Department of Environment, Food & Agriculture

WASTE DISPOSAL LICENCE - PUBLIC HEALTH ACT 1990

COLLECTION AND DISPOSAL OF WASTE REGULATIONS 2000

LICENCE NUMBER: **WDL/06/2003/V5**

FACILITY TYPE: **Energy from Waste Plant**

The Department of Local Government and the Environment, in pursuance of Part IV of the Public Health Act 1990 hereby grant the following Waste Disposal Licence.

This Licence authorises the sorting, storage, processing and incineration of waste and the use of plant and equipment for that purpose on land at:

Part Field 2516 and 2517 (County Series Map), Middle Farm Site, Braddan, Isle of Man.

This Licence is issued to: SITA Waste (Isle of Man) Limited,
Wellington House, Market Street, Douglas,
Isle of Man. IM1 2BF

that body being in occupation of the said land.

This Licence is issued subject to the conditions and limitations in the attached **SCHEDULE OF CONDITIONS**

This Licence supersedes the previous licence WL/06/2003/V4 and is effective from the date of its authorisation.

Signed …… …… Date …….

Martin Hall
Director of Environment Safety & Health
Department of Environment, Food & Agriculture

Waste Disposal Licence Number: WDL/06/2003/V5
Issue Number: 1
Date of Issue: 8th August, 2011

Contents

Introductory Note

This Introductory Note does not form part of the Schedule of Conditions attached to the Waste Disposal Licence.

The Department of Environment, Food & Agriculture is responsible for the administration and enforcement of all Waste Disposal Licences under the Public Health Act 1990. All references to the 'Department' or 'DEFA' herein refer to the Environment Directorate of the Department of Environment, Food & Agriculture.

1. General

This Licence is issued under Section 59 of the Public Health Act 1990 and the Collection and Disposal of Waste Regulations 2000. These Regulations specify those processes for which a Waste Disposal Licence is required, including the sorting, storing, processing and incineration of waste.

The Waste Disposal Licence includes conditions that have to be complied with. These conditions are intended to prevent this facility from causing pollution of the water, danger to public health and serious detriment to the amenities of the locality in which the facility is located.

The Operator of the Licensed Site must also satisfy any obligations imposed under other legislation, for example Health & Safety legislation.

For the period this Licence is in force, the Licensed Site must be operated in accordance with the conditions imposed by this Waste Disposal Licence (reference: WDL/06/2003/V1) and by the Braddan (Middle Farm) Planning Scheme Order 1998 (reference: SD 537/98) as amended by the Braddan (Middle Farm) Planning Scheme (Amendment) Order 2001(SD 266/01) [hereafter referred to as the Planning Scheme Order (as amended)].

The more stringent requirements shall be applied at all times whether contained within this Licence or the Planning Scheme Order (as amended).

2. Description of the Regulated Site

Summary

The main purpose of the activity at this site is the incineration of a range of waste materials and the recovery of energy in the form of heat and electricity. This Licence covers the operation of the entire site, including both incineration lines and all associated activities.

All process operations, with the exceptions of transport, loading of APCRs, unloading of lime & ammonia, gas oil storage, incoming water storage and sewage treatment, take place within a fully enclosed building.

There are two incineration lines :

- The Primary incinerator has a design capacity of c. 8.25 tonnes per hour (at a CV of 10.7MJ/kg) and processes municipal solid waste (MSW), sewage screenings and waste tyres.
- The Secondary incinerator has a design capacity of c. 1.0 tonnes per hour (at a CV of 8.78MJ/kg) and processes animal waste, clinical waste, sewage screenings and waste oils.

The heat produced by the primary incinerator is used to produce steam which is converted into electricity for use on site and for export to the Manx Electricity grid. The plant is designed to export up to 7MW of electricity. The heat from the secondary incinerator is used to pre-heat the boiler feed-water. There is the facility for waste heat to be used in a domestic or commercial heating scheme should this become viable.

Primary incineration line

Raw Materials

The Primary incineration line is used to process MSW, sewage screenings and waste tyres. These wastes are delivered to the site in covered vehicles. The vehicles are weighed before proceeding to the tipping hall. This is in a fully enclosed building and is maintained under slight negative pressure to ensure that no odours, dust or litter can escape from the building. The vehicles tip the incoming waste into the main bunker from where a grab transfers the waste to the feed hopper of the combustion plant. The grab is also used to mix the waste in the bunker and to remove any unsuitable items identified by the grab operator.

All raw materials (other than water, lime and activated carbon) for the process are stored in bunded areas and, with the exceptions of gas oil and incoming water, all are stored within the building :

- Lime for the flue gas cleaning process is delivered by bulk tanker and offloaded pneumatically into a storage silo using enclosed systems to prevent releases. All equipment is dust-tight and the exhaust air is passed through a filter, before release, to prevent the escape of dust.
- Ammonia solution for use in the control of nitrogen oxides is delivered by tanker and offloaded into a storage tank. During offloading ammonia vapour is vented to the tanker so preventing release to atmosphere. There are no open vents on the system and there are therefore no releases during normal operation.
- Activated carbon/lignite coke for the flue gas cleaning process is delivered and stored in ‘big bags’. The carbon is fed into the process, via volumetric feeders, using compressed air. The system is completely sealed so that dust releases are prevented.

- Gas oil is used as fuel in auxiliary burners and in the plume suppression equipment. It is delivered in tankers and stored in one of two bunded storage tanks. Storage for the auxiliary burners is outside the main building whilst the smaller storage tank for the plume suppression equipment is within the building.
- Various water treatment chemicals and other materials are used in the process and these are stored in the supplier's containers in bunded areas within the building.

Combustion Process

The Primary incinerator is a reciprocating grate design with a water-cooled grate to allow the combustion of high calorific value materials. The design is intended to provide good mixing of waste on the grate and hence to promote effective combustion.

Waste is fed into the furnace, from the feed hopper, using a feed ram. The incinerator temperature is continuously monitored and an automatic system ensures that waste can only be fed into the furnace provided the temperature is above 850^{o}C. The are two auxiliary burners which burn gas oil when necessary to raise the temperature to at least 850^{o}C and maintain this temperature for at least 2 seconds in the presence of excess oxygen. The oxygen concentration and the temperature are carefully controlled to ensure effective combustion and to minimise the formation of pollutants, including dioxins.

The combustion system incorporates a three-staged air supply to ensure effective incineration of the waste and to minimise the production of pollutants:

- Primary air is extracted from the tipping hall and introduced below the grate to promote good combustion.
- Secondary air is extracted from the boiler-house and introduced directly above the waste on the grate to provide good combustion control.
- Tertiary air is extracted from the boiler-house and is injected at the beginning of the boiler section to ensure completion of the combustion process. Ammonia is injected after the combustion chamber to react with the oxides of nitrogen, reducing them to nitrogen and water.

As the waste moves along the grate it is progressively dried & burned and the resultant ash (bottom ash) drops into a slag extractor trough supplied with cooling water before being discharged into the ash pit.

Energy Recovery

At the exit of the main combustion chamber there is a steam-generating boiler. Hot gases from the combustion of the waste are passed through a series of heat exchangers and the heat is used to produce steam in the boiler. The design of the boiler is such that the flue gas temperature is quickly reduced through the critical temperature range to minimise the formation of dioxins. The steam produced is fed to a steam turbine, which is used to generate electricity for use on site and for export to the Manx grid system.

