

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Robert Hopkins Environmental Services Limited

West Bromwich Transfer & Treatment
Facility
Bullock Street
West Bromwich
B70 7HE

Variation application number

EPR/ZP3537SL/V003

Permit number

EPR/ZP3537SL

West Bromwich Transfer & Treatment Facility

Permit number EPR/ZP3537SL

Introductory note

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

The following notice gives notice of the variation and consolidation of an environmental permit.

This permit includes controls over the operation of a hazardous waste co-incineration plant. The relevant listed activity for this is S5.1 A1 (a), and there are a range of other hazardous and non-hazardous waste storage and treatment activities, as shown in Table S1.1 of the permit. The permit implements primarily the requirements of the EU Directives on Industrial Emissions and Waste.

The main features of the permit are as follows:

The site accepts mainly hazardous wastes (and a small proportion of non-hazardous wastes), which are treated by sorting, separating, bulking and repackaging. The installation will be authorised to take in no more than 40,000 tonnes of both hazardous and non-hazardous waste per annum.

These are then sent for either recovery or disposal depending on the nature of the wastes. Up to 24,000 tonnes per year of suitable hazardous wastes received are to be blended into a solid hazardous waste feedstock and subjected to pyrolysis. The synthesis gas (syn gas) produced by the pyrolysis process is cleaned and conditioned such that it is suitable to be used as a fuel for the generation of up to 4MWe electrical power using a reciprocating CHP spark ignition gas engine. The heat generated by the gas engine is used for drying the waste feedstocks by means of a heat exchange system. The char produced by the pyrolysis process is collected and incinerated in a thermal oxidiser, with the heat output from the thermal oxidiser being used to heat the pyrolysis retort. The exhaust from the thermal oxidiser, having heated the pyrolysis retort, is then sent to a heat recovery steam generator which produces hot water and steam for use at the installation. Prior to exiting the final exhaust stack, the exhaust gases are then passed through a series of ceramic filters to remove residual particulates.

The exhausts from both the thermal oxidiser and the gas engine exit via individual flues within a shared 39m stack. Continuous emission monitoring is applied to a range of outputs from the thermal oxidiser flue and to NO_x for the gas engine flue.

The site is mainly under cover and wastes are stored in designated bays (sorted according to their chemical properties). A secure fencing and gates surround the site to prevent unauthorised access. The Operator has been granted a Trade Effluent consent from Severn Trent Water to allow a discharge to the sewer. There are no discharges to sewer arising from the treatment of waste gases.

The schedules specify the changes made to the permit.

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 received (EPR/ZP3537SL/A001)	Received 31/08/2005	Application for hazardous waste treatment facility.
Permit determined (EPR/ZP3537SL/A001)	35/01/2006	Permit issued to Robert Hopkins Environmental Limited.
Variation determined EPR/ZP3537SL/V002	18/07/2008	New permit template and revised operating conditions
Application EPR/ZP3537SL/V003 (variation and consolidation)	Duly made 14/01/2013	Application to vary and update the permit to modern conditions.
Variation determined EPR/ZP3537SL/V003	02/05/2013	Varied and consolidated permit issued in modern condition format.

End of Introductory Note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

permit number

EPR/ZP3537SL

issued to

Robert Hopkins Environmental Services Limited (“the operator”)

whose registered office is

Robert Hopkins & Son

Bullock Street

West Bromwich

West Midlands

B70 7HE

company registration number **02804996**

to operate a regulated facility at

West Bromwich Transfer & Treatment

Facility

Bullock Street

West Bromwich

B70 7HE

to the extent set out in the schedules.

The notice shall take effect from 02/05/2013

Name	Date
Kelly Bailey	02/05/2013

Authorised on behalf of the Environment Agency

Schedule 1

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/ZP3537SL

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/ZP3537SL/V003 authorising,

Robert Hopkins Environmental Services Limited (“the operator”),

whose registered office is

**Robert Hopkins & Son
Bullock Street
West Bromwich
West Midlands
B70 7HE**

company registration number **02804996**

to operate a regulated facility

**West Bromwich Transfer & Treatment
Facility
Bullock Street
West Bromwich
B70 7HE**

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

Name	Date
Kelly Bailey	02/05/2013

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.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Energy efficiency

- 1.2.1 For the following activities referenced in schedule 1, table S1.1 (A2 to A11):
- 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.
- 1.2.2 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall:
- (a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and 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.
- 1.2.3 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall provide and maintain steam and/or hot water pass-outs such that opportunities for the further use of waste heat may be capitalised upon should they become practicable.
- 1.2.3 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall review the practicability of Combined Heat and Power (CHP) implementation at least every 2 years. The results shall be reported to the Agency within 2 months of each 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”).
- 2.1.2 Waste authorised by this permit in condition 2.3.3 shall be clearly distinguished from any other waste on the site.
- 2.1.3 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

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 (a) 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.
 - (b) 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 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.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

- 2.3.3 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 tables S2.2, S2.3, S2.4 and S2.5; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
 - (c) it having been separately collected for recycling, it is subsequently unsuitable for recovery.
- 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.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall pyrolyse only those hazardous wastes where the throughputs, calorific values and pollutant compositions are within the ranges specified in table S2.6 of schedule 2.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall ensure that prior to accepting waste subject to condition 2.3.6 at the site, it has obtained sufficient information about the hazardous wastes to be pyrolysed to demonstrate compliance with the characteristics described in condition 2.3.6.
- 2.3.8 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall take representative samples of all hazardous waste deliveries to the site unless otherwise agreed in writing with the Environment Agency and test a representative selection of these samples to verify conformity with the information obtained as required by condition 2.3.7. These samples shall be retained for inspection by the Environment Agency for a period of at least 1 month after the material is incinerated and results of any analysis made of such samples will be retained for at least 2 years after the material is incinerated.
- 2.3.9 For the following activities referenced in schedule 1, table S1.1 (A1): Waste shall not be charged, or shall cease to be charged to the pyrolyser, if:
- (a) the thermal oxidiser temperature is below, or falls below, 1100°C; or
 - (b) any continuous emission limit value for emission point A1 in schedule 3 table S3.1 is exceeded; or
 - (c) for a period of more than 4 hours uninterrupted duration, any one of the following apply:
 - (ii) continuous emission monitors required to demonstrate compliance with any continuous emission limit values in schedule 3 table S3.1 for emission point A1 are unavailable due to technically unavailable stoppage, disturbances or failures,
- provided that the cumulative period of such operations would not exceed 60 hours for an co-incineration plant over a calendar year.
- 2.3.10 The operator shall record the beginning and end of each period of operation under condition 2.3.9 (c).
- 2.3.11 During a period of operation under condition 2.3.9 (c), the operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible

- 2.3.10 For the following activities referenced in schedule 1, table S1.1 (A1): The operator shall have at least one auxiliary burner in each line at start up or shut down or whenever the operating temperature falls below that specified in condition 2.3.9, as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.9 is maintained in the combustion chamber, such burner(s) may be fed only with fuels which result in emissions no higher than those arising from the use of gas oil, liquefied gas or natural gas.

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.

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

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 For the following activities referenced in schedule 1, table S1.1 (A1): Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S 3.4. Additional samples shall be taken and tested and appropriate action taken, whenever:
- (a) disposal or recovery routes change; or
 - (b) it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.

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.
- 3.2.4 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.

3.3 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, to prevent or where that is not practicable to minimise the odour.
- 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 and S3.2;
 - (b) process monitoring specified in table S3.3; and
 - (c) residue quality in table S3.4
- 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 and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.
- 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 and S3.2 unless otherwise agreed in writing by the Environment Agency.
- 3.5.5 For the following activities referenced in schedule 1, table S1.1 (A1): Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; the Continuous Emission Monitors shall be used such that;
- (a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages:

• Carbon monoxide	10%
• Sulphur dioxide	20%
• Oxides of nitrogen (NO & NO ₂ expressed as NO ₂)	20%
• Particulate matter	30%
• Total organic carbon (TOC)	30%
• Hydrogen chloride	40%
 - (b) 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 the value of the confidence intervals in condition 3.5.5 (a);
 - (c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case 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;
 - (d) 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 shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;
 - (e) no more than ten daily average values per year shall be determined not to be valid.

