

Surrender notice with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Springfields Fuels Ltd

Springfields
Salwick
Preston
Lancashire
PR4 0XJ

Surrender application number

EPR/NP3734SZ/S005

Permit number

EPR/NP3734SZ

Springfields

Permit number EPR/NP3734SZ

Introductory note

This introductory note does not form a part of the notice.

The following notice gives notice of the surrender in part and variation of an environmental permit.

The partial surrender is to remove those listed activities from the permit which are no longer carried out as result of the cessation of Magnox fuel manufacture. A number of different processes were carried out as part of the Magnox fuel process as follows:

- conversion of uranium ore concentrate into uranyl nitrate followed by purification of the uranyl nitrate;
- conversion of uranyl nitrate into uranium trioxide;
- conversion of uranium trioxide into uranium tetrafluoride;
- production of uranium billets by reaction of uranium fluoride with magnesium metal;
- production of uranium cast rods;
- the machining and final packaging of uranium metal into fuel cans and fuel assemblies.

The listed activities relating to the production of uranium billets, uranium cast rods and final uranium fuel assemblies have been removed from permit. The uranium billet and uranium cast rods production were covered by Section 2.2 A(1) producing non ferrous metals from ore concentrate or secondary raw materials by metallurgic, chemical or electrolytic activities. The machining and final packaging of uranium metal in fuel cans and fuel assemblies were covered by Section 7(B) surface cleaning operations relating to the use of halogenated solvents i.e. trichloroethylene.

The chemical processes associated with production of uranyl nitrate, uranium trioxide and uranium tetrafluoride are still carried out in the same plant facilities as part of natural residues recovery processing or the manufacture of uranium dioxide fuel. The Schedule 1 listed activities references for these processes have been updated to more suitable descriptions covered in Section 4 producing of inorganic chemicals, following cessation of the Magnox fuel manufacturing.

The other processes carried out on site still remain. These are:

- Production of uranium hexafluoride by reaction of uranium tetrafluoride with fluorine;
- Fluorine production via electrolysis of hydrogen fluoride;
- Conversion of enriched uranium hexafluoride to uranium dioxide powder by reaction with steam and hydrogen;
- Manufacture of oxide fuel pellets and finished oxide fuel;
- Enriched uranium residue recovery;
- Operation of a combined heat and power plant.

The partial surrender requires a variation to be made to the permit. A consolidated variation notice has been issued which takes into account and brings together in a single document all previous variations that relate to the original permit issued. It also modernises all conditions to reflect the conditions contained in our current generic environmental permit template

Any changes made as a result of the part surrender are set out in the schedules.

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

Status log of the permit		
Description	Date	Comments
Application BK0779IV	Received 10/12/01	Original submission by British Nuclear Fuels plc
Application BK0779IV	Received 08/09/04	Resubmission
Request for information	26/11/04	
Response received	29/11/04	Additional information on emissions
Application NP3734SZ	Received 08/03/05	Transfer of ownership to Springfields Fuels Ltd; BK0779IV withdrawn
Permit NP3734SZ determined	01/04/05	
Variation application SP3835XL	Received 24/12/07	Temporary boilers
Variation determined	10/01/08	
Variation application FP3031XN	Received 28/4/08	Further temporary boilers
Variation determined	15/04/08	
Agency variation determined EPR/NP3734SZ/V004	29/05/13	Agency variation to implement the changes introduced by IED
Partial surrender application EPR/NP3734SZ/S005	16/10/15	Surrender of Magnox Fuel manufacturing operations
Surrender determined and consolidated permit issued	25/04/16	

End of introductory note

Notice of surrender

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 and 25 of the Environmental Permitting (England and Wales) Regulations 2010 accepts the surrender in part and varies.

Permit number

EPR/NP3734SZ

Issued to

Springfields Fuels Ltd (“the operator”)

whose registered office is

**Salwick
Preston
Lancashire
PR4 0XJ**

company registration number 03857770

to operate a regulated facility at

**Springfields
Salwick
Preston
Lancashire
PR4 0XJ**

to the extent set out in the schedules.

This notice shall take effect from 25/04/16.

Name	Date
Steve Howard	25/04/16

Authorised on behalf of the Environment Agency

Schedule 1 – changes to the permit

Note: The conditions numbers used in this schedule refer to those in the consolidated permit.