The ash collected in the boilers (boiler ash) is mixed with bottom ash in the slag extractor trough and the cooled flue gases enter the gas cleaning plant.

Water Usage

Rain water is collected and stored separately on site and is used to supplement water supplied from the mains for use in the process. Water is used in a number of activities on site, including demineralised water for steam generation, in the gas cleaning plant, for cooling and for cleaning.

All water used in the process, and not released due to evaporation or with process residues, is collected and reused in the process. This recycled water is circulated and stored separately from new water or, in the case of steam condensate, is returned directly to the boiler feed-water system. There is therefore no release of aqueous effluent from the process.

Uncontaminated rain water may be released by overflow during periods when the quantity of collected rain water exceeds the water capacity of the underground reception tank. This release of surplus rainwater is continuously monitored for pH and periodically tested for other parameters. The release is combined with the release from the sewage treatment plant before release into Middle River.

Air Pollution Control

The flue gases are passed through a number of stages prior to release to the atmosphere :

1. Ammonia solution is injected into the flue gases after the combustion chamber to convert oxides of nitrogen to nitrogen and water; a process known as ‘selective non-catalytic reduction’ (SNCR). The quantity of ammonia injected is controlled automatically according to measurements of nitrogen oxides and ammonia in the flue gases.

2. After cooling in the boiler, the flue gases are treated in a spray dryer absorber in which an atomised lime slurry is injected into the flue gases. The lime slurry reacts with the acidic components (sulphur dioxide, hydrogen chloride & hydrogen fluoride) of the flue gases to neutralise them and produce dry calcium salts which are carried in the gas stream. The addition of lime slurry is controlled automatically according to measurements of temperature, sulphur dioxide & hydrogen chloride in the flue gases.
3. After the spray dryer, activated carbon or lignite coke is injected into the gas stream. Pollutants such as volatile organic compounds (VOCs), dioxins/furans, PCBs & metals are adsorbed onto the carbon particles ready for subsequent removal. The rate of carbon injection is automatically controlled according to the flue gas flow-rate.
4. The flue gases at this stage contain particulates from the combustion process (fly ash) together with particulates from the earlier gas cleaning processes; these mixed particulates being known as Air Pollution Control Residues (APCRs). Prior to discharge the flue gases are passed through bag filters to remove these suspended particulates and the APCRs are collected. It is possible for flue gases to by-pass the bag filters but this is not permitted if waste is being burned.
5. After passing through the bag filters the flue gases can be heated using either natural gas or gas oil to reduce the visibility of the plume prior to discharge via a 67m high stack.

Residue Handling

The bottom ash (bottom ash includes the boiler ash) is collected in a water-filled trough from which the slag extractor moves the ash onto a conveyor. The ash passes through a magnetic separator, to remove ferrous metals, to an ash storage pit prior to removal from the site. Separated ferrous metals are collected in a dedicated skip and sent for recycling. Bottom ash may be sent either for recycling or disposal.

The APCRs are collected and handled in a fully enclosed system. They are stored in a silo and discharged directly into bulk tankers for off-site disposal.

Liquid Effluent and Site Drainage

All liquid effluents are reused in the process. There are no discharges of process liquids to controlled waters.

Surface and roof water is collected for use in the process and uncontaminated surface/roof water may be discharged to Middle River in times of excess rainfall.

Foul sewage is collected and treated on site in a three-stage process involving settlement and biological treatment. The effluent discharged from the biological treatment vessel is sampled prior to being combined with any surface water discharge and release into Middle River.

Residues from sewage treatment are sent for off-site disposal.

Emissions to Air

The cleaned flue gases are discharged to air via a 67m high chimney stack. The stack has separate flues for the primary and secondary incineration streams.

The discharging gases are continuously monitored for : particulates, carbon monoxide (CO), ammonia (NH_3), sulphur dioxide (SO_2), hydrogen chloride (HCl), oxygen (O_2), water (H_2O), oxides of nitrogen (NO and NO_2 expressed as NO_2) and volatile organic compounds (VOCs expressed as TOC). They are also continuously sampled to provide an average concentration of dioxins/furans and are periodically tested for : dioxins/furans, dioxin-like polychlorinated biphenyls (PCBs), hydrogen fluoride (HF) and a range of metals.

The visibility of the plume is controlled according to a Plume Management Plan agreed with the Department of Local Government and the Environment.

Secondary incineration line

Raw Materials

The Secondary incineration line is used to process animal waste, clinical waste, sewage screenings and waste oils. The animal and clinical wastes are delivered to the site in bags contained within locked bins (whole carcasses may be delivered on occasions, contained to avoid fluid leakage). The bins are weighed and are either loaded directly onto the automated incinerator feed system or placed into a holding area. Refrigerated storage is available should it be required. The waste oils are delivered to the site in closed containers and the contents are transferred into a waste oil storage tank from which they can be supplied to the incinerator.

Raw materials for use in the secondary incineration line share common storage facilities and have comparable feed systems to those for the Primary incineration line.

Combustion Process

The Secondary incinerator is a two-stage starved-air stepped-hearth design which destroys waste by controlled combustion and semi-pyrolysis.

The Secondary incinerator is comprised of two combustion chambers. The wastes are charged to the first-step of a four-step floor in the primary chamber by a ram loader. The incoming waste is ignited by the burning material already in the chamber and the burning waste is progressively pushed across all four steps. Liquid wastes can also be injected into the primary chamber through nozzles and there are auxiliary burners to maintain combustion. The amount of air in the primary chamber is restricted and this semi-pyrolysis produces combustible gases which pass into the secondary chamber.

The gases in the secondary chamber are maintained above 850 ^{o}C when incinerating animal tissue wastes and 1000^{o}C when incinerating clinical waste for at least 2 seconds in the presence of excess oxygen. This temperature is continuously monitored and an automatic system ensures that waste can only be fed into the furnace provided the temperature is above 850 ^{o}C when incinerating animal tissue wastes and 1000^{o}C when incinerating clinical waste. There are auxiliary burners in the secondary chamber that can burn gasoil when necessary to raise the temperature to at least 850^{o}C; waste oil can also be burned to maintain the temperature above 1000^{o}C but is not permitted to be used at temperatures below 1000^{o}C. The oxygen concentration and the temperature are carefully controlled to ensure effective combustion and to minimise the formation of pollutants, including dioxins.

Combustion air is supplied to both the primary and secondary combustion chambers to ensure effective incineration of the waste and to minimise the production of pollutants:

- The primary air supply to the primary chamber is restricted to a level which produces a combustible gas.
- Secondary air is added in the connecting piece between the primary and secondary combustion chambers to create an excess of oxygen for combustion of the gas from the primary chamber.
- Ammonia is injected into the secondary chamber to react with oxides of nitrogen, reducing them to nitrogen and water.

As the waste moves along the steps of the primary chamber grate it is progressively dried & burned and the resultant ash (bottom ash) is removed onto a conveyor which discharges into a covered skip.