3.6 Pests

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;

- (b) implement the pests management plan, from the date of approval, 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 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.
- (d) For the following activities referenced in schedule 1, table S1.1 (A1): the functioning and monitoring of the co-incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Chapter IV of the Industrial Emissions Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the IED.

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.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

- 4.3.1 The Operator shall
 - (a) in the event 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) in the event 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) in the event 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.

In any other case:

 - (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

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.

4.4 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 "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.1 A1 (a)	The incineration of hazardous waste in a waste co-incineration plant with a capacity of 10 tonnes per day or more.	From receipt of waste, processing and blending, to cleaning and storage of syn gas, combustion of char in the thermal oxidiser, generation of steam via the heat recovery steam generator, cleaning and emission of exhaust gas and disposal of waste arisings. Waste types and quantities as specified in Table S2.2 of this permit, blended in the proportions detailed in Table 6.1 of the applicant's letter dated 14 January 2012, reference SOL1212BPP01 Schedule 5 (received by the Environment Agency on 14/01/13).
A2	S5.6 A1 (a)	D15: Storage pending any of the operations numbered D01 to D14 (excluding temporary storage pending collection on the site where it is produced).	From receipt of hazardous waste to storage prior to off-site disposal. Containerised wastes stored in the areas as detailed on drawing RH31. Waste types as specified in Table S2.3 of this permit.
A3	S5.3 A1 (a) (iv)	D14: repackaging prior to submission to any of the operations numbered D01 to D12.	From receipt of hazardous waste to despatch from site. Within the areas identified for bulking/ blending as detailed on drawing RH31. Waste types as specified in table S2.3
A4	S5.3 A1 (a) (iii)	D13: Blending or mixing prior to submission to any of the operations numbered D01 to D12.	From receipt of hazardous waste to introduction to bulking process prior to off site disposal. Within the areas identified for bulking/blending as detailed on drawing RH31. Waste types as specified in Table S2.3 of this permit.
A5	S5.3 A1 (a) (iii)	D13: Blending or mixing prior to submission to any of the operations numbered D01 to D12.	From receipt of hazardous waste to introduction to blending process prior to off site disposal. Within the areas identified for bulking/blending as detailed on drawing RH31. Waste types as specified in Table S2.4 of this permit.

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A6	S5.3 A1 (a) (iii)	D13: Blending or mixing prior to submission to any of the operations numbered D01 to D12.	From receipt of waste oils in containers through blending and, bulking to larger containers and storage prior to off site recovery. Within the areas identified for blending of waste oils as detailed on drawing RH31. Waste types as specified in Table S2.5 of this permit.
A7	S5.6 A1 (a)	R13: Storage of wastes pending any of the operations numbered R01 to R12 (excluding temporary storage pending collection on the site where it is produced).	From receipt of waste oils to off site transfer of separated oil and residues. Within bulk storage vessel OT1. Waste types as specified in Table S2.5 of this permit.
Directly Associated Activity			
A8	Electricity Generation	Generation of 4MWe electrical power using a reciprocating CHP spark ignition gas engine	From receipt of syn gas to release of exhaust gases. Combustion of syngas that meets the end of waste test.
A9	Flaring of syn gas	Flaring of syn gas using enclosed flare	From receipt of syn gas to release of exhaust gases
A10	Drum washing, crushing and shredding	D9; Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12 . R4 recycling or recovery of metals.	Washing of containers arising from storage and treatment operations. Shredding or crushing of washed containers arising from storage and treatment operations.
A11	Effluent storage and sewer discharge	D9 Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12	Tank EF1 Effluent arising from surface water drainage only. Discharge to foul sewer at point S1 as detailed on drawing Figure 13 from SOL0312BPP01, Issue 2 dated December 2012
A12	Gas fired boiler	Generation of heat for drum washing process	-

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.1.4, to 2.1.24, 2.2 and 2.3 given in pages 11 to 41 of the application.	28/8/05

Table S1.2 Operating techniques

Description	Parts	Date Received
Email regarding tonnage into the site, from R Hopkins Environmental Limited, dated 12/10/2005	All parts	12/10/2005
Email regarding waste types into the site, from R Hopkins Environmental Limited, dated 22/05/2006	All parts	22/05/2006
Email regarding waste types into the site, from R Hopkins Environmental Limited, dated 26/05/2006	All parts	26/05/2006
EMS 1.0, EMS 3.0, EMS 4.2 and EMS 4.3 (document and records control)	All parts (submitted to meet IP11 of ZP3537SL)	20/12/2006
EMS 4.4.1 (pre-acceptance of wastes)	All parts (submitted to meet IP1 of ZP3537SL)	19/04/2007
EMS 4.4.2 (acceptance of wastes)	All parts (submitted to meet IP2 of ZP3537SL)	19/04/2007
EMS 4.4.3 (storage of wastes)	All parts (submitted to meet IP3 of ZP3537SL)	19/04/2007
EMS 4.1 issue 3 (management procedure)	All parts (submitted to meet IP8 and IP9 of ZP3537SL)	12/09/2007
EMS 4.11 issue 3 (accident management)	All parts (submitted to meet IP10 of ZP3537SL)	09/11/2007
EMS 2.1.13 issue 1 (drum washing)	All parts (submitted to meet IP5(1) of ZP3537SL)	19/12/2007
EPR Substantial Variation Application SOL0312BPP01, Issue 2 dated December 2012	All parts	14/01/13
Letter dated 12/12/12 from SOL Environmental Limited in response to Not Duly Made letter from the Agency	All parts	14/01/13
Accident Management Plan, reference SOL0412BP01, dated September 2012	All parts	14/01/13
Letter dated 14/01/13 from SOL Environmental Limited in response to Not Duly Made letter from the Agency	All parts	15/01/13

Table S1.2 Operating techniques

Description	Parts	Date Received
Email dated 21/03/13 from Sol Environmental Limited in response to Environment Agency email dated 20/03/12 concerning waste types, gas flare and calorific value of hazardous wastes	Response to question 2 regarding oil filters Response to question 3 regarding gas flare	21/03/13
e-mail dated 01/05/2013 about waste types	all	01/05/2013

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IP1	The Operator shall submit a written report to the Environment Agency on the commissioning of the installation. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.	Within 4 months of the completion of commissioning.
IP2	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the furnace whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency.	Within 4 months of the completion of commissioning.
IP3	The Operator shall submit a written summary report to the Agency to confirm by the results of calibration and verification testing that the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.	Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning. Full summary evidence compliance report to be submitted within 18 months of commissioning.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP4	<p>The Operator shall provide the Environment Agency, for its agreement in writing, with detailed written proposals for the automatic recording of the runtime of the stand-by flare. The proposals shall include details of access to this data by the Environment Agency.</p> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the written proposals.</p> <p>You must implement the proposals as approved, and from the date stipulated, by the Environment Agency.</p>	Within 3 months of completion of commissioning
IP5	<p>The Operator shall undertake an assessment of the ratio of Chromium (total) to Chromium VI in the filter residues from the A1 emission line, using a minimum of 4 samples taken over the first year of operation following commissioning. The Operator shall then carry out an assessment of the impact of emissions to air of Chromium VI, using the actual ratio obtained. The assessment shall predict the impact of Chromium VI against the relevant EQS/EAL through the use of emissions monitoring data obtained during the first year of operation and air dispersion modelling. In the event that the assessment shows that the EQS/EAL can be exceeded, the report shall include proposals for further investigative work. A report on the assessment shall be made to the Environment Agency.</p>	Within 15 months of the completion of commissioning
IP6	<p>The operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission points A1 and A2, identifying the fractions within the PM₁₀, PM_{2.5} and PM_{1.0} ranges. The proposal shall include a timetable for approval by the Environment Agency to carry out such tests and produce a report on the results.</p> <p>On receipt of written agreement by the Environment Agency to the proposal and the timetable, the operator shall carry out the tests and submit to the Environment Agency a report on the results.</p>	Within 6 months of the completion of commissioning

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
PO1		<p>Prior to the commencement of commissioning; the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.</p>

