i.e. NAMAS/UKAS.

Recording and reporting procedures will be in place for all monitoring.

Condition 2.11: Decommissioning

The Regulations require consideration of appropriate conditions in terms of steps to be taken after the definitive cessation of operations at the installation (Regulation 12(9)(d) and steps that will help to ensure that "upon the definitive cessation of activities the necessary measure are taken to avoid any pollution risk and to return the site of the installation to a satisfactory state" (Regulation 11).

The Applicant has responded to question B2.11 of the application form with part 2.11 of the application.

A site report for the installation has been supplied.

A site closure plan in accordance with Nestle corporate policy already exists and a summary of this is detailed in section 2.11.2 of the application.

No additional conditions are required within condition 2.11 of the permit.

Consideration of Multi Operator Installations

Where there is more than one operator in an installation it may be appropriate to set additional conditions to secure the satisfactory operation of the installation as a whole.

This is not a multi-operator installation, there are no further conditions required.

B3*:* **Part 3 – 5 of the Permit**

General Note

Parts 3 to 5 of the permit contain mainly standard template conditions on records, reporting and notification. There are no specific application questions on these subjects so no assessment of the application is recorded in this part of the decision document.

Conditions - Part 3: Records

Effective record keeping is considered to be one of the management techniques for emission prevention and control. The permit contains standard conditions (3.1.1 to 3.1.7) for record keeping which are all considered to be appropriate BAT conditions, in this respect.

There are no additional conditions considered necessary for inclusion under this part of the permit.

Conditions - Part 4: Reporting

Regulation 12(9)(f) requires consideration of appropriate conditions in respect of the reporting of monitoring results. The permit contains standard reporting conditions, which are considered appropriate in this regard.

There are no additional conditions considered necessary for inclusion under this part of the permit.

Conditions - Part 5: Notification

Regulation 12(9)(f) requires consideration of appropriate conditions for notification of incidents or accidents which may cause significant pollution. The permit contains standard notification requirements, which are considered appropriate in this regard.

There are no additional conditions considered necessary for inclusion under this part of the permit.

B4: Parts 6 – 9 of the Permit

General Note

Part 6 of the permit contains conditions which are emission limit values (ELVs) for the purposes of the Regulations and Part 9 is the Improvement Programme. The substance of the rationale for these two sections may appear more fully in section B2.3 above. Part 9 allows for the imposition of off-site conditions.

Conditions - Part 6: Emissions

The Regulations require PPC permits to contain emission limit values for emissions based on BAT, the technical characteristics of the particular installation, its geographical location and the local environmental conditions. Consideration should also be given to whether any EC EQSs require stricter ELVs to be imposed. Analysis of the techniques which are being permitted for this installation on the basis of BAT is contained in Section B2.3 of this document. The ELVs imposed in Section 6 of the permit are based on the techniques considered to meet the requirements of the Regulations.

PPC Environmental Assessment

Table 3.1 of the application details the location of all release points to air and water.

Emissions to Air

It is considered that only the point source release from the fluidised bed boiler via the 50m steel chimney stack (designate Release Point A2) will require specific release limits to be set. These are listed in the table below.

Emissions from the two gas fired auxiliary boilers are considered to be insignificant.

Parameter (mg/m^3)	Emission Point A2			
	30 minute Average Concentration	10 Minute Average Concentration	Maximum Average Concentration	Maximum Periodic Concentration
Total Particulate	**25**	**N/A**	**37.5**	**25**
Oxides of Nitrogen (as NO_2)	**300**	**N/A**	**450**	**300**
Oxides of Sulphur (as SO_2)	**N/A**	**N/A**	**N/A**	**300**
Carbon Monoxide	**N/A**	**100**	**300**	**100**
Volatile Organic Compounds (as Total Organic Carbon)	**N/A**	**N/A**	**N/A**	**20**

The averaging periods for continuously measured concentration readings takes into account only the hours during which the plant is actually in operation, including start-up and shut-down.

Emissions to Land

There are no emission to land within the installation

Emissions to Water

There are no emissions to controlled waters within the installation

Emissions to Sewer

There are no direct emissions to sewer within the installation. Emissions to sewer are via the instant coffee production site.

Emissions of Heat

Under normal operating circumstances, there will be no emissions of heat

Emissions of Noise and Vibration

There will be noise emissions from the installation, which have been assessed by the applicant against the criteria specified in BS4142:1997

Consideration of EC Directives

The EC Directives are detailed in the IPPC A Practical Guide Note. The following Directives have been assessed as appropriate for consideration for this permit application:-

Air Quality

Directive 80/779 (sulphur dioxide and particulates)
Directive 85/203 (nitrogen dioxide)

These Directives will be replaced with Directive 99/30 which has been adopted as a daughter Directive to the Air Quality Framework Directive 96/62

The most up to date piece of English legislation detailing air quality objectives is The Air Quality (England) Regulations 2000 (SI 2000 No 928) which details the following relevant statutory objectives;

Nitrogen dioxide: 200 $\mu g/m^3$ (hourly mean 99.8th percentile) achieve by 31/12/05
40 $\mu g/ m^3$ (annual mean) achieve by 31/12/05

Carbon monoxide: 11.6 mg/m^3 (8 hour running mean) achieve by 31/12/03

PM_{10}: 50 $\mu g/m^3$ (24 hour mean, 99th percentile) achieve 31/12/04
40 $\mu g/m^3$ (annual mean) achieve 31/12/04

Sulphur dioxide 125 $\mu g/m^3$ (24 hour mean 99.9th percentile) achieve 31/12/04
350 $\mu g/m^3$ (hourly mean 99.5th percentile) achieve 31/12/04
266 $\mu g/m^3$ (15 minute mean 99th percentile) achieve 31/12/05

The Applicant has considered these objectives by undertaking air dispersion modelling. UK ADMS (Version 3) was used for dispersion modelling.

The model predictions show that the incremental impact from the installation are considered small compared to both the ambient air quality and the assessment criteria and therefore are not of concern to human health. The predictions confirm that the 50m chimney stack provides dispersion that is adequate to render emissions to atmosphere harmless at ground level.

It is considered that this assessment demonstrates there will be no significant adverse impacts arising from emissions to air from this installation

Water Quality

As there are no discharges to controlled waters other than site drainage no assessments have been made of EC Directives.

Consideration of R12(9) Requirements

Regulation 12(9)(a) requires the imposition of conditions to minimise long distance and transboundary pollution. The relevant conditions are imposed in condition 2.3 of the permit, by allowing operation of the plant as per the Operators application, in particular, with the use of abatement and other BAT techniques and in condition 6.1 by allowing emissions as per the limits specified. It has not been necessary to impose any further conditions.

Regulation 12(9)(b) requires imposition of conditions to ensure appropriate protection of the soil and groundwater. The relevant conditions are imposed in condition 2.3 of the permit, by allowing operation of the plant as per the Operators application, in particular with the use of impervious surface to ensure no leakage to soil, and in condition 6.2 by specifying no emissions to land within the installation boundary. It has not been necessary to impose any further conditions.

Regulation 12(9)(c) requires imposition of conditions relating to periods when the installation is not operating normally where there is a risk that the environment may be adversely affected during such periods, including, in particular, start up operations, leaks, malfunctions and momentary stoppages. The relevant conditions are imposed in 2.3 of the permit, by allowing operation of the plant as per the Operators application, in particular with the description of such abnormal modes of operation.

Consideration of S81 EA 95

There is a requirement to have regard to the National Air Quality Strategy. This regard is, in particular, concerning the emission of nitrogen dioxide, and is dealt with above.

Explanation of the ELVs set in Section 6

6.1 Emissions to Air

Table 6.1.1 details the main emission points to air. They are :-

Emission Point Reference/Description	Source
A1	42.5m high concrete chimney stack releasing exhaust gases from Nos 2&3 Auxiliary Boilers
A2	50m high steel chimney stack releasing exhaust gases from No 4 Coffee Grounds Boiler

The limits for emissions are set in table 6.1.2. The environmental impacts have been assessed above and are deemed acceptable.