Energy Recovery

The flue gases from the secondary combustion chamber are directed to a separate waste heat boiler. Here they are passed through a series of heat exchangers and the heat is used to produce steam in the boiler. The design of the boiler is such that the flue gas temperature is quickly reduced through the critical temperature range to minimise the formation of dioxins. The steam produced is used to pre-heat the boiler feed-water and the combustion air to the Primary incinerator.

The ash collected in the boiler (boiler ash) is periodically removed and combined with the bottom ash. The cooled flue gases enter the gas cleaning plant.

Water Usage

Water for use in the Secondary incineration line comes from the same sources and shares common storage & handling systems with the Primary incineration line.

Air Pollution Control

The gas cleaning process for the Secondary incineration line is the same type as that used in the Primary incineration line although the equipment used is smaller in size.

Residue Handling

The bottom ash is discharged from the primary combustion chamber into a dedicated ash skip. Ash from the waste heat boiler is periodically added to this bottom ash. The ash is transferred to the ash storage pit prior to recycling or disposal.

The APCRs are collected and handled in a fully enclosed system. They are combined with the APCRs from the primary incinerator in the common storage silo and are discharged directly into bulk tankers for off-site disposal.

Liquid Effluent and Site Drainage

The drains serving the secondary incineration area are separate from other drains and all aqueous arisings from activities in the area, e.g. floor washings, are collected in a 'waste water tank'. The contents of this tank are disposed of by injection into the secondary incinerator.

Although there is a separate drain in the same area for blow-down water from the waste heat boiler, this is physically isolated from the other drains in this area to avoid contamination.

Emissions to Air

The cleaned flue gases are discharged to air via a 67m high chimney stack. The stack has separate channels for the primary and secondary incineration streams.

The discharging gases are continuously monitored for : particulates, carbon monoxide (CO), ammonia (NH_3), sulphur dioxide (SO_2), hydrogen chloride (HCl), oxygen (O_2), water (H_2O), oxides of nitrogen (NO and NO_2 expressed as NO_2) and volatile organic compounds (VOCs expressed as TOC). They are also continuously sampled to provide an average concentration of dioxins/furans and are periodically tested for : dioxins/furans, dioxin-like polychlorinated biphenyls (PCBs), hydrogen fluoride (HF), and a range of metals.

The visibility of the plume is controlled according to a Plume Management Plan agreed with the Department.

3. Contact Details

If you contact the Department Environment, Food & Agriculture about this Licence please quote the Licence Number: WDL/06/2003/V5.

The Operator should use the telephone number for the Department's Administration Section (Telephone Number: ((01624) 685894), or any other number notified to it in writing by the Department Environment, Food & Agriculture, to give a notification under condition 5.1.1

4. Confidentiality

The Licence requires the Operator to provide information to the Department Environment, Food & Agriculture. The Department will place the information onto the public register. If the Operator considers that any information provided is commercially confidential, it may apply to the Department to have such information withheld from the register. To enable the Department to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

5. Variations to the Licence

This Licence may be varied in the future under Section 61 of the Public Health Act 1990. The Status Log within the Introductory Note to any such variation will include summary details of this Licence variations issued up to that point in time and state whether a consolidated version of the Licence has been issued.

6. Transfer of the Licence

Before the Licence can be transferred to another person, an application to transfer the Licence has to be made in accordance with Section 62 of the Public Health Act 1990. A transfer will be allowed unless the Department considers that the proposed holder will not be the person who will have control over the operation of the Site or will not ensure compliance with the conditions of the transferred Licence.

7. Surrender of the Licence

Before this Licence can be surrendered/relinquished, the Licence Holder must demonstrate to the Department that it is unlikely that the condition of the land will cause pollution of the environment or harm to human health.

8. Revocation of the Licence

Under Section 61 of the Public Health Act 1990, where it appears to the Department that:

a) the continuation of activities to which the Licence relates would cause pollution of water or danger to public health, or would be so seriously detrimental to the amenities of the locality affected by the activities that the continuation of them ought not to be permitted; and
b) that the pollution, danger or detriment cannot be avoided by modifying the conditions specified in the Licence;

The Department shall, by a notice served on the holder of the Licence, revoke the Licence.

9. Non-Compliance with the Licence

Where it appears to the Department that a condition or conditions within this Licence is not being complied with the Department may serve, on the Licence Holder, a notice requiring compliance with the condition or conditions within a specified time period.

If in the opinion of the Department the Licence Holder has not complied with the condition or conditions within the specified timescale, the Department may serve on him a further notice revoking the Licence at a specified time.

10. Status Log

Detail	Date	Comment
Application (Reference: *UN0340009A*)	Received 10th July 2003	
Licence DRAFT	Finalised 12th August 2003	Statutory Consultation to Commence: 15th August 2003
Licence Version 1	14th November 2001	Licence Number: WDL/06/2003/V1
Licence Version 2	20th March 2008	Licence Number WDL/06/2003/V2
Amendment Detail		Conditions Amended
1. Amendment to permit reduction of secondary temperature for selected Category 02 Wastes: Waste from Agriculture, Horticulture, Aquaculture, Forestry, Hunting and Fishing, Food Preparation and Processing.		2.3.15 2.3.17 2.3.19 2.3.21
2. Amendment to permit waste types for incineration in the secondary incinerator of selected Category 12 Wastes: wastes from shaping and physical and mechanical surface treatment of metal and plastics.		2.3.4 2.3.8 S3/O/2
3. Amendment to include the activity of bagging and storage of bagged APCR on site.		Table 2.5.2
4. Amendment to permit waste types for incineration in the primary incinerator of pelletised biosolids.		Table 2.3.2 2.3.27 S3/O/1
5. Receipt and storage of hazardous waste.		Table 1.1.1 Table 2.2.2 Table 2.5.3 2.5.9 2.5.10 2.5.11 2.5.12 2.5.13 2.5.14 2.5.15 2.5.16 2.5.17 2.5.18 2.5.19 2.5.20
6. Emission Limits to Water		Table 6.3.2a S3/W/1
7. Addition of permitted waste types for incineration in the primary and secondary incinerator of Waste from Dairy Products Industry – Sludge from on-site effluent treatment.		Table 2.3.2 Table 2.3.3 S3/O/1 S3/O/2

Detail	Date	Comment
Licence Version 3	7th April 2009	Licence Number WDL/06/2003/V3
Amendment Detail		Condition Amended
8. Amendment of pH maximum from 9 to 10 and conditions for maximum temperature and Ammonia.		Table 6.3.2b Table S2.2 S3/W/1
9. Removal of condition to require loaded pallets in hazardous waste store to be covered with tarpaulin.		2.5.14
10. Receipt, storage, bulking up and transfer of WEEE goods in reception hall and hazardous waste store.		2.5.9 Schedule 6
11. Receipt, storage, bulking up and transfer of paper and cardboard for recycling.		Table 1.1.1 2.3.2.1 Table 2.5.2 Schedule 3 Table S3 S3/O/3
Licence Version 4	3rd December 2009	Licence Number WDL/06/2003/V4
12. Pre-operational measures condition.		1.1.3 deleted
13. Additional permitted waste types permitted for disposal in Primary.		Table 2.3.2
14. Abnormal operating conditions.		2.3.22 – 2.3.25 S3/O/6
15. Storage of scrap ferrous metal outside incinerator building.		Table 2.5.2
16. Additional hazardous waste types permitted for storage in Hazardous Waste Store.		2.5.21 Table 2.5.3
17. Storage of unidentified waste in hazardous waste store.		2.5.22
18. Annual performance report.		4.1.4
19. Annual improvement program progress report.		4.1.5
20. Notification of abnormal emissions Part A, B & C		Schedule 1 5.1.1 5.1.2
21. Improvement programme.		9.1.1 Table 9.1.1 deleted
22. Daily average interpretation.		10.1.1
23. Reporting forms.		S3/A/1 & S3/A/2