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
PO2	Pyrolysis activity	<p>Prior to the commencement of commissioning, the Operator shall submit the following details regarding the composition of the blended hazardous waste that is to be charged to the pyrolyser:</p> <ul style="list-style-type: none"> (i) The maximum calorific value; (ii) The maximum concentrations of; <ul style="list-style-type: none"> a. Polychlorinated biphenyls; b. Pentachlorophenol; and c. Fluorine. d. Confirmation of other parameters in table S2.6 (iii) The range of the blend proportion of mixed C grade wood, oily contaminated rags and materials, solvent containing rags and materials, contaminated packaging materials and denatured paints and sludges (as detailed in Table 6.1, provided by the Operator on 14/01/13). <p>The proposed maximum value/concentrations shall be accompanied by a suitable justification for the values. No blended hazardous wastes may be introduced into the pyrolysis plant until the Environment Agency has provided its written approval of the proposed value/concentrations.</p>
PO3	Pyrolysis activity	<p>Prior to the commencement of commissioning, the Operator shall provide the Environment Agency with a written methodology for the sampling and analysis of the syn gas for the parameters listed in Table S3.3 for syn gas, post gas cleaning line and pre combustion.</p> <p>No blended hazardous wastes may be introduced into the pyrolysis plant until the Environment Agency has provided its written approval of the proposed methodology.</p>
PO4		<p>Prior to the commencement of commissioning, the Operator shall send a report to the Environment Agency which will contain a comprehensive review of the options available for utilising the heat generated by the waste co-incineration process in order to ensure that it is recovered as far as practicable. The review shall detail any identified proposals for improving the recovery and utilisation of waste heat and shall provide a timetable for their implementation.</p>

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
Gas Oil	< 0.1% sulphur content
Syn gas for combustion in gas engine	Meets the end of waste test

Table S2.2 Permitted waste types and quantities to be blended into solid hazardous waste feedstock for charging the pyrolysis plant (Activity A1)

Maximum quantity	24,000 tonnes per year of blended solid hazardous waste feedstock, not in addition to the 40,000 tonnes per year that may be accepted under Table S2.3
Waste code	Description
3	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 02	wastes from wood preservation
03 01 04*	sawdust, shavings, cuttings, wood, particle board and veneer containing dangerous substances
8	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
08 01 15*	aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances
08 01 17*	wastes from paint or varnish removal containing organic solvents or other dangerous substances
08 01 19*	aqueous suspensions containing paint or varnish containing organic solvents or other dangerous substances
08 03	wastes from MFSU of printing inks
08 03 12*	waste ink containing dangerous substances
08 03 14*	ink sludges containing dangerous substances
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 09*	machining emulsions and solutions free of halogens
13	OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)
13 01	waste hydraulic oils
13 01 05*	non-chlorinated emulsions
13 08	oil wastes not otherwise specified
13 08 02*	other emulsions
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 03	wooden packaging

Table S2.2 Permitted waste types and quantities to be blended into solid hazardous waste feedstock for charging the pyrolysis plant (Activity A1)

Maximum quantity	24,000 tonnes per year of blended solid hazardous waste feedstock, not in addition to the 40,000 tonnes per year that may be accepted under Table S2.3
Waste code	Description
15 01 06	mixed packaging
15 01 10*	packaging containing residues of or contaminated by dangerous substances
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 07*	oil filters, consisting only of the internal paper and/or fabric filter material.
16 07	wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)
16 07 08*	wastes containing oil
16 07 09*	wastes containing other dangerous substances
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	wood, glass and plastic
17 02 01	wood
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 02	wastes from physico/chemical treatments of waste (including dechromation, decyanidation, neutralisation)
19 02 04*	premixed wastes composed of at least one hazardous waste
19 02 09*	solid combustible wastes containing dangerous substances
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 27*	paint, inks, adhesives and resins containing dangerous substances

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
1	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 03	wastes from physical and chemical processing of metalliferous minerals
01 03 04*	acid-generating tailings from processing of sulphide ore
01 03 05*	other tailings containing dangerous substances
01 03 07*	other wastes containing dangerous substances from physical and chemical processing of metalliferous minerals
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 07*	wastes containing dangerous substances from physical and chemical processing of non-metalliferous minerals
01 05	drilling muds and other drilling wastes
01 05 05*	oil-containing drilling muds and wastes
01 05 06*	drilling muds and other drilling wastes containing dangerous substances
2	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 08*	agrochemical waste containing dangerous substances
3	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	wastes from wood processing and the production of panels and furniture
03 01 04*	sawdust, shavings, cuttings, wood, particle board and veneer containing dangerous substances
03 02	wastes from wood preservation
03 02 01*	non-halogenated organic wood preservatives
03 02 02*	organochlorinated wood preservatives
03 02 03*	organometallic wood preservatives
03 02 04*	inorganic wood preservatives
03 02 05*	other wood preservatives containing dangerous substances
4	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 01	wastes from the leather and fur industry
04 01 03*	degreasing wastes containing solvents without a liquid phase
04 02	wastes from the textile industry
04 02 14*	wastes from finishing containing organic solvents
04 02 16*	dyestuffs and pigments containing dangerous substances
04 02 19*	sludges from on-site effluent treatment containing dangerous substances
5	WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL
05 01	wastes from petroleum refining
05 01 02*	desalter sludges
05 01 03*	tank bottom sludges
05 01 04*	acid alkyl sludges
05 01 05*	oil spills

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
05 01 06*	oily sludges from maintenance operations of the plant or equipment
05 01 07*	acid tars
05 01 08*	other tars
05 01 09*	sludges from on-site effluent treatment containing dangerous substances
05 01 11*	wastes from cleaning of fuels with bases
05 01 12*	oil containing acids
05 01 15*	spent filter clays
05 06	wastes from the pyrolytic treatment of coal
05 06 01*	acid tars
05 06 03*	other tars
05 07	wastes from natural gas purification and transportation
05 07 01*	wastes containing mercury
6	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 01	wastes from the manufacture, formulation, supply and use (MFSU) of acids
06 01 01*	sulphuric acid and sulphurous acid
06 01 02*	hydrochloric acid
06 01 03*	hydrofluoric acid
06 01 04*	phosphoric and phosphorous acid
06 01 05*	nitric acid and nitrous acid
06 01 06*	other acids
06 02	wastes from the MFSU of bases
06 02 01*	calcium hydroxide
06 02 03*	ammonium hydroxide
06 02 04*	sodium and potassium hydroxide
06 02 05*	other bases
06 03	wastes from the MFSU of salts and their solutions and metallic oxides
06 03 11*	solid salts and solutions containing cyanides
06 03 13*	solid salts and solutions containing heavy metals
06 03 15*	metallic oxides containing heavy metals
06 04	metal-containing wastes other than those mentioned in 06 03
06 04 03*	wastes containing arsenic
06 04 04*	wastes containing mercury
06 04 05*	wastes containing other heavy metals
06 05	sludges from on-site effluent treatment
06 05 02*	sludges from on-site effluent treatment containing dangerous substances
06 06	wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes
06 06 02*	wastes containing dangerous sulphides
06 07	wastes from the MFSU of halogens and halogen chemical processes
06 07 01*	wastes containing asbestos from electrolysis
06 07 02*	activated carbon from chlorine production
06 07 03*	barium sulphate sludge containing mercury
06 07 04*	solutions and acids, for example contact acid
06 08	wastes from the MFSU of silicon and silicon derivatives

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
06 08 02*	wastes containing dangerous silicones
06 09	wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes
06 09 03*	calcium-based reaction wastes containing or contaminated with dangerous substances
06 10	wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture
06 10 02*	wastes containing dangerous substances
06 11	wastes from the manufacture of inorganic pigments and opacifiers
06 13	wastes from inorganic chemical processes not otherwise specified
06 13 01*	inorganic plant protection products, wood-preserving agents and other biocides.
06 13 02*	spent activated carbon (except 06 07 02)
06 13 04*	wastes from asbestos processing
06 13 05*	soot
7	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 01	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 01*	aqueous washing liquids and mother liquors
07 01 03*	organic halogenated solvents, washing liquids and mother liquors
07 01 04*	other organic solvents, washing liquids and mother liquors
07 01 07*	halogenated still bottoms and reaction residues
07 01 08*	other still bottoms and reaction residues
07 01 09*	halogenated filter cakes and spent absorbents
07 01 10*	other filter cakes and spent absorbents
07 01 11*	sludges from on-site effluent treatment containing dangerous substances
07 02	wastes from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 01*	aqueous washing liquids and mother liquors
07 02 03*	organic halogenated solvents, washing liquids and mother liquors
07 02 04*	other organic solvents, washing liquids and mother liquors
07 02 07*	halogenated still bottoms and reaction residues
07 02 08*	other still bottoms and reaction residues
07 02 09*	halogenated filter cakes and spent absorbents
07 02 10*	other filter cakes and spent absorbents
07 02 11*	sludges from on-site effluent treatment containing dangerous substances
07 02 14*	wastes from additives containing dangerous substances
07 02 16*	wastes containing dangerous silicones
07 03	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 01*	aqueous washing liquids and mother liquors
07 03 03*	organic halogenated solvents, washing liquids and mother liquors
07 03 04*	other organic solvents, washing liquids and mother liquors
07 03 07*	halogenated still bottoms and reaction residues
07 03 08*	other still bottoms and reaction residues
07 03 09*	halogenated filter cakes and spent absorbents
07 03 10*	other filter cakes and spent absorbents
07 03 11*	sludges from on-site effluent treatment containing dangerous substances