It is not considered necessary to impose annual mass release limits in addition to ensure environmental protection or to demonstrate BAT.

No specific conditions for odour have been set under condition 6.1.

6.2 Emissions to Land

There are no releases to land within the installation.

Condition 6.2.2 requires the Operator to contact the Agency as soon as possible if the state of the land changes significantly enough to affect or update the Site Report.

6.3 Emissions to Water

There are no emissions to controlled waters within the installation therefore conditions will not be required under this section of the permit.

6.4 Emissions to Sewer

The process effluent is discharged to foul sewer via the instant coffee production site which is not part of the permitted installation therefore conditions will not be required under this section of the permit.

6.5 Emissions of Heat

There will be no emissions of heat therefore conditions will not be required under this section of the permit.

6.6 Emissions of Noise and Vibration

There are no specific conditions required under this section of the permit.

Waste Management Licensing Regulations 1994

The "relevant objectives" of the 1994 Regulations will apply to any PPC installation which involves the recovery or disposal of controlled waste within the meaning of the Regulations.

The plant does not constitute a waste management activity under the above Regulations.

The Conservation (Natural Habitats etc) Regulations 1994

These Regulations impose various requirements in respect of the consideration of the impact of any proposals on a European site.

No additional conditions have been included to satisfy the Habitats Regulations.

Consideration of a relevant environmental statement

The Regulations require consideration of "relevant information obtained or conclusion arrived at pursuant to Articles 5, 6 and 7 of the EA Directive".

The applicant has responded to question B5 of the application form by stating that the development of the installation did require an environmental assessment under Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment.

No further conditions are required within the permit, pertaining to an Environmental Statement.

Conditions - Part 7: Transfer to effluent treatment plant

The use of an ETP will be one of the operating techniques for emission prevention and control. The applicant's proposals concerning any ETP will have been assessed under condition 2.3 above. However, additional specific conditions concerning transfers to ETPs may be included here.

There will be no transfer of effluent to an on site effluent treatment plant therefore this condition shall not apply.

Conditions - Part 8: Off-Site Conditions

Regulation 12(12) allows for the imposition of off-site conditions, subject to compensation in accordance with the provisions of Schedule 6.

There are no offsite conditions specified.

Conditions - Part 9: Improvement Programme

In the case of existing installations which are considered to meet the requirements of the Regulations at this time but which require improvement in the future in order to continue to meet the requirements over time, the use of improvement conditions will be appropriate. The template permit includes standard improvement conditions, which are considered to meet this requirement.

There are no improvement conditions included in the permit.

B5: Other Requirements That May Lead To The Imposition of Conditions

General Note

Other legislative requirements and parts of the PPC Regulations need to be assessed and may lead to the imposition of conditions. These are recorded below.

Secretary of State Directions relating to Directives

A Direction has been made under the PPC Regulations by the Secretary of State in order to require the Agency to comply with Directions that have been made under EPA 90 S7(2)(b), for the implementation of community environmental obligations.

Council Directive 2000/76/EC on the Incineration of Waste

The requirements of Council Directive 2000/76/EC on the Incineration of Waste has been assessed in the determination of this permit and it is considered that the exclusion relating to food products applies and hence this Directive is not applicable to this installation.

Environment Act 1995 – Section 4 (Pursuit of Sustainable Development)

Consideration has been given to whether any additional requirements should be imposed in terms of the Agency's duty to contribute to sustainable development under S4 EA95, but it is felt that existing requirements are sufficient in this regard and no other appropriate requirements have been identified.

Environment Act 1995 – Section 7 (Pursuit of Conservation Objectives)

Consideration has been given to whether any additional requirements should be imposed in terms of the Agency's duty to have regard to the various conservation objectives set out in S7 EA95, but it is felt that existing requirements are sufficient in this regard and no other appropriate requirements have been identified.

Human Rights Act 1998

The Act requires that decisions of public authorities such as the Agency do not breach the Human Rights of any person.

The document "Interim Legal Advice To Environment Agency Stage on the Impact of the Human Rights Act 1998" has been used to assess the impact of this permit on the Human Rights Act 1998.

Of particular consideration are Article 2, which identifies the right to life and has been raised, in some cases concerning the carrying on of pollution activities and Article 8, which gives the right to respect for private and family life, and could be raised against the Agency if it fails to properly control the polluting activity, protect people against the activity or provide people with sufficient information about the risks.

Article 8 in particular, applies to the decision the Agency takes on whether to grant or refuse a permit and the conditions imposed. It is unlikely that the granting of this permit will breach any persons right to respect for private and family life due to the conditions imposed. The application has been made available to the public on two public registers.. No subsequent representations have been made by members of the public, regarding this application on matters which suggest there may be effects on their private or family life.

PART C – CONCLUSION

The use of waste coffee grounds in the installation to generate steam is considered to be a renewable energy that offers the potential to conserve resources of non-renewable fossil fuels.

The application has been assessed and the installation will be permitted subject to conditions which secure BAT and other requirements of the Regulations. The assessments included in the determination indicate that the impact on the local environment will not be detrimental.

The permit conditions require continual review of the plant performance against the development of new technology.

PART D –APPENDIX.

Consultee	Response	Resulting Action
South Derbyshire District Council	Initial response raised concerns relating to noise issues. These were addressed in a Schedule 4 Notice.	Response to Schedule 4 Notice issued to local Authority. No further action required.
Southern Derbyshire Health Authority	Initial response requested further information on the composition of the products of combustion, emission data, plume map, adverse health effects from similar installations and details of odour and noise complaints. These were addressed in a Schedule 4 Notice	Response to Schedule 4 Notice issued to the Health Authority and their response concluded that they could find no evidence that the proposed facility would adversely affect the residents living in the vicinity of the installation. No further action required.
Severn Trent Water Ltd	Initial concerns about the failure of the Operator to comply with existing consent.	The discharge to sewer is via the instant coffee production area and does not form part of the installation. No further action required.
English Nature	No initial concerns. However, reference was made to the close proximity of the Old River Dove. This was addressed in a Schedule 4 Notice.	Response to Schedule 4 Notice issued to English Nature who concluded there were no issues relating to statutory sites. No further action required.
Food Standards Agency	No comments for consideration	No further action required
Scientific Support	Initial concerns relating to the site report and noise. These were addressed in a Schedule 4 Notice.	Response to Schedule 4 Notice issued to Scientific Support. No further action required.
Tactical Planning	Initial concerns relating to the EMS, raw materials and energy. These were addressed in a Schedule 4 Notice.	Response to Schedule 4 Notice issued to Tactical Planning. No further action required.
Environmental Protection	Initial comments referred to landspreading of coffee coloured waste water.	The landspreading of waste coffee water is an historical activity associated with the instant coffee process and not part of the installation. No further action required.
Water Quality	No comments for consideration	None required
Conservation	No objections raised, however the site is close to the Old River Dove SSSI. An assessment of the potential impact of the installation on this site was requested in a Schedule 4 Notice.	The only activity which affects the River Dove is the abstraction of river water under an abstraction licence. It was concluded that the installation would not impact on the Old River Dove. No further action required.

ENVIRONMENT AGENCY

Variation Notice with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

Nestle UK Limited
Marston Lane
Tutbury
Burton on Trent
Staffordshire
DE13 9LY

Variation Notice Number

CP3532XQ

Permit number

BJ9576IZ

Nestle UK Limited

Permit Number BJ9576

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.

1) The Operator has been reviewing the permitted process because of the number of changes which have taken place on the site since Permit issue and now considers that the primary purpose of the permitted installation is not the disposal of waste coffee grounds but the generation of energy from this material.

   If substantiated this reclassification of the site would satisfy the definition for a co-incineration plant and would require a change to the emission limit value criteria for emission into air.

   This Variation allows the Operator to undertake a trial to ascertain whether the existing plant and monitoring equipment can meet emission limit criteria for co-incineration.