END OF INTRODUCTORY NOTE

Waste Disposal Licence Number: WDL/06/2003/V5
Issue Number: 1
Date of Issue: 8th August, 2011

Detail	Date	Comment
Licence Version 5	08/08/11	Licence Number WDL/06/2003/V5
		Condition Amended
24. Hazardous Waste Storage extended from 6 to 12 months	15/03/10	2.5.18
25. CO ELV from 100 mg/m^3 per 1/2 hr to *150 mg/m^3 per 10min*	27/09/10	Table 6.1.2 S3/A/1 S3/A/2
26. Amendment to permit waste types for incineration in the primary incinerator of: Waste Crack-indicating agent EWC 10 10 16	27/09/10	Table 2.3.2
27. Amendment to permit waste types for incineration in the primary incinerator of: Bitumous mixture EWC 17 03 02	11/11/10	Table 2.3.2
28. Amendment to permit waste types for incineration in the primary incinerator of: EWC 02 02 02 animal waste tissue EWC 02 02 99 Wastes not otherwise specified	02/12/10	Table 2.3.2
29. Amendment to permit waste types for incineration in the primary incinerator of: Photographic film EWC 09 01 07	10/01/11	Table 2.3.2
30. Amendment to permit waste types for incineration in the primary incinerator of: EWC 12 01 05 Plastic shavings & turnings	14/02/11	Table 2.3.2
31. Amendment to permit waste types for incineration in the primary incinerator of: EWC 11 01 Wastes from Chemical surface treatment and coating of metals and other materials: non-ferrous Hydro-Metallurgy EWC 11 01 99 wastes not otherwise specified	11/07/11	Table 2.3.2

Schedule of Conditions

1 The Licensed Site

1.1.1 The Operator is authorised to carry out the activities specified in Table 1.1.1.

Table 1.1.1	
Activity	**Limits of Activity**
Receipt, processing and storage of wastes for incineration	From arrival of waste at the Licensed Site to storage prior to incineration. This may include processing of waste and/or transfer to off-site storage.
Receipt and storage of raw materials	From arrival at the Licensed Site to storage prior to use.
Incineration of wastes	From transfer out of waste storage to collection of ash from the primary and secondary incinerators
Storage and handling of waste products	From collection of bottom ash and APCRs from the incinerators to their removal from the Licensed Site.
Production of steam and electricity	From the generation of steam and electricity to the points of connection to off-site users.
Flue-gas cleaning	From the points of transfer of reagents from storage to the points of release of flue-gas to atmosphere.
Discharge of foul sewage	From the point of collection of foul sewage to the point of release from the Licensed Site.
Receipt and storage of hazardous waste	The storage of hazardous waste collected from island based companies, prior to shipment to the UK for disposal.
Receipt, processing and storage of waste paper and cardboard for recycling	From arrival of waste at the Licensed Site to storage in bay as indicated on Schedule 7 in the Main Reception Hall. This includes processing and transfer to a licensed facility for recycling.

1.1.2 The activities authorised under condition 1.1.1 shall not extend beyond the Licensed Site, being the area shown edged in red on Figure 2A (Site layout showing installation boundary) in Schedule 4.

2 Operational Matters

2.1 Management techniques and control

2.1.1 The Licensed Site shall, subject to the conditions of this Licence, be managed and controlled as described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Department of Environment, Food & Agriculture (herein referred to as the Department).

Table 2.1.1 : Management and control
Documentation reference
Section 2.1.2 of the Application

2.1.2 All plant, equipment and technical means used in operating the Licensed Site shall be appropriate for minimising the pollution of the environment and shall be maintained in good operating condition.

2.1.3 The Licensed Site shall be supervised by staff whoare suitably trained and fully conversant with the requirements of this Licence.

2.1.4 A copy of this Licence and those parts of the application referred to in this Licence shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Licence. A copy of this Licence and the Planning Scheme Order (as amended) shall be displayed in the Site control room.

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

2.1.6 The Operator shall grant access to the Licensed Site to any authorised officer of the Department, together with any person or equipment considered necessary by that officer, at any reasonable time.

2.1.7 The Operator shall submit to the Department the appropriate details of responsible persons who can be contacted at any time in the event of an emergency or incident. Any changes to these details shall be notified to the Department, in writing, prior to the change taking effect.

2.2 Raw materials (including water)

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

Table 2.2.1 : Raw materials (including water)
Documentation reference
Section 2.2.2 of the application
Section 2.2.4 of the application (plus appendix 4B and figure 6)

2.2.2 Subject to completion of improvement requirement 9.5, the Operator shall have, as part of the Environmental Management System, a Water Management Plan. This plan shall aim to minimise the consumption of water at the Licensed Site. The plan shall be reviewed and updated at least once every year.

2.2.3 Once natural gas becomes available at the Licensed Site, it shall be used to control the visibility of the plumes from both the primary and secondary incinerators in accordance with the "Plume Management Plan" agreed with the Department. In circumstances where natural gas is not available at the Licensed Site, or where its use would not represent the Best Available Technique, gas oil shall be used in place of natural gas.

2.2.4 Gas oil and natural gas shall be the only support fuels used in the primary incinerator.

2.2.5 Gas oil, waste oil and natural gas shall be the only support fuels used in the secondary incinerator.

2.2.6
a) Gas oil for use in the plume suppression burners of the incineration process shall have a sulphur content less than 0.1% by weight.
b) With effect until 31 December 2007, gas oil for use in all other activities on the Licensed Site shall have a sulphur content less than 0.2% by weight.
c) With effect from 1 January 2008, all gas oil used in the operation of the incineration process shall have a sulphur content less than 0.1% by weight.

2.2.7 The materials detailed in Table 2.2.2 shall be stored in the location and manner specified in that table.

Table 2.2.2 : Raw materials (including water)		
Material	**Location of Storage on site**	**Manner of Storage**
Lime	Within incinerator building	Dedicated silo with filter on vent. Silo within kerbed area.
Aqueous ammonia solution	Within incinerator building	Dedicated bulk storage vessel with no open vents. Vessel within bunded area.
Activated carbon / Lignite coke	Within incinerator building	In big bags as delivered within dedicated storage area. Area without drains.
Gas oil	Within incinerator building	Dedicated bulk storage vessel within a bunded area.
	Outside incinerator building	Dedicated bulk storage vessel within a bunded area.
Lubricating oils and other maintenance fluids	Within incinerator building	In closed containers as delivered within dedicated bunded storage area.
Water treatment chemicals	Within incinerator building	In closed containers as delivered within dedicated bunded storage area.
Detergents and biocides	Within incinerator building	In closed containers as delivered within dedicated bunded storage area.
Towns water	Outside incinerator building	Dedicated bulk storage vessel.
Waste oil	Within incinerator building	In closed containers as delivered or in dedicated bulk storage vessel. All within a dedicated bunded area.
Hazardous waste	Outside incinerator building	In compatible UN approved containers, on bunded pallets, or small laboratory chemicals inside a locked metal cabinet.