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
07 04	wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides
07 04 01*	aqueous washing liquids and mother liquors
07 04 03*	organic halogenated solvents, washing liquids and mother liquors
07 04 04*	other organic solvents, washing liquids and mother liquors
07 04 07*	halogenated still bottoms and reaction residues
07 04 08*	other still bottoms and reaction residues
07 04 09*	halogenated filter cakes and spent absorbents
07 04 10*	other filter cakes and spent absorbents
07 04 11*	sludges from on-site effluent treatment containing dangerous substances
07 04 13*	solid wastes containing dangerous substances
07 05	wastes from the MFSU of pharmaceuticals
07 05 01*	aqueous washing liquids and mother liquors
07 05 03*	organic halogenated solvents, washing liquids and mother liquors
07 05 04*	other organic solvents, washing liquids and mother liquors
07 05 07*	halogenated still bottoms and reaction residues
07 05 08*	other still bottoms and reaction residues
07 05 09*	halogenated filter cakes and spent absorbents
07 05 10*	other filter cakes and spent absorbents
07 05 11*	sludges from on-site effluent treatment containing dangerous substances
07 05 13*	solid wastes containing dangerous substances
07 06	wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 01*	aqueous washing liquids and mother liquors
07 06 03*	organic halogenated solvents, washing liquids and mother liquors
07 06 04*	other organic solvents, washing liquids and mother liquors
07 06 07*	halogenated still bottoms and reaction residues
07 06 08*	other still bottoms and reaction residues
07 06 09*	halogenated filter cakes and spent absorbents
07 06 10*	other filter cakes and spent absorbents
07 06 11*	sludges from on-site effluent treatment containing dangerous substances
07 07	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 01*	aqueous washing liquids and mother liquors
07 07 03*	organic halogenated solvents, washing liquids and mother liquors
07 07 04*	other organic solvents, washing liquids and mother liquors
07 07 07*	halogenated still bottoms and reaction residues
07 07 08*	other still bottoms and reaction residues
07 07 09*	halogenated filter cakes and spent absorbents
07 07 10*	other filter cakes and spent absorbents
07 07 11*	sludges from on-site effluent treatment containing dangerous substances
8	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01	wastes from MFSU and removal of paint and varnish

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
08 01 13*	sludges from paint or varnish containing organic solvents or other dangerous substances
08 01 15*	aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances
08 01 17*	wastes from paint or varnish removal containing organic solvents or other dangerous substances
08 01 19*	aqueous suspensions containing paint or varnish containing organic solvents or other dangerous substances
08 01 21*	waste paint or varnish remover
08 03	wastes from MFSU of printing inks
08 03 12*	waste ink containing dangerous substances
08 03 14*	ink sludges containing dangerous substances
08 03 16*	waste etching solutions
08 03 17*	waste printing toner containing dangerous substances
08 03 19*	disperse oil
08 04	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
08 04 11*	adhesive and sealant sludges containing organic solvents or other dangerous substances
08 04 13*	aqueous sludges containing adhesives or sealants containing organic solvents or other dangerous substances
08 04 15*	aqueous liquid waste containing adhesives or sealants containing organic solvents or other dangerous substances
08 04 17*	rosin oil
08 05	wastes not otherwise specified in 08
08 05 01*	waste isocyanates
9	WASTES FROM THE PHOTOGRAPHIC INDUSTRY
09 01	wastes from the photographic industry
09 01 01*	water-based developer and activator solutions
09 01 02*	water-based offset plate developer solutions
09 01 03*	solvent-based developer solutions
09 01 04*	fixer solutions
09 01 05*	bleach solutions and bleach fixer solutions
09 01 06*	wastes containing silver from on-site treatment of photographic wastes
09 01 11*	single-use cameras containing batteries included in 16 06 01, 16 06 02 or 16 06 03
09 01 13*	aqueous liquid waste from on-site reclamation of silver other than those mentioned in 09 01 06
10	WASTES FROM THERMAL PROCESSES
10 01	wastes from power stations and other combustion plants (except 19)
10 01 04*	oil fly ash and boiler dust
10 01 09*	sulphuric acid

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
10 01 13*	fly ash from emulsified hydrocarbons used as fuel
10 01 14*	bottom ash, slag and boiler dust from co-incineration containing dangerous substances
10 01 16*	fly ash from co-incineration containing dangerous substances
10 01 18*	wastes from gas cleaning containing dangerous substances
10 01 20*	sludges from on-site effluent treatment containing dangerous substances
10 01 22*	aqueous sludges from boiler cleansing containing dangerous substances
10 02	wastes from the iron and steel industry
10 02 07*	solid wastes from gas treatment containing dangerous substances
10 02 11*	wastes from cooling-water treatment containing oil
10 02 13*	sludges and filter cakes from gas treatment containing dangerous substances
10 03	wastes from aluminium thermal metallurgy
10 03 04*	primary production slags
10 03 08*	salt slags from secondary production
10 03 09*	black drosses from secondary production
10 03 15*	skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities
10 03 17*	tar-containing wastes from anode manufacture
10 03 19*	flue-gas dust containing dangerous substances
10 03 21*	other particulates and dust (including ball-mill dust) containing dangerous substances
10 03 23*	solid wastes from gas treatment containing dangerous substances
10 03 25*	sludges and filter cakes from gas treatment containing dangerous substances
10 03 27*	wastes from cooling-water treatment containing oil
10 03 29*	wastes from treatment of salt slags and black drosses containing dangerous substances
10 04	wastes from lead thermal metallurgy
10 04 01*	slags from primary and secondary production
10 04 02*	dross and skimmings from primary and secondary production
10 04 03*	calcium arsenate
10 04 04*	flue-gas dust
10 04 05*	other particulates and dust
10 04 06*	solid wastes from gas treatment
10 04 07*	sludges and filter cakes from gas treatment
10 04 09*	wastes from cooling-water treatment containing oil
10 05	wastes from zinc thermal metallurgy
10 05 03*	flue-gas dust
10 05 05*	solid waste from gas treatment
10 05 06*	sludges and filter cakes from gas treatment
10 05 08*	wastes from cooling-water treatment containing oil
10 05 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities
10 06	wastes from copper thermal metallurgy
10 06 03*	flue-gas dust
10 06 06*	solid wastes from gas treatment

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
10 06 07*	sludges and filter cakes from gas treatment
10 06 09*	wastes from cooling-water treatment containing oil
10 07	wastes from silver, gold and platinum thermal metallurgy
10 07 07*	wastes from cooling-water treatment containing oil
10 08	wastes from other non-ferrous thermal metallurgy
10 08 08*	salt slag from primary and secondary production
10 08 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities
10 08 12*	tar-containing wastes from anode manufacture
10 08 15*	flue-gas dust containing dangerous substances
10 08 17*	sludges and filter cakes from flue-gas treatment containing dangerous substances
10 08 19*	wastes from cooling-water treatment containing oil
10 09	wastes from casting of ferrous pieces
10 09 05*	casting cores and moulds which have not undergone pouring containing dangerous substances
10 09 07*	casting cores and moulds which have undergone pouring containing dangerous substances
10 09 09*	flue-gas dust containing dangerous substances
10 09 11*	other particulates containing dangerous substances
10 09 13*	waste binders containing dangerous substances
10 09 15*	waste crack-indicating agent containing dangerous substances
10 10	wastes from casting of non-ferrous pieces
10 10 05*	casting cores and moulds which have not undergone pouring, containing dangerous substances
10 10 07*	casting cores and moulds which have undergone pouring, containing dangerous substances
10 10 09*	flue-gas dust containing dangerous substances
10 10 11*	other particulates containing dangerous substances
10 10 13*	waste binders containing dangerous substances
10 10 15*	waste crack-indicating agent containing dangerous substances
10 11	wastes from manufacture of glass and glass products
10 11 09*	waste preparation mixture before thermal processing, containing dangerous substances
10 11 11*	waste glass in small particles and glass powder containing heavy metals (for example from cathode ray tubes)
10 11 13*	glass-polishing and -grinding sludge containing dangerous substances
10 11 15*	solid wastes from flue-gas treatment containing dangerous substances
10 11 17*	sludges and filter cakes from flue-gas treatment containing dangerous substances
10 11 19*	solid wastes from on-site effluent treatment containing dangerous substances
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 09*	solid wastes from gas treatment containing dangerous substances
10 12 11*	wastes from glazing containing heavy metals