Status Log of the permit		
Detail	**Date**	**Response Date**
Application BJ9576	Received 29/12/2000	Duly made
Response to request for information	Request dated 2/8/2001	Response dated 30/10/2001
Response to request for information	Request dated 8/8/2001	Response dated 30/10/2001
Permit BJ9576	Determined	Effective Date 24/02/2003
Request for Variation CP3532XQ	Received 04/04/2008	Determined 20/06/2008

End of Introductory Note

Variation Notice

Permit number
BJ9576IZ

Variation number
CP3532xq

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

Nestle UK Limited ("the Operator"),

whose registered office (or principal office) is
St. George's House
Park Lane
Croydon
Surrey
CR9 1NR

company registration number **51491**

to operate an installation at
Marston Lane
Tutbury
Burton-on-Trent
Staffordshire
DE13 9LY

to the extent set out in Schedules 1 to 3 of this Variation Notice.

The Notice shall take effect from **25/06/2008**

Signed	Date
	25th June 08

M. A. Smith

Authorised to sign on behalf of the Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

1.1) None

SCHEDULE 2 – CONDITIONS TO BE AMENDED

2.1) Amend Table 9.1.1 to the following :-

Table 9.1.1: Improvement programme		
Reference	**Requirement**	**Date**
IC1	The Operator shall undertake a trial to ascertain if the existing plant and monitoring equipment meet the emission limit criteria for co-incineration specified in Table 1 below.	31/12/2008
IC2	The Operator shall submit a written report to the Agency detailing the results of the trial undertaken in IC1 above	31/01/2009

Table 1: Emissions to air for co-incineration				
Emission point	**Parameter**	**Emission limit**	**Reference Period** (1)	**Monitoring method**
A2	Particulate matter	10 mg/m^3	Daily average	BS EN 13284-2 (5)
A2	Particulate matter	30 mg/m^3	Periodic over minimum 1-hour period. (6)	BS EN 13284-1
A2	Total Organic Carbon (TOC)	10 mg/m^3	Daily average	BS EN 12619 (5)
A2	Total Organic Carbon (TOC)	20 mg/m^3	Periodic over minimum 1-hour period. (6)	BS EN 12619
A2	Carbon monoxide	150 mg/m^3	At least 95% of all measurements determined as 10-minute average values taken in any 24-hour period.	ISO 12039 (4)
A2	Carbon monoxide	50 mg/m^3	Daily average	ISO 12039 (4)
A2	Carbon monoxide	100 mg/m^3	Periodic over minimum 1-hour period . (6)	ISO 12039
A2	Sulphur dioxide	50 mg/m^3	Daily average	BS 6069-4.4 (3)
A2	Sulphur dioxide	200 mg/m^3	Periodic over minimum 1-hour period. (6)	BS 6069-4.1
A2	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	200 mg/m^3	Daily average	ISO 10849 (3)
A2	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	400 mg/m^3	Periodic over minimum 1-hour period. (6)	ISO 10849 or BS ISO 11564
A2	Dioxins / furans (I-TEQ)	0.1 ng/m^3	Periodic over minimum 6-hour, maximum 8-hour period. (2) (6)	BS EN 1948

Note 1: In relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 11% dry for solid fuels;

Note 2: The I-TEQ sum of the equivalence factors to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum.

Note 3: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 20%. Valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted this value of the confidence interval (20%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete half-hour period, the half-hourly average shall nonetheless be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. (The number of half-hourly averages so validated shall not exceed 5 per day). Daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value will be considered valid if no more than five half-hourly average values in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid.

Note 4: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 10%. Valid 10-minute average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted this value of the confidence interval (10%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete 10-minute period, the 10-minute average shall nonetheless be considered valid if measurements are available for a minimum of 7 minutes during the 10-minute period. (The number of 10-minute averages so validated shall not exceed 15 per day). Daily average values shall be determined as the average of all the valid 10-minute average values within a calendar day. The daily average value will be considered valid if no more than fifteen ten-minute average values in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid.

Note 5: As Note 3, except that the value of the confidence interval is 30% in place of 20%.

Note 6; Periodic testing to be undertaken once during trial period.

2.2) Amend Condition 4.1.2 to the following :-

This Condition is suspended until the completion of IC2 above.

2.3) Amend Condition 6.1.3 to the following :-

This Condition is suspended until the completion of IC2 above.

2.4) Reporting Form Number S3/Air 2 has been amended as follows for the purpose of the trial in IC1 above:-

See Appendix 1 for particulate matter
See Appendix 2 for total organic compounds
See Appendix 3 for carbon monoxide
See Appendix 4 for sulphur dioxide
See Appendix 5 for oxides of nitrogen

SCHEDULE 3 – CONDITIONS TO BE ADDED

3.1) None

APPENDIX 5

Permit Reference Number : CP3532XQ

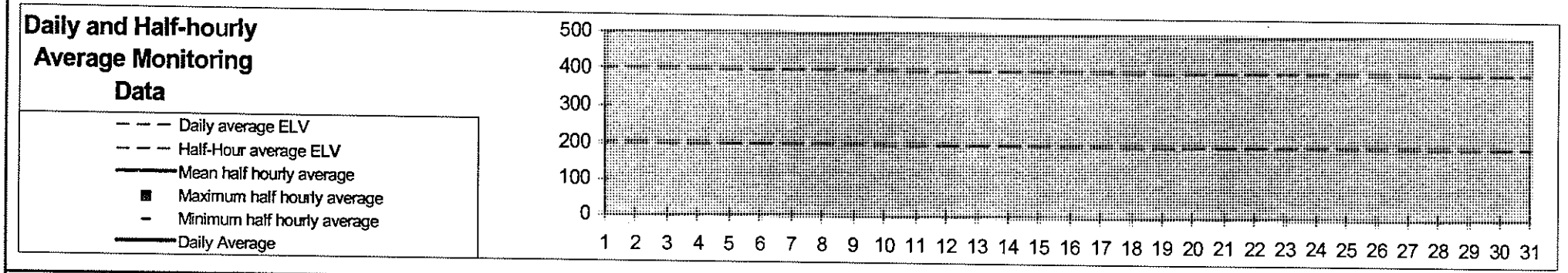
Operator : Nestle UK Limited

Installation : Tutbury

Form Number : CP3532XQ / CEM.NOx / A2

Reporting of Continuously Monitored Emissions to Air for Oxides of Nitrogen Emission Point A2 for the month of 2008

Daily and Half-hourly Average Monitoring Data



	Monthly summary		Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
			Half-Hour average ELV	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Half-hourly average	Monthly maximum		Maximum half hourly average																															
	Monthly mean		Mean half hourly average																															
	Monthly minimum		Minimum half hourly average																															
	Total invalid results		No. of invalid results																															
	Sum of exceedances		No. of exceedances of ELV																															
			Daily average ELV	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Daily average	Monthly maximum		Daily Average																															
	No. of invalid days		Value valid?																															
	Sum of exceedances		Value exceeds ELV (Y/N)																															

Signed .....

(authorised to sign as representative of Operator)

Date.....