2.3 Operating Techniques

2.3.1 The Licensed Site shall, subject to the conditions of this Licence, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Department.

Table 2.3.1: Operating techniques
Documentation reference
Section 2.3 of the application (including figures 2B, 3A & 3B and plus figures 3C, 5 & 6)

2.3.2 Only the waste types and quantities specified in Table 2.3.2 shall be incinerated in the primary incinerator on the Licensed Site unless otherwise agreed in writing by the Department.

2.3.2.1 Separately collected fractions of paper and cardboard shall be stored in the bay as indicated on Schedule 6 and processed in the main reception hall.

Table 2.3.2: Permitted Waste Types		
Indicative Description (European Waste Catalogue includes full description)	**European Waste Catalogue Number or other specification**	**Maximum design throughout**
02 02 WASTE FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING		For total wastes : 8.25 tonnes/hour (at 10.7MJ/kg)
Animal tissue waste	02 02 02	
Wastes not otherwise specified	02 02 99	
02 05 WASTES FROM THE DAIRY PRODUCTS INUSTRY		
Sludge from on-site effluent treatment	02 05 02	
03 01 WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE		
Waste bark & cork	03 01 01	
Sawdust, shavings, etc	03 01 05	
Wastes not otherwise specified	03 01 99	
03 03 WASTES FROM PULP, PAPER AND CARDBOARD PRODUCTION AND PROCESSING		
Waste bark & wood	03 03 01	
Green liquor sludge	03 03 02	
De-inking sludges	03 03 05	
Separated rejects from pulping	03 03 07	
Wastes from sorting for recycling	03 03 08	
Lime mud waste	03 03 09	
Fibre rejects & sludges	03 03 10	
Sludges from effluent treatment	03 03 11	
Wastes not otherwise specified	03 03 99	
04 02 WASTES FROM THE TEXTILE INDUSTRY		
Wastes from composite materials	04 02 09	
Organic matter from natural products	04 02 10	
Wastes from finishing	04 02 15	
Dyestuffs & pigments	04 02 17	
Sludges from effluent treatment	04 02 20	
Wastes from unprocessed fibres	04 02 21	
Wastes from processed fibres	04 02 22	
Wastes not otherwise specified	04 02 99	
09 01 WASTES FROM THE PHOTOGRAPHIC INDUSTRY		
Photographic film and paper containing silver or silver compounds	09 01 07	
10 10 Wastes from Thermal Processes		
Waste crack-indicating agent other than those mentioned in 10 10 15	10 10 16	
Wastes from Chemical Surface Treatment and Coating of Metals and other Materials; Non-Ferrous Hydro-Metallurgy		
Wastes not otherwise specified	11 01 99	
Wastes from Shaping and Physical and Mechanical Surface Treatment of Metals and Plastics		
Plastic shavings and turnings	12 01 05	
15 01 PACKAGING		
Paper & cardboard packaging	15 01 01	

Plastic packaging	15 01 02	
Wooden packaging	15 01 03	
Composite packaging	15 01 05	
Mixed packaging	15 01 06	
Glass packaging	15 01 07	
Textile packaging	15 01 09	
15 02 ABSORBENTS, FILTERS, CLOTHS, ETC		
Absorbents, filters, cloths, etc	15 02 03	
16 01 END-OF-LIFE VEHICLES		
End-of-life tyres	16 01 03	
17 02 CONSTRUCTION & DEMOLITION WASTES- WOOD, GLASS & PLASTIC		
Wood	17 02 01	
Plastic	17 02 03	
Bituminous mixture other than those mentioned in 17 03 01	17 03 02	
Soil and stones	17 05 04	
Mixed construction wastes	17 09 04	

19 08 WASTES FROM WASTE WATER TREATMENT PLANTS		For total wastes : 8.25 tonnes/hour (at 10.7MJ/kg)
Screenings	19 08 01	
Pelletised biosolids	19 08 05	
Sludge from other treatment of industrial waste water	19 08 14	
19 12 WASTES FROM MECHANICAL TREATMENT OF WASTES		
Paper & cardboard	19 12 01	
Plastic & rubber	19 12 04	
Wood	19 12 07	
Textiles	19 12 08	
Combustible waste (RDF)	19 12 10	
20 01 MUNICIPAL WASTE – SEPARATELY COLLECTED FRACTIONS		
Paper & cardboard	20 01 01	
Kitchen & canteen waste	20 01 08	
Clothes	20 01 10	
Textiles	20 01 11	
Edible oil & fat	20 01 25	
Paints, inks, adhesives and resins	20 01 28	
Detergents	20 01 30	
Discarded electrical and electronic equipment	20 01 36	
Wood	20 01 38	
Plastics	20 01 39	
Metals	20 01 40	
Other fractions not otherwise specified	20 01 99	
20 02 GARDEN AND PARK WASTES		
Biodegradable waste	20 02 01	
20 03 OTHER MUNICIPAL WASTES		
Mixed municipal waste	20 03 01	
Waste from markets	20 03 02	
Street-cleaning residues	20 03 03	
Waste from sewage cleaning	20 03 06	
Bulky waste	20 03 07	
Municipal waste not otherwise specified	20 03 99	

*** indicates hazardous waste**

2.3.3 Only the waste types and quantities specified in Table 2.3.3 shall be incinerated in the secondary incinerator on the Licensed Site unless otherwise agreed in writing by the Department.

Table 2.3.3: Permitted Waste Types		
Indicative Description (European Waste Catalogue includes full description)	**European Waste Catalogue Number or other specification**	**Maximum design throughout**
02 01 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING & FISHING		For total wastes : 1.0 tonnes/hour (at 8.78MJ/kg)
Animal-tissue waste	02 01 02	
Waste plastics	02 01 04	
02 02 WASTES FROM THE PREPARATION & PROCESSING OF MEAT, FISH & OTHER FOODS OF ANIMAL ORIGIN		
Animal-tissue waste	02 02 02	
Materials unsuitable for consumption	02 02 03	
02 03 WASTES FROM FOOD PREPARATION & PROCESSING (PLANT) ETC.		
Materials unsuitable for consumption	02 03 04	
02 05 WASTES FROM THE DAIRY PRODUCTS INDUSTRY		
Materials unsuitable for consumption	02 05 01	
Sludge from on-site effluent treatment	02 05 02	
02 06 WASTES FROM THE BAKING & CONFECTIONERY INDUSTRY		
Materials unsuitable for consumption	02 06 01	
12 01 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS		
Mineral-based machining oils free of halogens (except emulsions and solutions).	12 01 07*	
Machining emulsions and solutions free of halogens	12 01 09*	
Synthetic machining oils	12 01 10*	
Spent waxes and fats	12 01 12*	
Machining sludges other than those mentioned in 12 01 14	12 01 15	
Readily biodegradable machining oil	12 01 19*	
Wastes not otherwise specified	12 01 99	
12 03 WASTES FROM WATER AND STEAM DEGREASING PROCESSES		
Aqueous washing liquids	12 03 01*	
Steam degreasing wastes	12 03 02*	
13 01 WASTE HYDRAULIC OILS		
Non-chlorinated emulsions	13 01 05*	
Non-chlorinated hydraulic oils	13 01 10*	
Synthetic hydraulic oils	13 01 11*	
Readily biodegradable hydraulic oils	13 01 12*	
Other hydraulic oils	13 01 13*	
13 02 WASTE ENGINE, GEAR & LUBRICATING OILS		
Non-chlorinated oils	13 02 05*	
Synthetic oils	13 02 06*	
Readily biodegradable oils	13 02 07*	
Other oils	13 02 08*	