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 09*	wastes from asbestos-cement manufacture containing asbestos
10 13 12*	solid wastes from gas treatment containing dangerous substances
10 14	waste from crematoria
10 14 01*	waste from gas cleaning containing mercury
11	WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 01	wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)
11 01 05*	pickling acids
11 01 06*	acids not otherwise specified
11 01 07*	pickling bases
11 01 08*	phosphatising sludges
11 01 09*	sludges and filter cakes containing dangerous substances
11 01 11*	aqueous rinsing liquids containing dangerous substances
11 01 13*	degreasing wastes containing dangerous substances
11 01 15*	eluate and sludges from membrane systems or ion exchange systems containing dangerous substances
11 01 16*	saturated or spent ion exchange resins
11 01 98*	other wastes containing dangerous substances
11 02	wastes from non-ferrous hydrometallurgical processes
11 02 02*	sludges from zinc hydrometallurgy (including jarosite, goethite)
11 02 05*	wastes from copper hydrometallurgical processes containing dangerous substances
11 02 07*	other wastes containing dangerous substances
11 03	sludges and solids from tempering processes
11 03 01*	wastes containing cyanide
11 03 02*	other wastes
11 05	wastes from hot galvanising processes
11 05 03*	solid wastes from gas treatment
11 05 04*	spent flux
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 06*	mineral-based machining oils containing halogens (except emulsions and solutions)
12 01 07*	mineral-based machining oils free of halogens (except emulsions and solutions)
12 01 08*	machining emulsions and solutions containing halogens
12 01 09*	machining emulsions and solutions free of halogens
12 01 10*	synthetic machining oils
12 01 12*	spent waxes and fats
12 01 14*	machining sludges containing dangerous substances
12 01 16*	waste blasting material containing dangerous substances

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
12 01 18*	metal sludge (grinding, honing and lapping sludge) containing oil
12 01 19*	readily biodegradable machining oil
12 01 20*	spent grinding bodies and grinding materials containing dangerous substances
12 03	wastes from water and steam degreasing processes (except 11)
12 03 01*	aqueous washing liquids
12 03 02*	steam degreasing wastes
13	OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)
13 01	waste hydraulic oils
13 01 01*	hydraulic oils, containing PCBs
13 01 04*	chlorinated emulsions
13 01 05*	non-chlorinated emulsions
13 01 09*	mineral-based chlorinated hydraulic oils
13 01 10*	mineral based non-chlorinated hydraulic oils
13 01 11*	synthetic hydraulic oils
13 01 12*	readily biodegradable hydraulic oils
13 01 13*	other hydraulic oils
13 02	waste engine, gear and lubricating oils
13 02 04*	mineral-based chlorinated engine, gear and lubricating oils
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils
13 02 06*	synthetic engine, gear and lubricating oils
13 02 07*	readily biodegradable engine, gear and lubricating oils
13 02 08*	other engine, gear and lubricating oils
13 03	waste insulating and heat transmission oils
13 03 01*	insulating or heat transmission oils containing PCBs
13 03 06*	mineral-based chlorinated insulating and heat transmission oils other than those mentioned in 13 03 01
13 03 07*	mineral-based non-chlorinated insulating and heat transmission oils
13 03 08*	synthetic insulating and heat transmission oils
13 03 09*	readily biodegradable insulating and heat transmission oils
13 03 10*	other insulating and heat transmission oils
13 04	bilge oils
13 04 01*	bilge oils from inland navigation
13 04 02*	bilge oils from jetty sewers
13 04 03*	bilge oils from other navigation
13 05	oil/water separator contents
13 05 01*	solids from grit chambers and oil/water separators
13 05 02*	sludges from oil/water separators
13 05 03*	interceptor sludges
13 05 06*	oil from oil/water separators
13 05 07*	oily water from oil/water separators
13 05 08*	mixtures of wastes from grit chambers and oil/water separators
13 07	wastes of liquid fuels
13 07 01*	fuel oil and diesel

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
13 07 02*	petrol
13 07 03*	other fuels (including mixtures)
13 08	oil wastes not otherwise specified
13 08 01*	desalter sludges or emulsions
13 08 02*	other emulsions
14	WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08)
14 06	waste organic solvents, refrigerants and foam/aerosol propellants
14 06 01*	chlorofluorocarbons, HCFC, HFC
14 06 02*	other halogenated solvents and solvent mixtures
14 06 03*	other solvents and solvent mixtures
14 06 04*	sludges or solid wastes containing halogenated solvents
14 06 05*	sludges or solid wastes containing other solvents
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by dangerous substances
15 01 11*	metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 07*	oil filters
16 01 08*	components containing mercury
16 01 09*	components containing PCBs
16 01 10*	explosive components (for example air bags)
16 01 11*	brake pads containing asbestos
16 01 13*	brake fluids
16 01 14*	antifreeze fluids containing dangerous substances
16 01 21*	hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14
16 02	wastes from electrical and electronic equipment
16 02 09*	transformers and capacitors containing PCBs
16 02 10*	discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09
16 02 11*	discarded equipment containing chlorofluorocarbons, HCFC, HFC
16 02 12*	discarded equipment containing free asbestos
16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
16 02 15*	hazardous components removed from discarded equipment
16 03	off-specification batches and unused products
16 03 03*	inorganic wastes containing dangerous substances

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
16 03 05*	organic wastes containing dangerous substances
16 05	gases in pressure containers and discarded chemicals
16 05 04*	gases in pressure containers (including halons) containing dangerous substances
16 05 06*	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
16 05 07*	discarded inorganic chemicals consisting of or containing dangerous substances
16 05 08*	discarded organic chemicals consisting of or containing dangerous substances
16 06	batteries and accumulators
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 06*	separately collected electrolyte from batteries and accumulators
16 07	wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)
16 07 08*	wastes containing oil
16 07 09*	wastes containing other dangerous substances
16 08	spent catalysts
16 08 02*	spent catalysts containing dangerous transition metals or dangerous transition metal compounds
16 08 05*	spent catalysts containing phosphoric acid
16 08 06*	spent liquids used as catalysts
16 08 07*	spent catalysts contaminated with dangerous substances
16 09	oxidising substances
16 09 01*	permanganates, for example potassium permanganate
16 09 02*	chromates, for example potassium chromate, potassium or sodium dichromate
16 09 03*	peroxides, for example hydrogen peroxide
16 09 04*	oxidising substances, not otherwise specified
16 10	aqueous liquid wastes destined for off-site treatment
16 10 01*	aqueous liquid wastes containing dangerous substances
16 10 03*	aqueous concentrates containing dangerous substances
16 11	waste linings and refractories
16 11 01*	carbon-based linings and refractories from metallurgical processes containing dangerous substances
16 11 03*	other linings and refractories from metallurgical processes containing dangerous substances
16 11 05*	linings and refractories from non-metallurgical processes containing dangerous substances
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	concrete, bricks, tiles and ceramics
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances
17 02	wood, glass and plastic
17 02 04*	glass, plastic and wood containing or contaminated with dangerous substances
17 03	bituminous mixtures, coal tar and tarred products