APPENDIX 2

Permit Reference Number : CP3532XQ

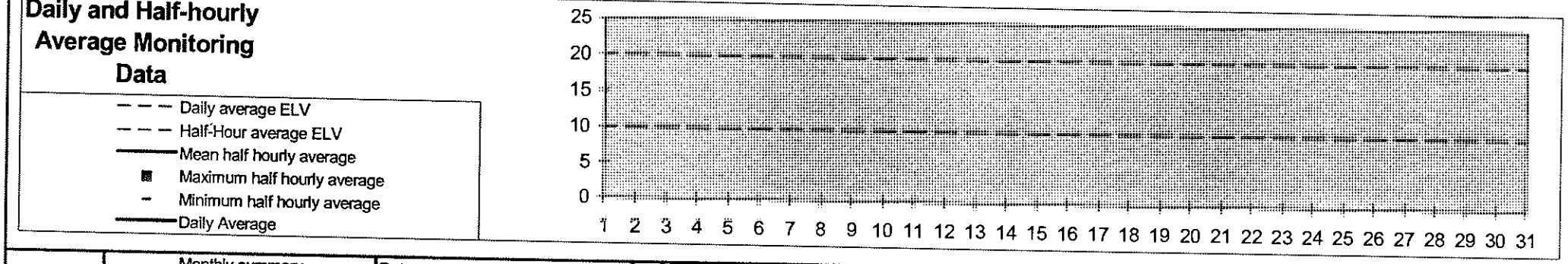
Operator : Nestle UK Limited

Installation : Tutbury

Form Number : CP3532XQ / CEM.TOC / A2

Reporting of Continuously Monitored Emissions to Air for TOC Emission Point A2 for the month of ....., 2008

Daily and Half-hourly Average Monitoring Data



	Monthly summary		Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
			Half-Hour average ELV	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Half-hourly average	Monthly maximum		Maximum half hourly average																															
	Monthly mean		Mean half hourly average																															
	Monthly minimum		Minimum half hourly average																															
	Total invalid results		No. of invalid results																															
	Sum of exceedances		No. of exceedances of ELV																															
			Daily average ELV	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Daily average	Monthly maximum		Daily Average																															
	No. of invalid days		Value valid?																															
	Sum of exceedances		Value exceeds ELV (Y/N)																															

Signed .....
(authorised to sign as representative of Operator)

Date.....

APPENDIX 3

Permit Reference Number : CP3532XQ

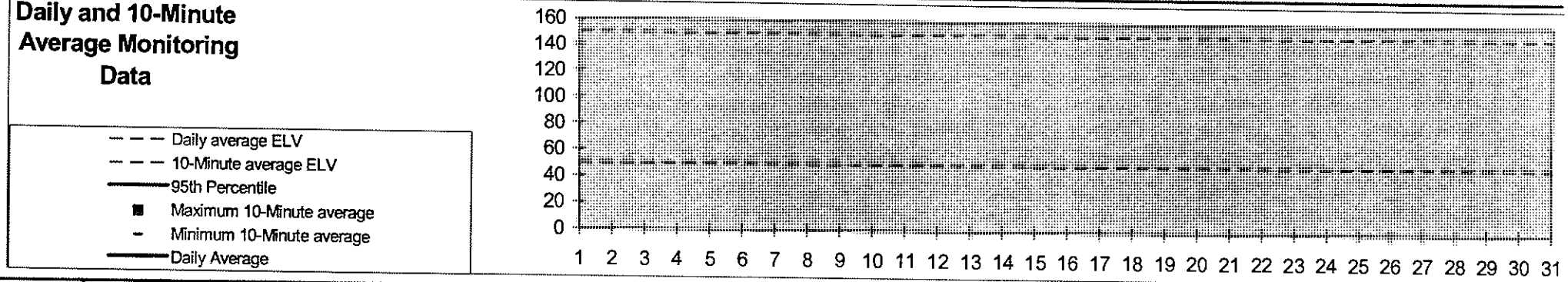
Operator : Nestle UK Limited

Installation : Tutbury

Form Number : CP3532XQ / CEM.CO / A2

Reporting of Continuously Monitored Emissions to Air for Carbon Monoxide for the month of ....., 2008

Daily and 10-Minute Average Monitoring Data



	Monthly summary		Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
10-Minute average			10-Minute average ELV	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
	Monthly maximum		Maximum 10-Minute average																															
	Monthly 95th percentile		95th Percentile																															
	Monthly minimum		Minimum 10-Minute average																															
	Total invalid results		No. of invalid results																															
	Sum of exceedances		No. of exceedances of 95th %-ile																															
Daily average			Daily average ELV	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	Monthly maximum		Daily Average																															
	No. of invalid days		Value valid?																															
	Sum of exceedances		Value exceeds ELV (Y/N)																															

Signed .....
(authorised to sign as representative of Operator)

Date.....

APPENDIX 4

Permit Reference Number : CP3532XQ

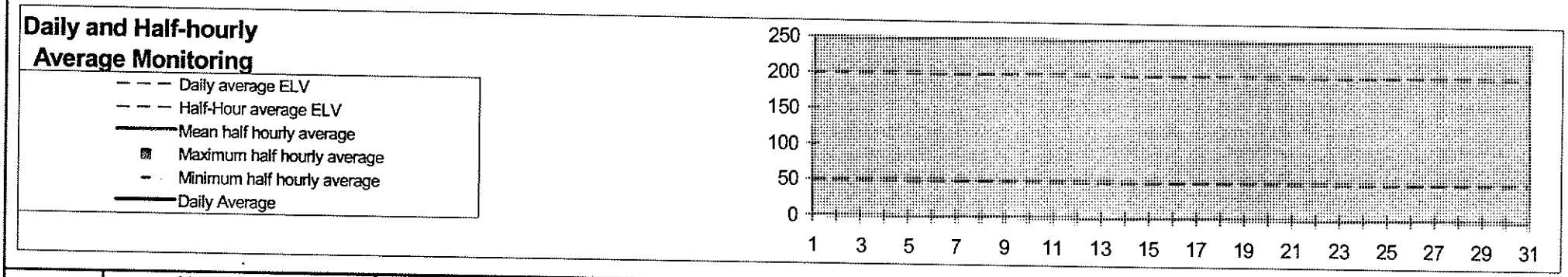
Operator : Nestle UK Limited

Installation : Tutbury

Form Number : CP3532XQ / CEM.SO2 /A2

Reporting of Continuously Monitored Emissions to Air for Sulphur Dioxide Emission Point A2 for the month of 2008

Daily and Half-hourly Average Monitoring



	Monthly summary		Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Half-hourly average			Half-Hour average ELV	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	Monthly maximum		Maximum half hourly average																															
	Monthly mean		Mean half hourly average																															
	Monthly minimum		Minimum half hourly average																															
	Total invalid results		No. of invalid results																															
	Sum of exceedances		No. of exceedances of ELV																															
Daily average			Daily average ELV	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	Monthly maximum		Daily Average																															
	No. of invalid days		Value valid?																															
	Sum of exceedances		Value exceeds ELV (Y/N)																															

Signed .....
(authorised to sign as representative of Operator)

Date.....

APPENDIX 1

Permit Reference Number : CP3532XQ

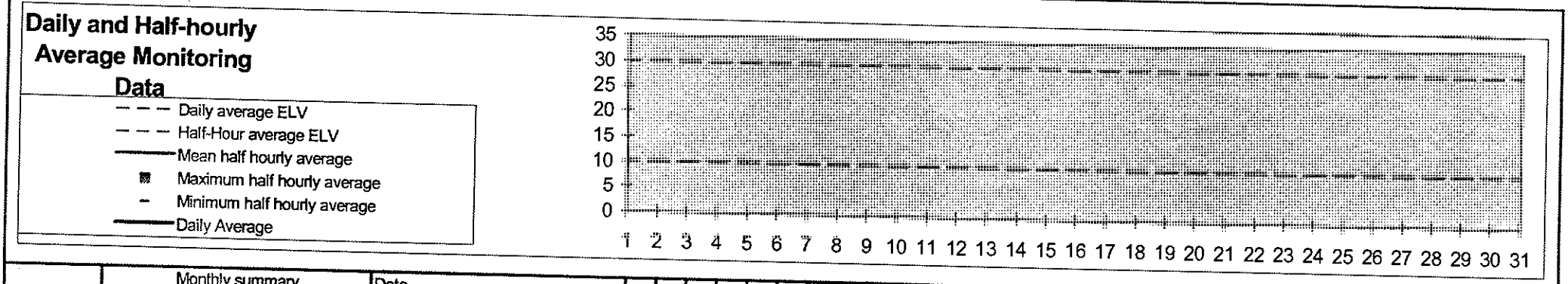
Operator : Nestle UK Limited

Installation : Tutbury

Form Number : CP3532XQ / CEM.PM / A2

Reporting of Continuously Monitored Emissions to Air for Particulate Matter Emission Point A2 for the month of 2008

Daily and Half-hourly Average Monitoring Data



	Monthly summary		Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Half-hourly average			Half-Hour average ELV	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	Monthly maximum		Maximum half hourly average																															
	Monthly mean		Mean half hourly average																															
	Monthly minimum		Minimum half hourly average																															
	Total invalid results		No. of invalid results																															
	Sum of exceedances		No. of exceedances of ELV																															
Daily average			Daily average ELV	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Monthly maximum		Daily Average																															
	No. of invalid days		Value valid?																															
	Sum of exceedances		Value exceeds ELV (Y/N)																															

Signed .....
(authorised to sign as representative of Operator)

Date.....