13 03 WASTE INSULATING AND HEAT TRANSMISSION OILS		
Non-chlorinated oils	13 03 07*	
Synthetic oils	13 03 08*	
Readily biodegradable oils	13 03 09*	
Other oils	13 03 10*	
13 04 BILGE OILS		
Bilge oils from inland navigation	13 04 01*	
Bilge oils from jetty sewers	13 04 02*	
Bilge oils from other navigation	13 04 03*	
13 05 OIL/WATER SEPARATOR CONTENTS		
Solids from separators	13 05 01*	
Sludges from separators	13 05 02*	
Interceptor sludges	13 05 03*	
Oil from oil/water separators	13 05 06*	
Oily water from oil/water separators	13 05 07*	
Mixtures of wastes from separators	13 05 08*	
13 07 WASTES OF LIQUID FUELS		
Fuel oil & diesel	13 07 01*	
Other fuels (including mixtures)	13 07 03*	
13 08 OIL WASTES NOT OTHERWISE SPECIFIED		
Desalter sludges or emulsions	13 08 01*	
Other emulsions	13 08 02*	
Wastes not otherwise specified	13 08 99*	
18 01 WASTES FROM HEALTH CARE IN HUMANS		
Sharps	18 01 01	
Body parts including blood bags etc	18 01 02	
Wastes subject to special requirements	18 01 03*	
Wastes with no special requirements	18 01 04	
Chemicals	18 01 07	
Medicines	18 01 09	
18 02 WASTES FROM HEALTH CARE IN ANIMALS		
Sharps	18 02 01	
Wastes subject to special requirements	18 02 02*	
Wastes with no special requirements	18 02 03	
Chemicals	18 02 06	
Medicines	18 02 08	
WASTES FROM WASTE WATER TREATMENT		
Screenings	19 08 01	

*** indicates hazardous waste**

2.3.4 EWC-category 13 waste (oil wastes and wastes from liquid fuels) and permitted EWC category 12 waste (wastes from shaping and physical and mechanical surface treatment of metals and plastics) may be incinerated in the secondary incinerator provided the following conditions are satisfied :

a) The quantity incinerated in any year shall not exceed 500 tonnes.
b) The rate of input to the incinerator shall be between 0 kg/hr and 1000 kg/hr.
c) The calorific value of the waste shall be between 10 MJ/kg and 50 MJ/kg.

2.3.5 EWC-category 18 waste (wastes from human or animal health care) may be incinerated in the secondary incinerator provided the following conditions are satisfied :

a) The quantity incinerated in any year shall not exceed 500 tonnes.
b) The rate of input to the incinerator shall be between 0 kg/hr and 1000 kg/hr.
c) The calorific value of the waste shall be between 2 MJ/kg and 23 MJ/kg.

2.3.6 No waste material shall be accepted at the Licensed Site which has a PCB content greater than 50mg/kg.

2.3.7 Prior to accepting hazardous waste at the Licensed Site, the Operator shall have available information about the waste for the purpose of verifying compliance with conditions 2.3.4, 2.3.5 and 2.3.6. This information shall cover :

a) All the administrative information required by applicable legislation;
b) The physical, and as far as practicable, chemical composition of the waste and all other information necessary to evaluate its suitability for the intended incineration process; and
c) The hazardous characteristics of the waste, the substances with which it cannot be mixed, and the precautions to be taken in handling the waste.

2.3.8 Prior to accepting hazardous waste at the Licensed Site, at least the following reception procedures shall be carried out by the Operator :

a) The checking of all those documents required by applicable legislation; and

b) The taking of representative samples of all EWC-category 13 and permitted EWC category 12 wastes, as far as possible before unloading, to verify conformity with the information provided for in condition 2.3.7 by carrying out controls and to enable the Department of Local Government and the Environment to identify the nature of the wastes treated. These samples shall be kept for at least one month after the incineration.

2.3.9 The Operator shall determine the mass of each category of waste, if possible according to the EWC, prior to accepting the waste at the Licensed Site.

2.3.10 The Operator shall adopt procedures and practices to, as far as practicable, identify and manage the wastes delivered to the Licensed Site such that the conditions of this Licence are not breached.

2.3.11 The Operator shall adopt effective procedures and practices to monitor and control pests, odour and litter to the satisfaction of the Department.

2.3.12 There shall be no odour from the Licensed Site which is considered likely to cause offence as perceived by an authorised officer of the Department at any location outside the site boundary.

2.3.13 The bottom ash from each of the primary and secondary incinerators shall have a total organic carbon (TOC) content less than 3% or a loss on ignition (LOI) of less than 5% of the dry weight of the ash.

2.3.14 The primary incinerator shall be operated in such a way that the gas resulting from the burning of waste is raised, after the last injection of combustion air, to a temperature of at least 850^{o}C, as measured near the inner wall or at another representative point of the combustion chamber as authorised by the Department, for a minimum of two seconds.

2.3.15 The secondary incinerator shall be operated in such a way that the gas resulting from the burning of waste is raised, after the last injection of combustion air, to a temperature of at least 850 ^{o}C when incinerating animal tissue wastes and 1000^{o}C when incinerating clinical waste, as measured near the inner wall or at another representative point of the combustion chamber as authorised by the Department, for a minimum of two seconds.

2.3.16 The primary incinerator shall be equipped with auxiliary burners which must be switched on automatically to ensure that the temperature of the combustion gases in the combustion chamber, after the last injection of combustion air, does not fall below 850^{o}C at any time when unburned waste is in the combustion chamber. The burners shall also be used during start-up and shut-down operations in order to ensure that a temperature of at least 850^{o}C is maintained at all times during these operations as long as unburned waste is in the combustion chamber.

2.3.17 The secondary incinerator shall be equipped with auxiliary burners which must be switched on automatically to ensure that the temperature of the combustion gases in the secondary chamber, after the last injection of combustion air, does not fall below 850^{o}C (1000^{o}C when incinerating clinical waste) at any time when unburned waste is in the combustion chamber. The burners shall also be used during start-up and shut-down operations in order to ensure that a temperature of at least 850^{o}C (1000^{o}C when incinerating clinical waste) is maintained at all times during these operations as long as unburned waste is in the combustion chamber.

2.3.18 No hazardous wastes with a content of more than 1% w/w of halogenated organic substances, expressed as chlorine, shall be incinerated at the Licensed Site.