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/NP3734SZ

This is the consolidated permit referred to in the surrender notice for application EPR/NP3734SZ/S005 authorising,

Springfields Fuels Ltd (“the operator”),

whose registered office is

**Salwick
Preston
Lancashire
PR4 0XJ**

company registration number 03857770

to operate an installation at

**Springfields
Salwick
Preston
Lancashire
PR4 0XJ**

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

Name	Date
Steve Howard	25/04/16

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

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

1.3 Efficient use of raw materials

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

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

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

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

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the emission point(s) set out in schedule 3 tables S3.1, S3.2 and S3.3 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
 - (a) point source emissions specified in tables S3.1, S3.2 and S3.3;
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
 - (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 For the following activities referenced in schedule 1, table S1.1 (A1 to A4 etc.) A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 Activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
S1.1 A(1) (a)	Operation of the combustion plant consisting of two auxiliary two gas turbines, both turbines are fitted with waste heat recovery boilers, WHRB2 has a supplementary waste induct burner	From fuel supply, through gas turbine and waste heat recovery boilers, auxiliary boilers to boiler blowdown and gaseous emissions
S4.2 A(1) (a) (v)	Production of uranyl nitrate from processing of uranium residues in Natural Residues Recovery Plant Production of uranium trioxide by conversion of uranyl nitrate in Uranium Trioxide Production plant Production of uranium dioxide by conversion of uranium hexafluoride in Oxide Fuels Complex	From receipt of intermediate product/raw material feedstock through production process to transfer of intermediate products to further processes and storage of final products. Includes treatment of gaseous and aqueous effluents.
S4.2 A(1) (a)(vi)	Fluorine production via electrolysis of hydrogen fluoride in the Fluorine Production Plant	From materials receipt and handling, electrolysis processing and transfer of fluorine gas to UF6 production plant. Includes treatment of gaseous effluents.
S4.2 A(1) (b)	Production of uranium tetrafluoride by conversion of uranium trioxide in Kiln Plant Production of uranium hexafluoride by conversion of uranium tetrafluoride in Hex Plant	From receipt of intermediate product/raw material feedstock through production process to transfer of intermediate products to further processes and storage of final products. Includes treatment of gaseous and aqueous effluents.
S4.7 A(1) (b)	Enriched uranium residues recovery plant producing ammonium diuranate	From furnace pre-treatment through treatment of residues, precipitation of ammonium diuranate, processing effluents, nitric acid washing, demineralised water production to the Hex cylinder wash facility
S5.4 A1 (a) (ii)	Aqueous effluent treatment by pH neutralisation	From receipt of aqueous effluent from process plants to discharge to site trade effluent drainage system
Directly Associated Activity		
Recovering of nitric acid	Recovery of nitric acid in nitric acid recovery plant	From oxides of nitrogen generated from uranium trioxide production and uranyl

Table S1.1 Activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
		nitrate production through scrubbing process to liquid recovery including gaseous emissions
The storage of uranic residues	Uranic residues store and waste management	From materials receipt through drum handling to residue processing
The storage of uranium hexafluoride	Hex cylinder storage rafts	From receipt through storage to transfer of Hex cylinders
The pelleting, machining and final packaging of uranium oxides into Fuel cans and Fuel assemblies	OFC pelleting and fuel finishing plants	From materials receipt through pelleting, sintering, grinding, AGR canning, AGR fuel assembly to effluent discharge
The manufacture of the components that make up the Fuel cans and Fuel assemblies	Component manufacturing plant	From materials receipt through magnox can production, AGR cans, AGR grids, magnox forgings and end cap machining to effluent discharge
The washing of containers for the storage of uranium hexafluoride	Hex cylinder wash facilities	From cylinder delivery through wash cycles to integrity testing and effluent discharge
Uranic decontamination	De-contamination of equipment and plant	From receipt of plant and equipment, through washing and soaking (including drum cleaning) to cleaned item transfer and effluent discharge
The storage, handling and disposal of waste	Waste management areas	Storage of residues and materials, through crushing and disposal of drums, re-drumming to disposal of waste from site
The laundering of clothing and personal protective equipment	Washing in the Laundry	From receipt of work clothing and PPE through washing to cleaned clothing and equipment
The production and distribution of nitrogen gas, cooling water and compressed air	Site nitrogen production, site re-circulated water system and site compressed air production	From input of power and raw materials through nitrogen generation, cold water production, compressed air generation
The handling of liquid effluent flows prior to discharge to surface water and the associated drainage systems	Effluent handling complex and site drainage systems	From storm and trade effluent input to release into the Ribble estuary
Distribution of hydrogen to various plants and areas	Site hydrogen supply system including emergency supply	Distribution from trailers or continuity banks to various plants and areas via over-ground pipes
Research and Technology	Research and technology facility	Laboratory scale processes, pilot plant processes, small scale treatment, waste