Permit with introductory note

Pollution Prevention and Control Regulations 2000

Nestle UK Limited
Marston Lane
Tutbury
Burton-on-Trent
Staffordshire
DE13 9LY

Permit number

BJ9576

Contents

Introductory note

This introductory note does not form a part of the Permit

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

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

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

Brief description of the installation regulated by this permit

The main purpose of the activity at the installation is :-

Burning waste coffee grounds generated in the course of producing instant coffee. The waste coffee grounds are used to produce process steam for use in the instant coffee production process.

The coffee production process produces waste wet coffee grounds at a maximum rate of 1850kg(dry) per hour. The grounds are then pressed and conveyed to a furnace where they are burnt.

The coffee grounds burning furnace is of the vertical water tube fluidised bed type. The bed is comprised of sand, aerated by primary air, onto which the grounds are fed at three points using screw feeders and pneumatic distribution systems. Torch type natural gas burners are provided to achieve the initial bed temperature required for coffee grounds combustion.

A bed sand discharge system is provided to remove sand in the event of clinker formation and a sand feed system is used to replace sand removed or lost through abrasion within the bed and carried over out of the furnace.

Primary air heating is achieved through a combination of a steam air heater and a gas fired duct burner. The latter is only required during conditions where the grounds feed rate is at a maximum and the coffee grounds moisture level is high. Secondary air is introduced into the combustion chamber in a staged manner to limit the production of oxides of nitrogen.

A steam atomisation system is provided to enable the injection of the syrup from the dewatering process.

Combustion gases pass through a refractory lined combustion chamber and into a two pass evaporator comprised of a combination of water walls and evaporator pendants. Two automatically operated auxiliary, naturally gas fired, burners are installed to ensure that the combustion temperature does not fall below a predetermined minimum level.

Flue gases from the boiler second pass discharge through a pair of cyclone separators, an economiser and into a baghouse filter system where particulate emissions are abated prior to final discharge to atmosphere through a 50 metre high dedicated chimney stack.

A Urea injection system is installed for the final reduction of oxides of nitrogen and provision is also made for the installation of sulphur dioxide abatement equipment should this prove necessary in the future.

In addition to the coffee grounds boiler, two natural gas fired boilers are also installed and used for the generation of site services steam. These boilers will also burn gas oil in the event of interruption of the natural gas supply.

The installation will have releases to air and effluent which will be finally discharged to sewer via a treatment plant with other effluent generated in the production of the instant coffee. This effluent treatment plant does not form part of the installation.

There are no direct discharges to controlled waters.

Discharges to land will be via a licensed contractor.

Coffee oil may also be produced during the coffee grounds dewatering process and this will be sent off site for recycling.

Other PPC Permits relating to this installation		
Permit holder	Permit Number	Date of Issue
None		

Superseded Licenses/Consents/Authorisations relating to this installation		
Holder	Reference Number	Date of Issue
Nestle UK Limited	BG8556	7 February 2000

Talking to us

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

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

Confidentiality

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

Variations to the permit

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

Surrender of the permit

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

Transfer of the permit or part of the permit

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

Status Log

Detail	Date	Comment
Application BJ9576	Received 29/12/2000	Duly made
Response to request for information	Request dated 2/8/2001	Response dated 30/10/2001
Response to request for information	Request dated 8/8/2001	Response dated 30/10/2001
Permit BJ9576	Determined	Effective Date 24/02/2003

End of introductory note.

PERMIT

Permit number **BJ9576**

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

Nestle UK Limited ("the Operator"),

whose Registered Office is

St. George's House
Park Lane
Croydon
Surrey
CR9 1NR

Company registration number **51491**

to operate an Installation at

Marston Lane
Tutbury
Burton-on-Trent
Staffordshire
DE13 9LY

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

Signed

S M Bowen

Authorised to sign on behalf of the Environment Agency

Date

Conditions

1 The permitted installation

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

Table 1.1.1			
Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Schedule 1 Activity Reference (if applicable)	Limits of specified activity
Combustion process	Burning of waste coffee grounds	Section 1.1 A(1)(b)(iii)	Burning of waste coffee grounds from instant coffee production
Abatement of flue gases	Abatement of particulate and gaseous emissions	Directly associated activity	Compliance with emission limits at release points specified
Water discharges to foul sewers	Discharge of process water and site drainage from the installation	Directly associated activity	From the installation to the effluent treatment plant located on the instant coffee production site.

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

1.1.3 There are no pre-operation conditions

2 Operational Matters

2.1 Management techniques and control

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

Table 2.1.1 : Management and control		
Description	Parts	Date Received
Application	The response to question 2.1 given in section 2.1 of the application	29/12/00
Response to Schedule 4 Part 1 Notice	Response to questions 2	01/11/01

2.1.2 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.

2.1.3 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.1.4 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

2.1.5 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.2 Raw materials (including water)

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

Table 2.2.1 : Raw materials (including water)		
Description	Parts	Date Received
Application	The response to question 2.2 given in section 2.2 of the application	29/12/00
Response to Schedule 4 Part 1 Notice	Response to question 3	01/11/01

2.2.2. The Operator shall keep records of the annual use of raw materials

2.3 Operating Techniques

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

Table 2.3.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.3 given in Section 2.3 of the application	29/12/00
Response to Schedule 4 Part 1 Notice	Response to question 8	01/11/01

2.3.2 The total period for which distillate fuel oil can be used as a standby fuel due to an interruption of the gas supply shall not exceed 45 days in any given contract year

2.3.3 The sulphur content of the distillate fuel oil shall not exceed 0.2% by weight and after 1.1.2008 shall not exceed 0.1% by weight.

2.3.4 In the case of abnormal operation the Operator shall shut down the Permitted Installation as soon as practicable, until normal operations can be restored, where :-

a) there is a breakdown of abatement systems; or

b) continuous measurement(s) exceed emission limit value(s) in Table 6.1.3 for a period of 4 hours uninterrupted duration; or

c) continuous emissions monitor(s) is(are) out of service for a period of 4 hours uninterrupted duration; or

d) where the cumulative duration of abnormal operation periods, as specified in 2.3.4(b) and 2.3.4(c) above, over a calendar year is or exceeds 60 hours.

2.4 Groundwater protection

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

Table 2.4.1: Groundwater protection

Description	Parts	Date Received
Application	The response to questions 2.4 given in Section 2.4 of the application	29/12/00

2.5 Waste handling and storage

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

Table 2.5.1: Waste handling and storage		
Description	Parts	Date Received
Application	The response to question 2.5 given in Section 2.5 of the application	29/12/00

2.6 Waste recovery and disposal

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

Table 2.6.1: Waste recovery and disposal		
Description	Parts	Date Received
Application	The response to question 2.6 given in section 2.6 of the application	29/12/00

2.7 Energy Efficiency

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

Table 2.7 1: Energy efficiency		
Description	Parts	Date Received
Application	The response to question 2.7 given in section 2.7 of the application	29/12/00
Response to Schedule 4 Part 1 Notice	Response to questions 4	01/11/01

2.7.2 The Operator shall produce a report annually on the energy consumption of the installation.

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

.