2.3.19 During start-up and shut-down of the secondary incinerator, or when the temperature of the combustion gas in the secondary chamber falls below 850^{o}C, the auxiliary burners in the secondary incinerator shall not be fed with waste oil.

Abnormal Operating Conditions

2.3.20 The primary incinerator shall operate an automatic system to prevent waste feed under the following circumstances :

a) When the temperature of the combustion gases in the combustion chamber, after the last injection of combustion air, is below 850^{o}C; or

When any of the continuous measurements required by this Licence show that any emission limit value is exceeded due to disturbances or failures of the purification devices.

2.3.21 The secondary incinerator shall operate an automatic system to prevent waste feed under the following circumstances :

a) When the temperature of the combustion gases in the secondary chamber, after the last injection of combustion air, is below 850^{o}C (1000^{o}C when incinerating clinical waste); or

b) When any of the continuous measurements required by this Licence show that any emission limit value is exceeded due to disturbances or failures of the purification devices.

2.3.22 The Operator shall record the beginning and end of each period of abnormal operation.

2.3.23 In the case of a breakdown which has the potential to affect the emissions from the process, the Operator shall take appropriate action to reduce or close down operations as soon as practicable until normal operations can be restored.

2.3.24 Where, during abnormal operation, any of the following situations arise, the Operator shall, as soon as practicable, cease the burning of waste until normal operation can be restored:

a) Continuous measurement shows that an emission exceeds any emission limit value in Table 6.1.2, or continuous emission monitor(s) are out of service, as the case may be, for a total of four hours uninterrupted duration.
b) The cumulative duration of abnormal operation periods over one calendar year (excluding periods of less than 90 minutes when a monitor is out of service as part of a scheduled calibration or maintenance routine) exceeds 60 hours on an incineration line.
c) The total particulate content of the emissions into the air exceeds 150mg/m^3 expressed as a half-hourly average; or
d) The emission limit value for CO or VOCs (as TOC) in Table 6.1.2 is exceeded;

Unless otherwise agreed in writing by the Department.

2.3.25 The Operator shall interpret the end of the period of abnormal operation as the earliest of the following:

a) When the failed equipment is repaired and brought back into normal operations;
b) When the Operator initiates a shut-down of the waste combustion activity;
c) When a period of 4 hours has elapsed from the start of the abnormal operation;
d) When, in any calendar year, an aggregated period of 60 hours abnormal operation has been reached for a given incineration line.

2.3.26 The use of the bag filter bypasses shall be minimised. The bag filter bypasses shall only be used when waste is not present in the corresponding furnace or in the event of an emergency. Any use of a bypass when waste is present in the corresponding furnace shall be notified to the Department in accordance with this Licence.

Pelletised Biosolids

2.3.27 Pelletised biosolids delivered to the primary stream shall account for no more than 5% of the total delivery of waste.

Clinical Waste

2.3.28 Clinical waste shall be placed in the furnace without first being mixed with other categories of waste and without direct handling.

Plume Visibility

2.3.29 The visibility of the plumes from the primary and secondary incinerators shall be controlled according to the most recent version of the "Plume Management Plan" agreed with the Department, or as otherwise specified in writing by the Department.

2.4 Groundwater protection

2.4.1 The Licensed Site shall, subject to the conditions of this Licence, be controlled as described in the documentation specified in Table 2.4.1, or as otherwise agreed in writing by the Department.

Table 2.4.1: Groundwater protection
Documentation reference
Section 2.4 of the application

2.4.2 The Operator shall carry out a survey, at least once per year, of the integrity of the surfacing of all areas, including bunded areas, where any substance with the potential to contaminate the ground and/or groundwater is handled or stored. Procedures shall be included in the Environmental Management System to document and review the findings and actions resulting from the surveys.

2.4.3 The Operator shall carry out a survey, at least once every three years, of the integrity of those plant collection drains, underground tanks and sumps where any substance with the potential to contaminate the ground and/or groundwater may be present. Procedures shall be included in the Environmental Management System to document and review the findings and actions resulting from the surveys.

2.5 Waste handling and storage

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

Table 2.5.1: Waste handling and storage
Documentation reference
Section 2.5 of the application (including figure 2B)

2.5.2 Waste materials specified in Table 2.5.2 shall only be stored on the site in the location and manner specified in that Table.

2.5.2.1 APCRs shall only be stored within reception hall in the event of the normal disposal route to the UK being unavailable, the silo is full and there is adequate segregation from traffic provided.

APCRs shall only be stored within the Hazardous Waste Store when the designated area in the waste reception hall is full.

2.5.3 Transport and intermediate storage of dry residues shall take place in such a way as to prevent dispersal in the environment, e.g. in closed containers.

2.5.4 Bottom ashes shall be segregated and shall not be mixed with residues from air pollution control devices.

2.5.5 Bottom ashes from the primary and secondary incinerators shall be stored separately on-site unless there is no practicable recycling option available for bottom ash from the primary incinerator. Ashes from the secondary incinerator shall not be recycled.

2.5.6 All spillages of materials shall be collected and stored in a manner that is appropriate to the material involved and which minimises any potential negative impact on the environment.

2.5.7 All hazardous waste shall be stored in dedicated storage vessels located in areas with impermeable surfacing.

2.5.8 All waste storage areas shall be clearly and appropriately marked and signed. All storage vessels within such areas shall be secure and clearly labelled.

Table 2.5.2: Waste stored on site		
Description of Waste	**Location of Storage on Site**	**Manner of Storage**
Bottom ash (including boiler ash)	Within incinerator building	Dedicated area of hardstanding with impermeable surface and no drains.
APCRs	Within incinerator building	Dedicated silo with filter on vent. Silo within area of hardstanding with impermeable surface and no drains.
	Within incinerator building as identified on plan in Schedule 5.	Dedicated closed bags in waste reception hall, within area of hardstanding with impermeable surface and no drains
	Hazardous Waste Store under South facing eaves of building outside.	Dedicated closed bags covered with waterproof and weather proof sheeting, on bunded pallets.
Hazardous waste	Hazardous Waste Store under South facing eaves of building outside.	In compatible UN approved containers, on bunded pallets, or small laboratory chemicals inside a locked metal cabinet, in accordance with HWS conditions.
Scrap ferrous metal	Collected within incinerator building, stored outside incinerator building.	Dedicated skip
Maintenance wastes	Within incinerator building	Dedicate areas in a manner appropriate to the particular waste.
Incoming wastes not suitable for incineration	Within incinerator building	Dedicated area
Incoming separately collected fractions of paper and cardboard suitable for recycling	Within incinerator building	Dedicated bay as indicated in Schedule 6.

	Hazardous Waste Store
2.5.9	Hazardous waste imported to the site, other than raw materials (Table 2.2.2) and Permitted Waste Types (Table 2.3.2), shall be stored in the Hazardous Waste Store as located on the drawing in Schedule 6, with the exception of EWC Code 20 01 35* (Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components), which will be stored in the Reception Hall. Maximum Quantities The total quantity of wastes permitted to be stored in the Hazardous Waste Store listed below in Table 2.5.3, shall not exceed the capacity of 50 pallets, each with a maximum capacity of four 210 litre drums or other smaller containers. Exclusions Hazardous wastes shall not be imported to site or stored in the Hazardous Waste Store: i. If not sealed in UN approved containers ii. If they contain substances which are unsuitable for the storage pallets with properties such as attack polyethylene or have vapour pressures incompatible with the containers. iii. Unless a site specific risk assessment has been approved in writing by the Environmental Protection Unit for the respective 'Hazardous Properties' of the waste. iv. If defined by Technical Guidance WM2 as having the Hazardous Properties H1 "Explosive", H2 "Oxidising" or H3A "Highly Flammable". v. If not specified in Table 2.5.3.