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
17 03 01*	bituminous mixtures containing coal tar
17 03 03*	coal tar and tarred products
17 04	metals (including their alloys)
17 04 09*	metal waste contaminated with dangerous substances
17 04 10*	cables containing oil, coal tar and other dangerous substances
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 05 05*	dredging spoil containing dangerous substances
17 05 07*	track ballast containing dangerous substances
17 06	insulation materials and asbestos-containing construction materials
17 06 01*	insulation materials containing asbestos
17 06 03*	other insulation materials consisting of or containing dangerous substances
17 06 05*	construction materials containing asbestos
17 08	gypsum-based construction material
17 08 01*	gypsum-based construction materials contaminated with dangerous substances
17 09	other construction and demolition wastes
17 09 01*	construction and demolition wastes containing mercury
17 09 02*	construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB-containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors)
17 09 03*	other construction and demolition wastes (including mixed wastes) containing dangerous substances
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)
18 01	wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 06*	chemicals consisting of or containing dangerous substances
18 01 10*	amalgam waste from dental care
18 02	wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 05*	chemicals consisting of or containing dangerous substances
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	wastes from incineration or pyrolysis of waste
19 01 05*	filter cake from gas treatment
19 01 06*	aqueous liquid wastes from gas treatment and other aqueous liquid wastes
19 01 07*	solid wastes from gas treatment
19 01 10*	spent activated carbon from flue-gas treatment
19 01 11*	bottom ash and slag containing dangerous substances
19 01 13*	fly ash containing dangerous substances
19 01 15*	boiler dust containing dangerous substances
19 01 17*	pyrolysis wastes containing dangerous substances

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 04*	premixed wastes composed of at least one hazardous waste
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 07*	oil and concentrates from separation
19 02 08*	liquid combustible wastes containing dangerous substances
19 02 09*	solid combustible wastes containing dangerous substances
19 02 11*	other wastes containing dangerous substances
19 03	stabilised/solidified wastes
19 03 04*	wastes marked as hazardous, partly stabilised
19 03 06*	wastes marked as hazardous, solidified
19 04	vitrified waste and wastes from vitrification
19 04 02*	fly ash and other flue-gas treatment wastes
19 04 03*	non-vitrified solid phase
19 07	landfill leachate
19 07 02*	landfill leachate containing dangerous substances
19 08	wastes from waste water treatment plants not otherwise specified
19 08 06*	saturated or spent ion exchange resins
19 08 07*	solutions and sludges from regeneration of ion exchangers
19 08 08*	membrane system waste containing heavy metals
19 08 10*	grease and oil mixture from oil/water separation other than those mentioned in 19 08 09
19 08 11*	sludges containing dangerous substances from biological treatment of industrial waste water
19 08 13*	sludges containing dangerous substances from other treatment of industrial waste water
19 10	wastes from shredding of metal-containing wastes
19 10 03*	fluff-light fraction and dust containing dangerous substances
19 10 05*	other fractions containing dangerous substances
19 11	wastes from oil regeneration
19 11 01*	spent filter clays
19 11 02*	acid tars
19 11 03*	aqueous liquid wastes
19 11 04*	wastes from cleaning of fuel with bases
19 11 05*	sludges from on-site effluent treatment containing dangerous substances
19 11 07*	wastes from flue-gas cleaning
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 06*	wood containing dangerous substances
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances
19 13	wastes from soil and groundwater remediation
19 13 01*	solid wastes from soil remediation containing dangerous substances
19 13 03*	sludges from soil remediation containing dangerous substances
19 13 05*	sludges from groundwater remediation containing dangerous substances

Table S2.3 Permitted waste types and quantities for waste transfer and bulking (Activities A2, A3 and A4)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
19 13 07*	aqueous liquid wastes and aqueous concentrates from groundwater remediation containing dangerous substances
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 13*	solvents
20 01 14*	acids
20 01 15*	alkalines
20 01 17*	photochemicals
20 01 19*	pesticides
20 01 21*	fluorescent tubes and other mercury-containing waste
20 01 23*	discarded equipment containing chlorofluorocarbons
20 01 26*	oil and fat other than those mentioned in 20 01 25
20 01 27*	paint, inks, adhesives and resins containing dangerous substances
20 01 29*	detergents containing dangerous substances
20 01 33*	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components (6)
20 01 37*	wood containing dangerous substances

Table S2.4 Permitted waste types and quantities for blending and transfer Activity A5

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M³ bulk oil storage.
Waste code	Description
4	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 01	wastes from the leather and fur industry
04 01 03*	degreasing wastes containing solvents without a liquid phase
04 02	wastes from the textile industry
04 02 14*	wastes from finishing containing organic solvents
04 02 16*	dye stuffs and pigments containing dangerous substances
6	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 01	wastes from the manufacture, formulation, supply and use (MFSU) of acids
06 01 01*	sulphuric acid and sulphurous acid
06 01 02*	hydrochloric acid
06 01 03*	hydrofluoric acid
06 01 04*	phosphoric and phosphorous acid
06 01 05*	nitric acid and nitrous acid
06 01 06*	other acids
06 02	wastes from the MFSU of bases
06 02 01*	calcium hydroxide
06 02 03*	ammonium hydroxide

Table S2.4 Permitted waste types and quantities for blending and transfer Activity A5

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
06 02 04*	sodium and potassium hydroxide
06 02 05*	other bases
11	WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 01	wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)
11 01 05*	pickling acids
11 01 06*	acids not otherwise specified
11 01 07*	pickling bases
11 01 11*	aqueous rinsing liquids containing dangerous substances
11 01 13*	degreasing wastes containing dangerous substances
14	WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08)
14 06	waste organic solvents, refrigerants and foam/aerosol propellants
14 06 02*	other halogenated solvents and solvent mixtures
14 06 04*	sludges or solid wastes containing halogenated solvents
14 06 05*	sludges or solid wastes containing other solvents
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by dangerous substances
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 03	off-specification batches and unused products
16 03 03*	inorganic wastes containing dangerous substances
16 03 05*	organic wastes containing dangerous substances
16 05	gases in pressure containers and discarded chemicals
16 05 06*	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
16 05 07*	discarded inorganic chemicals consisting of or containing dangerous substances
16 05 08*	discarded organic chemicals consisting of or containing dangerous substances
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 14*	acids
20 01 15*	alkalines

Table S2.5 Permitted waste types and quantities for waste oils storage and blending (Activities A6 and A7)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
1	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 05	drilling muds and other drilling wastes
01 05 05*	oil-containing drilling muds and wastes
5	WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL
05 01	wastes from petroleum refining
05 01 05*	oil spills
05 01 06*	oily sludges from maintenance operations of the plant or equipment
12	WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 06*	mineral-based machining oils containing halogens (except emulsions and solutions)
12 01 07*	mineral-based machining oils free of halogens (except emulsions and solutions)
12 01 08*	machining emulsions and solutions containing halogens
12 01 09*	machining emulsions and solutions free of halogens
12 01 10*	synthetic machining oils
12 01 14*	machining sludges containing dangerous substances
12 01 19*	readily biodegradable machining oil
13	OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)
13 01	waste hydraulic oils
13 01 01*	hydraulic oils, containing PCBs
13 01 04*	chlorinated emulsions
13 01 05*	non-chlorinated emulsions
13 01 09*	mineral-based chlorinated hydraulic oils
13 01 10*	mineral based non-chlorinated hydraulic oils
13 01 11*	synthetic hydraulic oils
13 01 12*	readily biodegradable hydraulic oils
13 01 13*	other hydraulic oils
13 02	waste engine, gear and lubricating oils
13 02 04*	mineral-based chlorinated engine, gear and lubricating oils
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils
13 02 06*	synthetic engine, gear and lubricating oils
13 02 07*	readily biodegradable engine, gear and lubricating oils
13 02 08*	other engine, gear and lubricating oils
13 03	waste insulating and heat transmission oils
13 03 01*	insulating or heat transmission oils containing PCBs
13 03 06*	mineral-based chlorinated insulating and heat transmission oils other than those mentioned in 13 03 01
13 03 07*	mineral-based non-chlorinated insulating and heat transmission oils
13 03 08*	synthetic insulating and heat transmission oils
13 03 09*	readily biodegradable insulating and heat transmission oils

Table S2.5 Permitted waste types and quantities for waste oils storage and blending (Activities A6 and A7)