2.8 Accident prevention and control

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

Table 2.8.1 : Accident prevention and control		
Description	Parts	Date Received
Application	The response to question 2.8 given in section 2.8 of the application	29/12/00

2.9 Noise and vibration

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

Table 2.9.1 : Noise and vibration		
Description	Parts	Date Received
Application	The response to question 2.9 given in section 2.9 of the application	29/12/00
Response to Schedule 4 Part 1 Notice	Response to questions 6 and pages 11, 12, 13, 14 and 15.	01/11/01

2.10 Monitoring

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

Table 2.10.1 : Monitoring		
Description	Parts	Date Received
Application	The response to question 2.10 given in section 2.10 of the application	29/12/00

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

2.10.3 There shall be provided:

a safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2, unless otherwise specified in that Schedule; and

b safe means of access to other sampling/monitoring points when required by the Agency.

2.11 Decommissioning

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

Table 2.11.1 : Decommissioning		
Description	Parts	Date Received
Application	The response to question 2.11 given in section 2.11 of the application	29/12/00

2.12 Multi-operator installations

2.12.1 This is not a multi-operator installation

3 Records

3.1.1 A record (a "Specified Record") shall be made of:-

a any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, has had or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;

b all monitoring and sampling taken or carried out in accordance with the conditions of this permit and any assessment or evaluation made on the basis of such data.;

3.1.2 There shall be made available for inspection by the Agency at any reasonable time:

a Specified Records;

b any other records made by the Operator in relation to the operation of the Permitted Installation ("Other Records").

3.1.3 A copy of any Specified or Other Records shall be supplied to the Agency on demand and without charge.

3.1.4 Specified Records and Other Records shall:-

a be legible;

b be made as soon as reasonably practicable; and

c indicate any amendments which have been made and shall include the original record wherever possible.

3.1.5 Specified Records and Other Records shall be retained for a minimum period of 4 years from the date when the records were made For all waste received at or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of 4 years)

a its composition, or as appropriate, description;

b the best estimate of the quantity produced;

c its disposal routes; and

d the best estimate of the quantity sent for recovery.

3.1.6 A record shall be made at the Permitted Installation of any complaints concerning the Installation's effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

4 Reporting

4.1.1 All reports and notifications required by this Permit, or by Regulation 16 of the PPC Regulations, shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.

4.1.2 The Operator shall report the parameters listed in Table S2 to Schedule 2 as follows:

a in respects of the emission points specified;

b for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;

c giving the information from such results and assessments as may be required by the forms specified in those Tables; and

d sending the report to the Agency within 28 days of the end of the reporting period.

4.1.3 The Operator shall, within 36 months of the issue of this Permit, submit a report on potential environmental improvements to the Permitted Installation. For each of the subject areas identified in Section 2 of the appropriate technical guidance, the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in guidance. The methodologies used should be based on those given in Agency guidance note IPPC H1 (Environmental Assessment and Appraisal of BAT) and should justify, against the Best Available Techniques criteria, where potential improvements are not planned to be implemented. As part of their management system the Operator shall submit an updated report every 36 months.

4.1.4 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.

4.1.5 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them.

5 Notifications

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

a the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;

b the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;

c the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and

d any accident which has caused or may have the potential to cause pollution.

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

a the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and

b the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;

and such information shall be in accordance with that Schedule.

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

a permanent cessation of the operation of any part of or all of the Permitted Installation;

b cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1year; and

c resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.1.3(b).

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

a where the Operator is a registered company:

i any change in the Operator's trading name, registered name or registered office address;

ii a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);

iii any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

:

6 Emissions

6.1 Emissions into air

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

Table 6.1.1: Emission points into air

Emission point reference/description	Source	Location of emission point
A1	42.5m high concrete chimney stack releasing exhaust gases from No 2 and No 3 auxiliary natural gas fired boilers	Point A1 on site plan
A2	50m high steel chimney stack releasing exhaust gases from No 4 coffee grounds boiler	Point A2 on site plan

6.1.2 The limits for emissions into air for the parameter(s) and emission point(s) set out in Table 6.1.3 shall not be exceeded.

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

Table 6.1.3: Emission limits into air				
Parameters	Emission Point A2			
	No more than two 30 minute average concentration readings in any rolling 24 hour period shall exceed (Note 1) (Note 5)	No more than six 10 minute average concentration readings in any rolling 24 hour period shall exceed (Note 2) (Note 3) (Note 5)	Maximum continuously measured average concentration (Note 5)	Maximum periodic concentration measured at the frequency specified.
Total Particulate (mg/m^3)	25	-	37.5 (Note 1)	25 (Note 6)
Oxides of Nitrogen (as Nitrogen Dioxide) (mg/m^3)	300	-	450 (Note 1)	300 (Note 6)
Oxides of Sulphur (as Sulphur Dioxide) (mg/m^3)	-	-	-	300 (Note 7)
Carbon Monoxide (mg/m^3)	-	100	300 (Note 2) (Note 4)	100 (Note 6)
Volatile Organic Compounds (as Total Organic Carbon) (mg/m^3)	- -	-	-	20 (Note 7)
Dioxins & Furans (ITEQ) (ng/m^3)	-	-	-	0.1 (Note 8)

Notes :-

(1) Measured continuously, averaged over a 30 minute consecutive period. (The rolling 24 hour period shall comprise 48 successive 30 minute averaging periods.)

(2) Measured continuously, averaged over a 10 minute consecutive period. (The rolling 24 hour period shall comprise 144 successive 10 minute averaging periods.)

(3) During normal operation when firing waste coffee grounds

(4) Applicable during normal operation and start-up (''start-up'' means the period between the initiation of the start-up sequence from cold when firing Natural Gas only, before the addition of coffee grounds, to the point when the fluidised bed reaches normal operating temperature, or four hours whichever is the sooner.)

(5) The averaging period for all continuously measured concentration readings shall take into account only the hours during which the plant is actually in operation, including start-up and shut –down.

(6) Measured annually

(7) Measured bi-annually

(8) Frequency of monitoring shall be as agreed in writing with the Environment Agency

6.2 Emissions to land

6.2.1 There shall be no direct emission to land from the Permitted Installation

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

6.3 Emissions to water [other than emissions to sewer]

6.3.1 There shall be no emission to water from the Permitted Installation

6.4 Emissions to sewer.

6.4.1 There shall be no direct emission into sewer from the Permitted Installation

6.5 Emissions of heat

6.5.1 Energy shall be recovered as far as practicable.

6.5.2 By 31 January each year the Operator shall submit to the Environment Agency an annual report on opportunities for reductions in heat emissions.

6.6 Emissions of noise and vibration

6.6.1 There are no specific conditions relating to noise and vibration.

7 Transfer to effluent treatment plant

7.1.1 No transfers to effluent treatment plant are controlled under this part of this Permit.

8 Off site conditions

8.1.1 There are no off site conditions.

9 Improvement programme

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

Table 9.1.1: Improvement programme requirements

Reference	Requirement	Date
	There are no outstanding improvement conditions	

10 Interpretation

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

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

"Background concentration"
means the same as "background quantity" as defined in paragraph 11 to Part 2 to Schedule1 of the PPC Regulations.

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

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

''bi-annually''
means twice per year with at least five months between tests

''annual''
means once per year with at least ten months between tests

''mg/m^3''
means milligrammes per cubic metre

''ng/m^3''
means nanogrammes per cubic metre

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

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

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

"Substances prescribed for water"

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

"Year"

means calendar year ending 31 December.

''Periodic''

means sampling for the parameter specified at the frequency specified

''Reporting Period''

means a specified period of time commencing 1st January each year

''Reporting Address''

means the address, from time to time notified to the Operator, for that purpose by the Environment Agency in writing.

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

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

a in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 11% dry for solid fuels;

11 Written agreement to changes

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

a the Operator shall give the Agency written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and

b such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.

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

Schedule 1

Confirmation of condition 5.1.1 notifications, in accordance with condition 5.1.2

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

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

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

Returns should contain:

Part A

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

Part B

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

☐ Name ☐ Post.....