Table S1.1 Activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
		radiochemical analysis
Chemical Analysis	Chemical and metallurgical services department	From materials input through analysis, to waste disposal

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Sections B2.3 and B2.4 of the application	Duly Made 08/09/04
Minor Operational Changes	All correspondence related to minor operational changes that have been 'agreed in writing by the Agency' in accordance with conditions 1.5.1 to 1.5.4 of permit number NP3734SZ dated 01/04/05.	From issue of permit NP3734SZ dated 01/04/05 to 20/04/16

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP1	The Operator shall review containment measures for the prevention or minimisation of liquid releases from all process, storage and waste areas, including sub-surface structures and bulk delivery. The Operator shall submit a summary report of the survey and compare findings against indicative BAT provided in the Sector guidance notes S2.03 and S4.03. Where improvements can be made, and the option is considered BAT for future use, provide an implementation plan with a timescale agreed with Agency.	Completed
IP2	The Operator shall provide the Agency with a report detailing the proposals for the Operator to meet the requirements of the Solvent Emissions Regulations (2004), within the shortest possible time.	Completed
IP3	The Operator shall provide the Agency with a report confirming that the Operator has fully met the requirements of the Solvent Emissions Regulations (2004)	Completed
IP4	The Operator shall provide a written report to the Agency regarding the performance of the triple cyclone, gas scrubbing unit for furnace 7 in the Enriched Uranium Residues Recovery Plant (EURRP), discharging via existing release point G97. This shall include reporting of measurements of monitoring as detailed in BNFL letter TOEA352/04, 10 November 2004.	Completed
IP5	The Operator shall provide a written report to the Agency regarding the NOx (oxides of nitrogen) removal efficiency of the new gas scrubbing unit, discharging via existing release point G94 in the Enriched Uranium Residues Recovery Plant (EURRP).	Completed
IP6	The Operator shall provide a written report to the Agency regarding the new effluent processing arrangements in the Enriched Uranium Residues Recovery Plant (EURRP). This shall include reporting of uranium removal efficiencies for the effluent discharged from EURRP.	Completed
IP7	The Operator shall, with regard to reporting condition 4.1.7 of this permit, assess the likelihood of future land pollution from continuing activities and submit the information to the Agency in the form of a completed Table 2A/2B, as recommended in the Technical Guidance Note IPPC H7. This shall include identification of potentially polluting substances and an	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	assessment of the effectiveness of pollution prevention measures for those substances.	
IP8	The Operator shall include within the site protection and monitoring programme (SPMP) objectives of Box 7 in the Technical Guidance Note IPPC H7, and include details of maintenance, inspection and testing of pollution prevention measures and infrastructure, environmental monitoring and information and data management systems.	Completed
IP9	The emission limit values set out in Tables 2.2.5 and 2.2.6 for emissions to water of nitrate, nitrite and ammonical nitrogen from Emission Point W1 shall only apply until 31/09/06. Thereafter emissions shall only be made in compliance with revised emission limit values to be set by the Agency in a Variation Notice. The Operator shall provide revised information on the relevant reduced emissions from Point W1 from 01/04/06 onwards together with an assessment of their environmental impact by the date specified.	Completed
IP10	The Operator shall review previous studies of the site process effluent toxicity of individual substances and synergistic effects, and provide the Agency with a summary report containing recommendations for further work, as appropriate.	Completed
IP11	The Operator shall remodel the environmental impact of emissions of oxides of nitrogen, using measured data for the operational combustion plant, and shall report the findings to the Environment Agency. The report shall include details of any proposed operational controls required to avoid exceeding environmental assessment levels.	Completed
IP12	The Operator shall submit a report to the Environment Agency, detailing reasons for the failure of the waste heat boilers in 2007, lessons learnt, and arrangements for preventing premature failure in future. The report shall address not only boiler plant, but also other plant regulated under this permit to which the lessons learnt are relevant.	Completed
IP13	The Operator shall submit an options paper to the Environment Agency, comparing alternatives for supplying the site's energy needs for at least the next five years. The paper must address energy efficiency, emissions of nitrogen oxides and impact on air quality, and shall include an assessment identifying which option the Operator considers to represent BAT. The paper shall also propose an implementation plan with a timescale to be agreed with the Agency.	Completed
IP14	The Operator shall submit an options paper to the Environment Agency, comparing alternatives for supplying the site's energy needs for at least the next five years. The paper must address energy efficiency, emissions of nitrogen oxides and impact on air quality, and shall include an assessment identifying which option the Operator considers to represent BAT. The paper shall also propose an implementation plan with a timescale to be agreed with the Agency.	Completed