Maximum quantity	Total annual input of wastes to the site for all activities shall not exceed 40,000 tonnes per year. 42M ³ bulk oil storage.
Waste code	Description
13 03 10*	other insulating and heat transmission oils
13 04	bilge oils
13 04 01*	bilge oils from inland navigation
13 04 02*	bilge oils from jetty sewers
13 04 03*	bilge oils from other navigation
13 05	oil/water separator contents
13 05 02*	sludges from oil/water separators
13 05 03*	interceptor sludges
13 05 06*	oil from oil/water separators
13 05 07*	oily water from oil/water separators
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 13*	brake fluids
16 07	wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)
16 07 08*	wastes containing oil
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 07*	oil and concentrates from separation
19 08	wastes from waste water treatment plants not otherwise specified
19 08 10*	grease and oil mixture from oil/water separation other than those mentioned in 19 08 09
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 26*	oil and fat other than those mentioned in 20 01 25

Table S2.6 Specification for blended solid hazardous waste feedstock for charging the pyrolysis plant

Content/Value	Specification
Throughput	Maximum of 24,000 tonnes per year
Composition	Blend of wastes listed in Table S2.2 only, blend range to be established in accordance with pre-operational measure Table S1.4, PO2.
Calorific value (dry basis)	Minimum: 18MJ/kg
	Maximum: To be established in accordance with pre-operational measure Table S1.4, PO2.
Polychlorinated biphenyls	Maximum concentration: To be established in accordance with pre-operational measure Table S1.4, PO2.
Pentachlorophenol	Maximum concentration: To be established in accordance with pre-operational measure Table S1.4, PO2.
Chlorine	Maximum concentration: 300 g/tonne
Fluorine	Maximum concentration: To be established in accordance with pre-operational measure Table S1.4, PO2.
Sulphur	Maximum concentration: 1200 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Cadmium	Maximum concentration: 0.23 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Zinc	Maximum concentration: 485.48 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Vanadium	Maximum concentration: 14 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Lead	Maximum concentration: 47.98 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Copper	Maximum concentration: 221.17 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Chromium	Maximum concentration: 90.11 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Nickel	Maximum concentration: 428.11 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Antimony	Maximum concentration: 361.40 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Cobalt	Maximum concentration: 4.36 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Tin	Maximum concentration: 22.39 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Manganese	Maximum concentration: 134.54 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Thallium	Maximum concentration: 0.12 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Arsenic	Maximum concentration: 1.98 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Mercury	Maximum concentration: 0.05 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Boron	Maximum concentration: 15.9 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.
Selenium	Maximum concentration: 0.19 g/tonne or as established in accordance with pre-operational measure Table S1.4, PO2.

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Particulate matter	Pyrolysis plant	15 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Total Organic Carbon (TOC)	Pyrolysis plant	15 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Hydrogen chloride	Pyrolysis plant	15 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Hydrogen fluoride	Pyrolysis plant	3 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Carbon monoxide	Pyrolysis plant	75 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Sulphur dioxide	Pyrolysis plant	75 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Pyrolysis plant	300 mg/m ³	daily average	Continuous measurement	BS EN 15267-3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Cadmium & thallium and their compounds (total)	Pyrolysis plant	0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Mercury and its compounds	Pyrolysis plant	0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	Pyrolysis plant	0.5 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Water vapour content	Pyrolysis plant		continuous	Continuous measurement	BS EN 14181
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxins / furans (I-TEQ)	Pyrolysis plant	0.1 ng/m ³	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxins / furans (WHO-TEQ Humans / Mammals)	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxins / furans (WHO-TEQ Fish)	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxins / furans (WHO-TEQ Birds)	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxin-like PCBs (WHO-TEQ Fish)	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Dioxin-like PCBs (WHO-TEQ Birds)	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	Pyrolysis plant		periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	Procedure shall use BS ISO 11338-1 and BS-ISO 11338-2.
A2 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Gas engine	250 mg/m ³	daily average	Continuous measurement	BS EN 15267-3
A2 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Carbon monoxide	Gas engine	1400 mg/m ³	hourly mean	Annually	BS EN 14181
A3 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Gas flare	150 mg/m ³	hourly mean	Annually if the flare operates for more than 10% of a year (876 hours)	In accordance with the Agency's Technical Guidance Note (Monitoring) M2, version 9 January 2013
A3 as shown on revised Plan "SOL0312BPP01 page 18", provided by the Operator on 21/03/13	Carbon monoxide	Gas flare	100 mg/m ³	hourly mean		

Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
S1	No parameters set	Site Effluent Treatment plant and holding tank. The discharge shall consist only of surface water arisings at the facility. No waste waters from the cleaning of waste gases arising from Activity A1 in Table S1.1 shall be discharged	No limits set	-	-	-

Table S3.3 Process monitoring requirements

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Top of thermal oxidiser, as identified in the Application	Temperature (° C)	Continuous	Traceable to national standards	-
Surface temperature of pyrolysis retort, as identified in the application	Temperature (° C)	Continuous	Traceable to national standards	-
Temperature within char hopper	Temperature (° C)	Continuous	Traceable to national standards	-
A1 as shown on revised Plan "SOL0312BPP01 page 18"	Exhaust gas temperature	Continuous	Traceable to national standards	-
A1 as shown on revised Plan "SOL0312BPP01 page 18"	Exhaust gas pressure	Continuous	Traceable to national standards	-
A1 as shown on revised Plan "SOL0312BPP01 page 18"	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	-
A1 as shown on revised Plan "SOL0312BPP01 page 18"	Exhaust gas water vapour content	Continuous	BS EN 15267-3 BS EN 14181	Unless gas is dried before analysis of emissions.
Syn gas, post gas cleaning line and pre combustion.	Carbon monoxide (% vol/vol)	Weekly for first month of operation then quarterly for the remaining first year of	In accordance with pre-operational measure Table S1.4, PO3.	-
	Methane (%vol/vol)			-
	Calorific value (MJ/kg)			-
	Nitrogen (% vol/vol)			-

	Sulphur (% vol/vol)	operation, then annually thereafter or as agreed in writing with the Environment Agency		-
	Volatile organic compounds (% vol/vol)			-
	Hydrogen chloride (% vol/vol)			-
	Hydrogen fluoride (% vol/vol)			-
	Cadmium (mg/m ³)			-
	Thallium (mg/m ³)			-
	Mercury (mg/m ³)			-
	Antimony (mg/m ³)			-
	Arsenic (mg/m ³)			-
	Lead (mg/m ³)			-
	Chromium (mg/m ³)			-
	Cobalt (mg/m ³)			-
	Copper (mg/m ³)			-
	Manganese (mg/m ³)			-
	Nickel (mg/m ³)			-
	Vanadium (mg/m ³)		-	

Table S3.4 Residue quality

Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Residue from Thermal Oxidiser	TOC	<3%	Monthly in the first year of operation. Then Quarterly	Environment Agency ash sampling protocol.	
Residue from Thermal Oxidiser	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per Environment Agency ash sampling protocol.	
Residue from Thermal Oxidiser	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Sampling and analysis as per Environment Agency ash sampling protocol.	
HEPA ceramic filter residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per Environment Agency ash sampling protocol.	
HEPA ceramic filter residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Sampling and analysis as per Environment Agency ash sampling protocol.	

Table S3.4 Residue quality

Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Syn gas cleaning residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per Environment Agency ash sampling protocol.	
Syn gas cleaning residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Sampling and analysis as per Environment Agency ash sampling protocol.	

* Or other equivalent standard as agreed in writing with the Environment Agency.

Schedule 4 - Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1, A2, A3	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
TOC Parameters as required by condition 3.5.1	Residue from thermal oxidiser	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	Residue from thermal oxidiser	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	Residue from thermal oxidiser	Before use of a new disposal or recycling route	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	APC Residues	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	APC Residues	Before use of a new disposal or recycling route	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	HEPA ceramic filter residues	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	HEPA ceramic filter residues	Before use of a new disposal or recycling route	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	Syn gas cleaning residues	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	Syn gas cleaning residues	Before use of a new disposal or recycling route	
Functioning and monitoring of the incineration plant as required by condition 4.2.2		Annually	1 Jan

Table S4.2: Annual production/treatment

Parameter	Units
Total Hazardous Waste Co-Incinerated	tonnes
Electrical energy produced	KWhrs
Thermal energy produced	KWhrs
Electrical energy exported	KWhrs
Electrical energy used on installation	KWhrs
Waste heat utilised by the installation	KWhrs
Water used on the installation	Cubic metres
Waste sent for recovery	Tonnes
Waste sent for disposal	Tonnes

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Electrical energy exported, imported and used at the installation	Quarterly	KWhrs / tonne of waste incinerated
Fuel oil consumption	Quarterly	Kgs / tonne of waste incinerated
Mass of Thermal Oxidiser ash produced	Quarterly	Kgs / tonne of waste incinerated
Mass of HEPA filter residues produced	Quarterly	Kgs / tonne of waste incinerated
Mass of syn gas cleaning residues produced	Quarterly	Kgs / tonne of waste incinerated

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Mass of other solid residues produced	Quarterly	Kgs / tonne of waste incinerated
Water consumption	Quarterly	Kgs / tonne of waste incinerated
Periods of operation covered by condition 2.3.9(c)	Quarterly	No of occasions and cumulative hours for current calendar year for each line.