☐ Signature ☐ Date

☐ Statement that signatory is authorised to sign on behalf of Nestle UK Ltd

Schedule 2

Reporting of monitoring data

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

Table S2: Reporting of monitoring data

Parameter	Emission point	Frequency	Reporting Period	Form Number
Total Particulate	A2	Continuous Annual Periodic	3 Monthly Annually	S3/Air 2 S3/Air 1
Oxides of Nitrogen (as Nitrogen Dioxide)	A2	Continuous Annual Periodic	3 Monthly Annually	S3/Air 2 S3/Air 1
Oxides of Sulphur (as Sulphur Dioxide)	A2	Bi-annual Periodic	6 Monthly	S3/Air 1
Carbon Monoxide	A2	Continuous Annual Periodic	3 Monthly Annually	S3/Air 2 S3/Air 1
Volatile Organic Compound (as Total Organic Carbon)	A2	Bi-annual Periodic	6 Monthly	S3/Air 1
Abnormal Operating Conditions	See condition 2.3.4	See condition 2.3.4	3 Monthly	S3/Op 1
Energy Consumption	See condition 2.7.2	See condition 2.7.2	Annually	S3/ E1

Schedule 3

Forms to be used

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

Table S3: Reporting Forms	
Media/Parameter	Form Number
Air (Periodic measurement A2)	S3/Air 1
Air (Continuous monitoring A2)	S3/Air 2
Operational Information (abnormal operation)	S3/Op 1
Energy Consumption	S3/E1

END OF PERMIT

Environment Agency Permitting decisions

Bespoke Variation

We have decided to issue the variation for Nestle Boiler Plant Tutbury operated by Nestle UK Ltd.

The variation number is EPR/BJ9576IZ/V004.

The variation is effective from 18/10/2010.

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

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Structure of this document

Annex 1 the decision checklist and Key Issues.

Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met Yes
Receipt of submission		
Confidential information	A claim for commercial or industrial confidentiality has been **not** been made.	✓
Consultation		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.	✓
Operator		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.	✓
European Directives		
Applicable Directives	All applicable European Directives have been considered in the determination of the application.	✓
Biodiversity, Heritage, Landscape and Nature Conservation	No assessment of habitats is required because there are no changes to emissions as a result of this variation	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
The permit conditions		
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit. Procedures for start-up and shut-down have been incorporated into table 2.3.1 of the permit.	✓
Monitoring	Amendments to monitoring have been made to table 6.3.1 of the permit	✓

Key Issues of the decision

The installation is a fluidised bed combustion unit that burns waste coffee grounds from the coffee production process. The process produces waste wet coffee grounds at a maximum rate of 1850kg(dry) per hour. The unit has a thermal input of 11MW. Emission to air is via a 50m stack. The permit contains ELVs for emissions to air, that apply at all times including periods of start-up and shut-down.

The unit starts up on natural gas and then wet coffee grounds are fed in. At start-up and shut-down exceedances of the ELV (measured by continuous monitors) for carbon monoxide (CO) and to a lesser extent oxides of nitrogen NOx) can occur. Exceedances are normally seen with concentrations of CO at 160-200mg/m^3 but have been seen up to 2000mg/m^3. Exceedances of oxides of nitrogen are just above the current ELVs. At these levels, and given the fact that the EQS for CO is relatively high, there is very unlikely to be a significant impact on local air quality from emissions at start-up from a combustion plant of this size. We therefore amended table 6.1.3 so that the continuous emission limits for CO and NOx do not apply during periods of start-up and shut-down.

The Applicant requested that the particulate matter limits be excluded during start-up and shut-down. However levels of particulates should not rise because they are controlled by the bad filters. We have therefore not changed the particulate limits.

We have added definitions of start-up and shut-down to section 10 the permit. The Applicant also provided sequences for the start-up and shut-sown procedures and we have incorporated these into table 2.1.3 of the permit.

Variation notice with introductory note

Environmental Permitting (England & Wales) Regulations 2010

Nestle Boiler Plant Tutbury

Nestle UK Ltd
Marston Lane
Tutbury
Burton-on-Trent
Staffordshire
DE13 9LY

Variation notice number
EPR/BJ9576IZ/V004

Permit number

EPR/BJ9576IZ

Nestle Boiler Plant Tutbury
Permit number EPR/BJ9576IZ

Introductory note

This introductory note does not form a part of the permit

The following notice, which is issued pursuant to regulation 20 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations 2010 S.I.2010 No. 675 (the Regulations), gives notice of the variation of an environmental permit to operate a regulated facility.

The installation is a fluidised bed combustion unit that burns waste coffee grounds from the coffee production process. The coffee production process produces waste wet coffee grounds at a maximum rate of 1850kg(dry) per hour. The combustion unit has a thermal input of 11MW. The permit contains ELVs for emissions to air that apply at all times, including periods of start-up and shut-down. This variation is to amend the emission limit values (measured by continuous monitors) for carbon monoxide and oxides of nitrogen so that they do not apply during periods of start-up and shut-down.

Schedule 1 of this notice lists any deleted conditions, Schedule 2 lists any amended conditions, Schedule 3 lists any conditions that have been added and Schedule 4 shows any changes to the plan.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status Log of the permit		
Detail	**Date**	**Response Date**
Application (EPR/BJ9576IZ/A001)	Duly made 29/12/2000	
Additional information	Request dated 02/08/2001	30/10/2001
Additional information	Request dated 08/08/2001	30/10/2001
Permit determined (EPR/BJ9576IZ)	23/02/2003	
Variation CP3532XQ (EPR/BJ9576IZ/V002)	Duly made 04/04/2008	
Variation CP3532XQ (EPR/BJ9576IZ/V002)	Issued 25/06/2008	
Variation XP3134GQ (EPR/BJ9576IZ/V003)	Received 19/12/2008	
Variation XP3134GQ (EPR/BJ9576IZ/V003)	Issued 15/01/2009	
Variation (EPR/BJ9576IZ/V004)	Duly made 06/10/2010	
Variation issued (EPR/BJ9576IZ/V004)	18/10/2010	

End of Introductory Note

Notice of variation

Environmental Permitting
(England and Wales) Regulations 2010

Permit number
EPR/BJ9576IZ

The Environment Agency in exercise of its powers under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010 No 675) varies the permit as set out below.

Nestle UK Ltd ("the operator"),

whose registered office is

St George's House
Croydon
Surrey
CR9 1NR

company registration number **51491**

holds a permit to operate a regulated facility at
Nestle Boiler Plant Tutbury
Marston Lane
Tutbury
Burton-on-Trent
Staffordshire
DE13 9LY

and that permit is varied to the extent set out in Schedules 1 to 4 of this notice.

The notice shall take effect from 18/10/2010

Name	Date
Mark Jenkins	18th October 2010

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

No conditions are deleted.

Schedule 2 – conditions to be amended

The following conditions are amended as follows:

- Table 2.3.1 is amended to include operating techniques for start-up and shut-down. The amended table is as follows:

Table 2.3.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.3 given in Section 2.3 of the application	29/12/00
Response to Schedule 4 Part 1 Notice	Response to question 8	01/11/01
Variation application	The sequence of events for start-up and shut-down of boiler number 4, contained in document 0910VarRev2	06/10/10

- Table 6.1.3 is amended so that the continuous emission limits for carbon monoxide and oxides of nitrogen do not apply during start-up and shut-down. The amended table is as follows:

Table 6.1.3: Emission limits into air

Parameters	Emission Point A2			
	No more than two 30 minute average concentration readings in any rolling 24 hour period shall exceed (Notes 1 and 5)	No more than six 10 minute average concentration readings in any rolling 24 hour period shall exceed (Notes 2, 3 and 5)	Maximum continuously measured average concentration (Note 5)	Maximum periodic concentration measured at the frequency specified.
Total Particulate (mg/m^3)	25	-	37.5 (Note 1)	25 (Note 6)
Oxides of Nitrogen (as Nitrogen Dioxide) (mg/m^3)	300 (Note4)	-	450 (Notes 1 and 4)	300 (Note 6)
Oxides of Sulphur (as Sulphur Dioxide) (mg/m^3)	-	-	-	300 (Note 7)
Carbon Monoxide (mg/m^3)	-	100 (Note 4)	300 (Notes 2 and 4)	100 (Note 6)

Table 6.1.3: Emission limits into air				
Parameters	**Emission Point A2**			
	No more than two 30 minute average concentration readings in any rolling 24 hour period shall exceed (Notes 1 and 5)	No more than six 10 minute average concentration readings in any rolling 24 hour period shall exceed (Notes 2, 3 and 5)	Maximum continuously measured average concentration (Note 5)	Maximum periodic concentration measured at the frequency specified.
Volatile Organic Compounds (as Total Organic Carbon) (mg/m^3)	- -	-	-	20 (Note 7)
Dioxins & Furans (ITEQ) (ng/m^3)	-	-	-	0.1 (Note 8)

Notes :-

(1) Measured continuously, averaged over a 30 minute consecutive period. (The rolling 24 hour period shall comprise 48 successive 30 minute averaging periods.)