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Fuel oil	Less than 0.1% w/w sulphur content.

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Auxiliary Boiler 1 using natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	350 mg/m ³	Instantaneous	Daily	Testo Gas Analyser
A1	Auxiliary Boiler 1 using gas oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	450 mg/m ³	Instantaneous	Daily	Testo Gas Analyser
A2	Auxiliary Boiler 2 using natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	350 mg/m ³	Instantaneous	Daily	Testo Gas Analyser
A2	Auxiliary Boiler 2 using gas oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	450 mg/m ³	Instantaneous	Daily	Testo Gas Analyser
A3	Gas Turbine 1 & Waste Heat Recovery Boiler 1 using natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	185 mg/m ³	Monthly average	Continuous	BS EN 15269-1
A3	Gas Turbine 1 & Waste Heat Recovery Boiler 1 using gas oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	225 mg/m ³	Monthly average	Continuous	BS EN 15269-1
A4	Gas Turbine 2 & Waste Heat Recovery Boiler 2 using natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	185 mg/m ³	Monthly average	Continuous	BS EN 15269-1
A4	Gas Turbine 2 & Waste Heat Recovery Boiler 2 using gas oil	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	225 mg/m ³	Monthly average	Continuous	BS EN 15269-1

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
G31	Denitrators (building 337) & Dissolver (building 336)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	3500 mg/m ³	Hourly average	Annual	TGN M22
G94	Dissolver (building 633) via scrubber	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	2550 mg/m ³	Hourly average	Annual	TGN M22
G55	Extraction from wet areas (building 684)	Fluorine and hydrogen fluoride (expressed as HF)	5 mg/m ³	Weekly average determined from 24 hour composite samples	Daily	BS ISO 15713
G59	Extraction from line 1 & 2 cell rooms, cell workshops and cell purges (via scrubber) (building 284)	Fluorine and hydrogen fluoride (expressed as HF)	5 mg/m ³	Weekly average determined from 24 hour composite samples	Daily	BS ISO 15713
G60	Extraction from line 2A & 2B cell rooms (building 284)	Fluorine and hydrogen fluoride (expressed as HF)	5 mg/m ³	Weekly average determined from 24 hour composite samples	Daily	BS ISO 15713
G101	Kilns (building 686) via scrubber	Fluorine and hydrogen fluoride (expressed as HF)	5 mg/m ³	Weekly average determined from 24 hour composite samples	Daily	BS ISO 15713
G102	Process areas/vessels (building 686) via emergency scrubber	Fluorine and hydrogen fluoride (expressed as HF)	5 mg/m ³	Weekly average determined from 24 hour composite samples	Daily	BS ISO 15713
G11	Rotary filters on uranyl nitrate filters (building 336)	No parameters set	-	-	-	-
G19	DHF storage via scrubber	No parameters set	-	-	-	-
G46	Reduction kiln (building 654) via scrubber	No parameters set	-	-	-	-
G47	Hydrofluorination kiln (building 654) via scrubber	No parameters set	-	-	-	-
G49	HF storage and transfer	Hydrogen fluoride	-	-	-	-

	system (building 654) via scrubber					
G51	Pressure relief on Hydrofluorination kiln (building 654) via scrubber	No parameters set	-	-	-	-
G63	Extract from line 1 & 2 fluorine cells (building 284) via scrubber	No parameters set	-	-	-	-