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air 1-8 or other form as agreed in writing by the Environment Agency	02/05/13
Residues	Form residues1 or other form as agreed in writing by the Environment Agency	02/05/13
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	02/05/13
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	02/05/13

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

“abatement equipment” means that equipment dedicated to the removal of polluting substances from releases from the installation to air or water media.

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

“APC residues” means air pollution control residues

“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.

“background concentration” means such concentration of that substance as is present in:

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

“bi-annual” means twice per year with at least five months between tests;

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

“daily average” for releases of substances to air means the average of valid half-hourly averages over a calendar day during normal operation.

“dioxin and furans” means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“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 or background concentration limit..

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

“hazardous property” has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

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

“ISO” means International Standards Organisation.

“LOI” means loss on ignition a technique used to determine the combustible material by heating the ash residue to a high temperature

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

“PAH” means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenzo[ah]anthracene, Dibenzo[a,i]pyrene Fluoranthene, Indo[1,2,3-cd]pyrene, Naphthalene

“PCB” means Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed in the table below.

“quarterly” for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date.

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“shut down” is any period where the plant is being returned to a non-operational state and there is no waste being burned.

“start up” is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the plant in sufficient quantity to initiate steady-state conditions as described in the application or agreed in writing with the Environment Agency.

“TOC” means *Total Organic Carbon*. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC. In respect of ash from thermal oxidiser, this means the total carbon content of all organic species present in the ash (excluding carbon in elemental form).

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

“year” means calendar year ending 31 December.

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

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

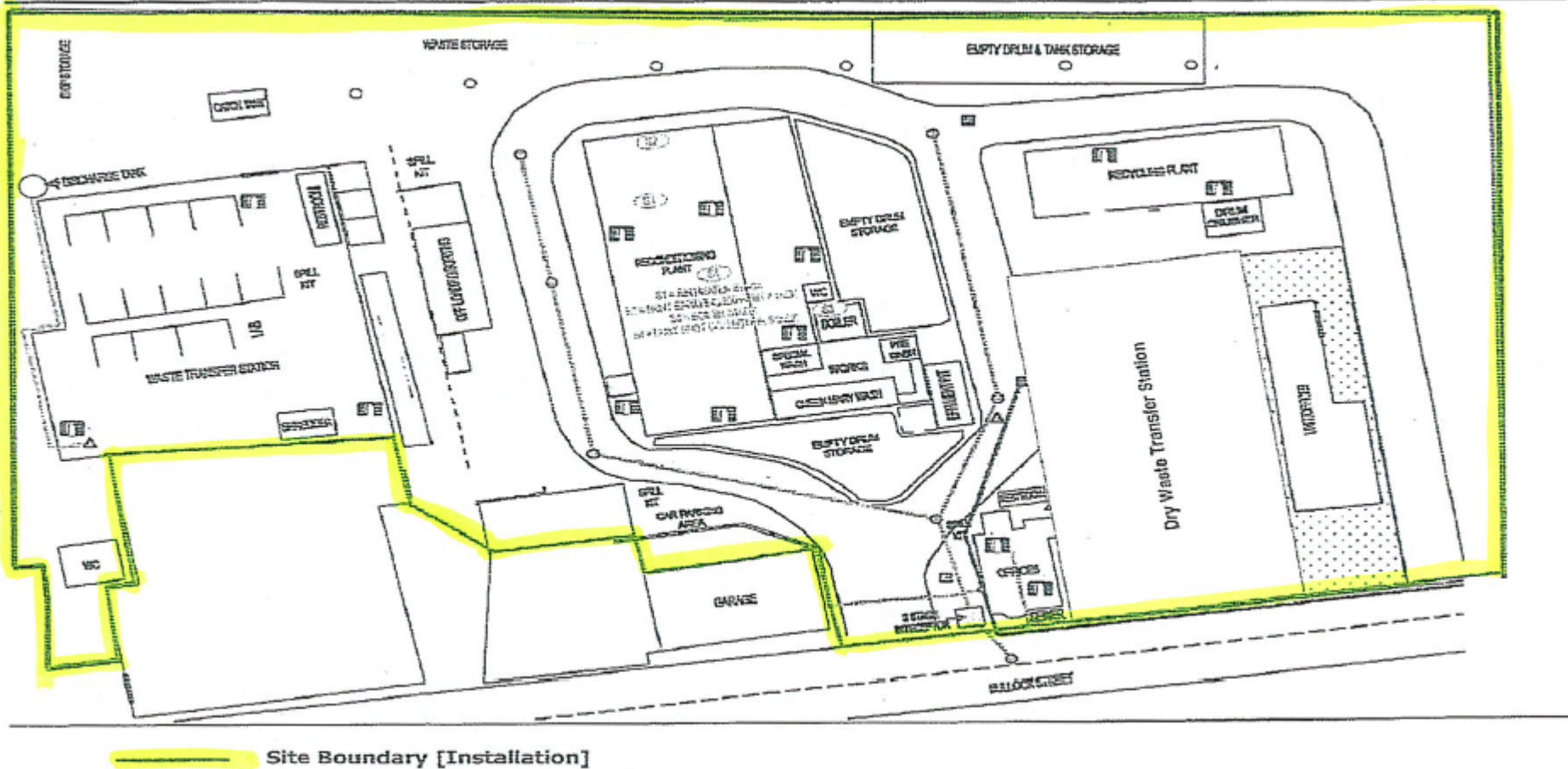
- (a) in relation to emissions from the gas engine (A2), the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 5%;
- (b) in relation to gases from the thermal oxidiser (A1) the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 6% dry; and
- (c) where hazardous wastes are burned in plant covered by Schedule 13 of Environmental Permitting Regulations and the emissions of pollutants are reduced by gas treatment, standardisation of the gas with respect to oxygen content shall be carried out only if the oxygen concentration measured over the same period exceeds the relevant oxygen content defined in conditions (a) – (b) above. In other cases, the measured emissions shall be standardised only for moisture, pressure and temperature.

For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing. When reporting on measurements of dioxins/furans and dioxin-like PCBs, the toxic equivalence concentrations should 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. However the minimum value should be used when assessing compliance with the emission limit value in table S3.1.

TEF schemes for dioxins and furans				
Congener	I-TEF	WHO-TEF		
	1990	2005	1997/8	
		Humans / Mammals	Fish	Birds
Dioxins				
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	0.5	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.001	<0.001
OCDD	0.001	0.0003	-	-
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.3	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.01
OCDF	0.001	0.0003	0.0001	0.0001

TEF schemes for dioxin-like PCBs			
Congener	WHO-TEF		
	2005	1997/8	
	Humans / mammals	Fish	Birds
Non-ortho PCBs			
3,4,4',5-TCB (81)	0.0001	0.0005	0.1
3,3',4,4'-TCB (77)	0.0003	0.0001	0.05
3,3',4,4',5 - PeCB (126)	0.1	0.005	0.1
3,3',4,4',5,5'-HxCB(169)	0.03	0.00005	0.001
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	0.00003	<0.000005	0.0001
2,3,4,4',5-PeCB (114)	0.00003	<0.000005	0.0001
2,3',4,4',5-PeCB (118)	0.00003	<0.000005	0.00001
2',3,4,4',5-PeCB (123)	0.00003	<0.000005	0.00001
2,3,3',4,4',5-HxCB (156)	0.00003	<0.000005	0.0001
2,3,3',4,4',5'-HxCB (157)	0.00003	<0.000005	0.0001
2,3',4,4',5,5'-HxCB (167)	0.00003	<0.000005	0.00001
2,3,3',4,4',5,5'-HpCB (189)	0.00003	<0.000005	0.00001

Schedule 7 - Site plan



END OF PERMIT