(2) Measured continuously, averaged over a 10 minute consecutive period. (The rolling 24 hour period shall comprise 144 successive 10 minute averaging periods.)

(3) During normal operation when firing waste coffee grounds

(4) These limits do not apply during start-up and shut-down.

(5) The averaging period for all continuously measured concentration readings shall take into account only the hours during which the plant is actually in operation. For carbon monoxide and oxides of nitrogen, periods of start-up and shut-down are excluded.

(6) Measured annually

(7) Measured bi-annually

(8) Frequency of monitoring shall be as agreed in writing with the Environment Agency

- Section 10 is amended by the addition of the following definitions:

"Start-up" means the period from addition of coffee grounds to the hot bed, to the point when the fluidised bed reaches the normal operating temperature of 600^{o}C and the gas burners have been off for 0.5hr, or 2.5 hrs from when the first coffee feed screw to the boiler is started whichever is the sooner.

"Shut-down" means the period when the final feed screw has stopped and coffee grounds are no longer being charged to the boiler.

Schedule 3 – conditions to be added

No conditions are added

Schedule 4 – amended plan

The plan is not amended

ENVIRONMENT AGENCY

Variation Notice with introductory note

Environmental Permitting (England & Wales) Regulations 2007

Nestle UK Limited
Marston Lane
Tutbury
Burton on Trent
Staffordshire
DE13 9LY

Variation Notice Number

XP3134GQ

Permit number

BJ9576IZ

Nestle UK Limited

Permit Number BJ9576IZ

Introductory note

This introductory note does not form a part of the permit

The following notice, which is issued pursuant to regulation 20 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations S.I.2007 No. 3538 (the Regulations), gives notice of the variation of an environmental permit to operate a regulated facility.

This variation allows changes to the Installation as follows:-

- The Operator has been undertaking a trial on the permitted process due to the number of changes which have taken place on the Installation since Permit issue. Due to the breakdown of the equipment supplying the raw materials, the Agency has agreed to an extension of the trial period.

Status Log of the permit		
Detail	**Date**	**Response Date**
Application BJ9576	Received 29/12/2000	Duly made
Response to request for information	Request dated 2/8/2001	Response dated 30/10/2001
Response to request for information	Request dated 8/8/2001	Response dated 30/10/2001
Permit BJ9576	Determined	Effective Date 24/02/2003
Request for Variation CP3532XQ	Received 04/04/2008	Determined 20/06/2008
Request for Variation XP3134GQ	Received 19/12/2008	Determined 15/01/2009

End of Introductory Note

VARIATION NOTICE

Environmental Permitting (England and Wales) Regulations 2007

Permit number
BJ9576IZ

Variation number
XP3134GQ

The Environment Agency in exercise of its powers under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2007 (SI 2000 No 3538) varies the permit as set out below.

Nestle UK Limited ("the Operator"),

whose registered office (or principal office) is
St. George's House
Park Lane
Croydon
Surrey
CR9 1NR

company registration number **51491**

to operate an installation at
Marston Lane
Tutbury
Burton-on-Trent
Staffordshire
DE13 9LY

to the extent set out in Schedules 1 to 3 of this Variation Notice.

The Notice shall take effect from **15/01/2009**

Signed	Date
	15th January 2009

M. A. Smith

Authorised to sign on behalf of the Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

1.1) None

SCHEDULE 2 – CONDITIONS TO BE AMENDED

2.1) Amend Table 9.1.1 to the following :-

Table 9.1.1: Improvement programme

Reference	Requirement	Date
IC1	The Operator shall undertake a trial to ascertain if the existing plant and monitoring equipment meet the emission limit criteria for co-incineration specified in Table 1 below.	30/06/2009
IC2	The Operator shall submit a written report to the Agency detailing the results of the trial undertaken in IC1 above	31/07/2009

Table 1: Emissions to air for co-incineration

Emission point	Parameter	Emission limit	Reference Period (1)	Monitoring method
A2	Particulate matter	10 mg/m^3	Daily average	BS EN 13284-2 (5)
A2	Particulate matter	30 mg/m^3	Periodic over minimum 1-hour period. (6)	BS EN 13284-1
A2	Total Organic Carbon (TOC)	10 mg/m^3	Daily average	BS EN 12619 (5)
A2	Total Organic Carbon (TOC)	20 mg/m^3	Periodic over minimum 1-hour period. (6)	BS EN 12619
A2	Carbon monoxide	150 mg/m^3	At least 95% of all measurements determined as 10-minute average values taken in any 24-hour period.	ISO 12039 (4)
A2	Carbon monoxide	50 mg/m^3	Daily average	ISO 12039 (4)
A2	Carbon monoxide	100 mg/m^3	Periodic over minimum 1-hour period . (6)	ISO 12039
A2	Sulphur dioxide	50 mg/m^3	Daily average	BS 6069-4.4 (3)
A2	Sulphur dioxide	200 mg/m^3	Periodic over minimum 1-hour period. (6)	BS 6069-4.1
A2	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	200 mg/m^3	Daily average	ISO 10849 (3)
A2	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	400 mg/m^3	Periodic over minimum 1-hour period. (6)	ISO 10849 or BS ISO 11564
A2	Dioxins / furans (I-TEQ)	0.1 ng/m^3	Periodic over minimum 6-hour, maximum 8-hour period. (2) (6)	BS EN 1948

Note 1: In relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 11% dry for solid fuels;

Note 2: The I-TEQ sum of the equivalence factors to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum.

Note 3: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 20%. Valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted this value of the confidence interval (20%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete half-hour period, the half-hourly average shall nonetheless be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. (The number of half-hourly averages so validated shall not exceed 5 per day). Daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value will be considered valid if no more than five half-hourly average values in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid.

Note 4: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 10%. Valid 10-minute average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted this value of the confidence interval (10%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete 10-minute period, the 10-minute average shall nonetheless be considered valid if measurements are available for a minimum of 7 minutes during the 10-minute period. (The number of 10-minute averages so validated shall not exceed 15 per day). Daily average values shall be determined as the average of all the valid 10-minute average values within a calendar day. The daily average value will be considered valid if no more than fifteen ten-minute average values in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid.

Note 5: As Note 3, except that the value of the confidence interval is 30% in place of 20%.

Note 6; Periodic testing to be undertaken once during trial period.

2.2) Amend Condition 4.1.2 to the following :-

This Condition is suspended until the completion of IC2 above.

2.3) Amend Condition 6.1.3 to the following :-

This Condition is suspended until the completion of IC2 above.

2.4) Reporting Form Number S3/Air 2 has been amended as follows for the purpose of the trial in IC1 above:-

See Appendix 1 for particulate matter
See Appendix 2 for total organic compounds
See Appendix 3 for carbon monoxide
See Appendix 4 for sulphur dioxide
See Appendix 5 for oxides of nitrogen

SCHEDULE 3 – CONDITIONS TO BE ADDED

3.1) None