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1	Process effluent, steam condensate, cooling water and surface water	pH	5 - 12	24-hour flow proportional sample	Daily	BS 1647
		Total Suspended Solids	2500 mg/l		Weekly	BS EN 872
		Chemical Oxygen Demand	500 mg/l	7 day rolling average taken from 24-hour flow proportional sample	Weekly	BS ISO 15705
		Ammonical Nitrogen (as N)	300 mg/l	24 hour flow proportional sample	Daily	UKAS accredited in-house method based on gas sensing probe
		Arsenic	3 mg/l	Monthly bulk comprising of 24-hour flow proportionate samples	Monthly	UKAS accredited in-house method by ICP-MS
		Cadmium and it's compounds expressed as cadmium (Total Cd)	0.1 mg/l			
		Chromium	2 mg/l			
		Copper	5.5 mg/l			
		Iron	80 mg/l			
		Mercury and it's compounds, expressed as mercury (Total Hg)	0.05 mg/l			
		Nickel	2.5 mg/l			
		Lead	2.5 mg/l			
		Vanadium	5 mg/l			
		Zinc	3.5 mg/l			
		Volume	12000 m ³ /day	24-hour total	Continuous	MCERTS self-monitoring of effluent flow scheme

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 & W2	Combined W1 & W2 effluent streams	Temperature	30 °C	Daily average	Continuous	Temperature Probe
W2	Surface water	pH	5 - 9	24-hour flow proportional sample	Daily	BS 1647
		Arsenic	0.05 mg/l	Monthly bulk comprising of 24-hour flow proportionate samples	Monthly	UKAS accredited in-house method by ICP-MS
		Cadmium and it's compounds expressed as cadmium (Total Cd)	0.002 mg/l			
		Chromium	0.05 mg/l			
		Copper	0.05 mg/l			
		Iron	6 mg/l			
		Mercury and it's compounds expressed as mercury (Total Hg)	0.005 mg/l			
		Nickel	0.05 mg/l			
		Lead	0.02 mg/l			
		Vanadium	0.05 mg/l			
		Zinc	0.02 mg/l			
		Total daily volume of discharge	2400 m ³ /day			

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site—emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1	Component Manufacturing Plant	Mercury and its compounds, expressed as mercury (Total Hg)	0.12 mg/l	Spot sample	Quarterly	UKAS accredited in-house method by ICP-MS
		Cadmium and its compounds, expressed as cadmium (Total Cd)	0.10 mg/l			

Table S3.4 Annual limits

Substance	Medium	Limit (including unit)
Oxides of Nitrogen	Air	120,000 kg (as NO ₂)
Mercury	Sewer	4.4 kg
Cadmium	Sewer	3.7 kg
Suspended Solids	Water (W1)	450,000 kg
Chemical Oxygen Demand	Water (W1)	132,000 kg
Ammonical Nitrogen (as N)	Water (W1)	55,000 kg
Nitrite (as NO ₂)	Water (W1)	255,000 kg
Nitrate (as NO ₃)	Water (W1)	2,805,000 kg
Arsenic	Water (W1 & W2)	1,141 kg
Cadmium	Water (W1 & W2)	21 kg
Chromium	Water (W1 & W2)	370 kg
Copper	Water (W1 & W2)	3,516 kg
Iron	Water (W1 & W2)	61,488 kg
Mercury	Water (W1 & W2)	5 kg
Nickel	Water (W1 & W2)	1,720 kg
Lead	Water (W1 & W2)	650 kg
Vanadium	Water (W1 & W2)	1,051 kg
Zinc	Water (W1 & W2)	1,440 kg

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Oxides of nitrogen	A1, A2, A3, A4	Every 3 months	1 January, 1 April, 1 July, 1 October
Oxides of nitrogen	G31, G94	Every 12 months	1 January
Hydrogen fluoride	G55, G59, G60, G101 & G102	Every 3 months	1 January, 1 April, 1 July, 1 October
Emissions to water Parameters as required by condition 3.5.1	W1, W2	Every month	1 st of each month

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Waste	Annually	tonnes

Media/parameter	Reporting format	Date of form
Air (quarterly)	Form A1 or other form as agreed in writing by the Environment Agency	01/04/16
Air (annually)	Form A2 or other form as agreed in writing by the Environment Agency	01/04/16
Water (monthly)	Form W1 or other form as agreed in writing by the Environment Agency	01/04/16
Water (annually)	Form W2 or other form as agreed in writing by the Environment Agency	01/04/16
Sewer	Form S1 or other form as agreed in writing by the Environment Agency	01/04/16
Water usage	Form WU1 or other form as agreed in writing by the Environment Agency	01/04/16
Energy usage	Form E1 or other form as agreed in writing by the Environment Agency	01/04/16

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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

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

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

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

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

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

“Hazardous property” has the meaning in Annex III of the Waste Framework Directive.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

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

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

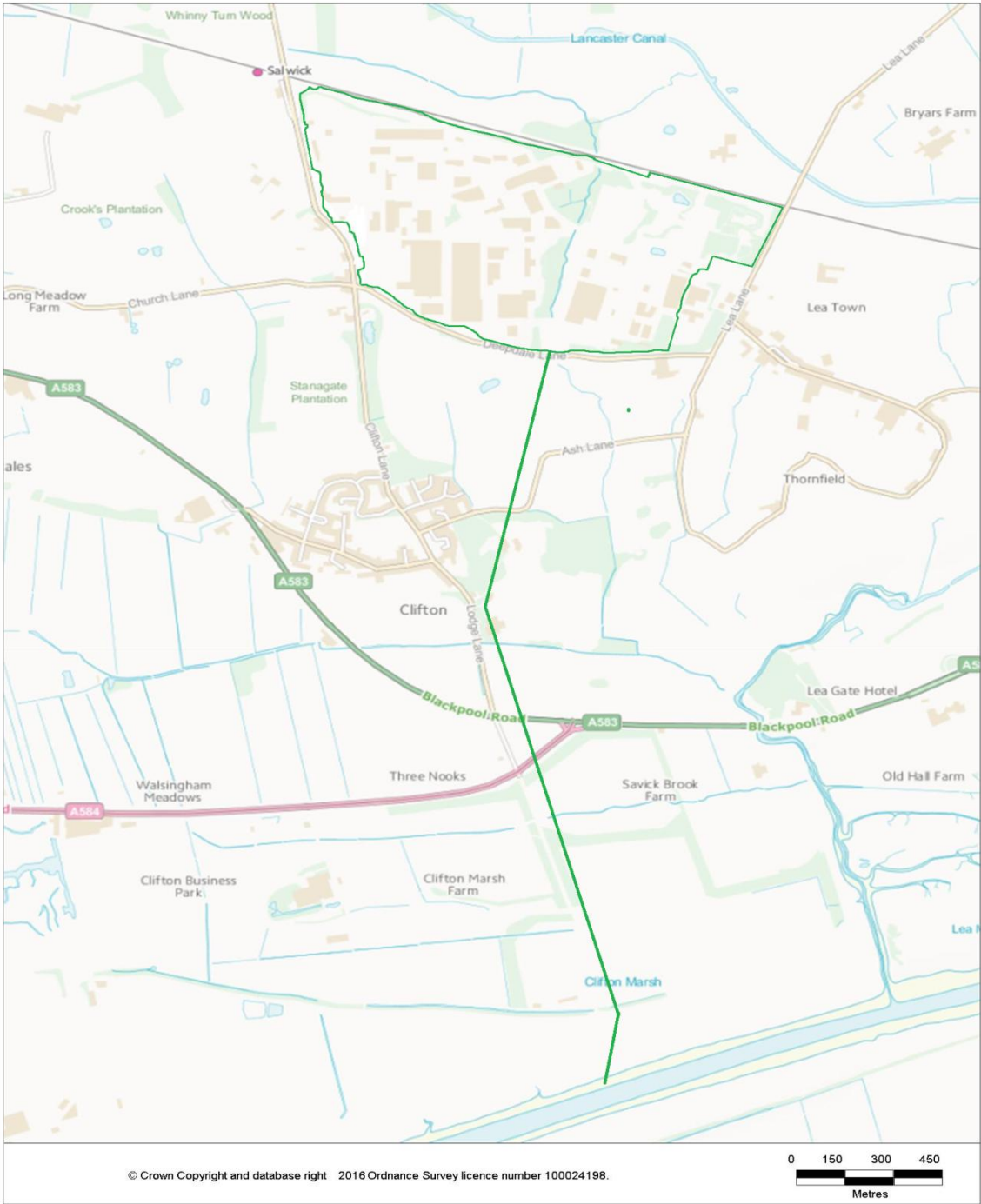
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

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

“year” means calendar year ending 31 December.

Schedule 7 – Site plans





END OF PERMIT