Table 2.5.3 Hazardous Waste Permitted to be stored on site subject to prior written approval of site specific risk assessment from the Environmental Protection Unit	
EWC Code	**Description of Waste**
02 01 08*	Agrochemical waste containing dangerous substances
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 03*	ammonium hydroxide
06 02 04*	sodium and potassium hydroxide
06 02 05*	other bases
06 03 11*	solid salts and solutions containing cyanide
06 03 13*	solid salts and solutions containing heavy metals
06 03 14*	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 15*	metallic oxides containing heavy metals
06 03 16*	metallic oxides other than those mentioned in 06 03 15
06 04 04*	Wastes containing mercury
06 13 99	wastes not otherwise specified
07 01 03*	organic halogenated solvents, washing liquids and mother liquids
07 01 04*	other organic solvents, washing liquids and mother liquids
07 03 04*	other organic solvents, washing liquids and mother liquids
08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances
08 01 21*	waste paint or varnish remover
09 01 01*	Water-based developer and activator solutions
09 01 04*	Fixer solutions
11 01 09*	sludges and filter cakes containing dangerous substances
11 01 10	sludges and Filter Cake other than those mentioned in 11 01 09
11 01 11*	aqueous rinsing liquids containing dangerous substances
11 01 12	aqueous rinsing liquids other than those mentioned in 11 01 11
11 01 13*	degreasing wastes containing dangerous substances
11 02 05*	wastes from copper hydrometallurgical process containing dangerous substances

12 01 01	ferrous metal filings and tunings
12 01 07*/ 12 01 10*	mineral based machining oils free of halogens
12 01 09*	machining emulsions and solutions free of halogens
12 01 16*	waste blasting material containing dangerous substances
12 01 20*/ 12 01 21	spent grinding bodies and grinding materials
13 01 10*	mineral based non-chlorinated hydraulic oils
13 01 13*	other hydraulic oils
13 03 10*	other insulating and heat treatment oils
15 02 02*	absorbents, filter materials contaminated by dangerous substances
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16 01 07*	oil filters
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 cholofluorocarbons, HCFC, HFC
16 02 12*	discarded equipment containing free asbestos
16 02 13*	discarded equipment containing hazardous components[2] other than those mentioned in 16 02 09 to 16 02 12
16 02 14	discarded equipment containing other than those mentioned in 16 02 09 to 16 02 13
16 02 15*	hazardous components removed from discarded equipment
16 03 03*	inorganic wastes containing dangerous substances
16 03 05*	Organic wastes containing dangerous substances
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 and excluding wastes which require special storage requirements, subject to Condition 2.5.21.
16 05 08*	Trichloroethylene only
16 06 03*	mercury-containing batteries
16 06 06*	Separately collected electrolyte from batteries and accumulators
19 08 13*	Sludges containing dangerous substances from other treatment of industrial waste water
20 01 01	paper and cardboard

20 01 15*	Alkalines
20 01 19*	Pesticides
20 01 21*	fluorescent tubes and other mercury containing waste
20 01 23*	discarded equipment containing chlorofluorocarbons
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[7]
20 01 38	wood other than those mentioned in 20 01 37
20 01 40	metals
20 02 39	plastics
20 03 01	mixed municipal waste

2.5.10	Incompatible Wastes • Oxidising agents with Flammable Material • Cyanides with Acids • Sulphides with Acids • Hypochlorites with Acids • Chlorine / Bromine release agents with Acids • Water Reactive Chemicals with Aqueous Material • Strong Acids with Strong Alkalis shall not be stored in the hazardous waste store together
2.5.11	Each drum or other mobile container used to hold hazardous wastes, shall be: a) loaded and unloaded in accordance with documented handling procedures; b) clearly and unambiguously labelled regarding its contents; c) shall not be filled or emptied on site except in the case of damage to prevent spillage and then in accordance with documented procedures; d) inspected and maintained according to documented and recorded maintenance schedules and procedures; d) in the event of damage to or deterioration to a container that is, or is likely to cause, a leak, the container shall be repaired or replaced immediately.
2.5.12	Leaks or spillages of hazardous waste occurring on site shall be controlled and remediated in accordance with the Spillage Plan.

2.5.13	Leaks or spillages of hazardous waste occurring on site shall be controlled and remediated in accordance with the Spillage Plan.
2.5.15	The Hazardous Waste Store shall be segregated from the road by means of a traffic barrier system.
2.5.16	Drums or other mobile containers in the HWS must be stored in such a manner that their identification labels may be readily examined, and the condition of each container may be readily inspected.
2.5.17	Recording procedures shall be maintained to ensure that all hazardous wastes which are accepted on the site are tracked through to disposal or dispatch; that is, their identity, location and status are recorded and auditable.
2.5.18	Hazardous waste shall not be stored on site for longer than 12 months unless otherwise approved in writing by the Environmental Protection Unit.
2.5.19	Hazardous waste shall not be bulked, blended, decanted or repackaged on site unless approved by the EPU such as where there is potential for leakage or spillage to occur.
2.5.20	Aerosols shall be stored in cages suitably constructed to prevent ejection during a fire. Cages shall be closed and secured when not being loaded or unloaded.
2.5.21	EWC 16 05 06* Laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals and excluding wastes which require special storage requirements, shall be stored in a locked store.
2.5.22	Unidentified waste can: • if it is necessary for reasons of public safety; • further to being risk assessed by suitably qualified person; • further to being packaged as determined appropriate by a suitably qualified person; Be imported to site and stored in a dedicated quarantine storage area until identified, following which it shall be repackaged if necessary and disposed of by appropriate means.

2.6 Waste recovery and disposal

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

Table 2.6.1: Waste recovery and disposal
Documentation reference
Section 2.6 of the application

2.6.2 Subject to completion of improvement requirement 9.6, the Operator shall have, as part of the Environmental Management System, a Waste Recovery and Disposal Plan. This plan shall aim to minimise the quantity of waste produced by the Licensed Site and sent for disposal. The plan shall be reviewed and updated at least once every year.

2.6.3 Prior to determining the routes for the disposal or recycling of the residues from incineration, appropriate tests shall be carried out to establish the physical and chemical characteristics and the polluting potential of the different residues. The analysis shall concern the total soluble fraction and heavy metals soluble fraction.

2.6.4 All waste materials produced on the Licensed Site shall be minimised in their amount and harmfulness and shall be subject to recycling, in preference to disposal, where this is reasonably practicable,

2.6.5 No waste material, excluding waste designated to be stored in the Hazardous Waste Store but including incoming wastes and wastes produced on site, shall be stored on the Licensed Site for a period exceeding two months unless otherwise agreed in writing by the Department.

2.6.6 Wastes produced at the Licensed Site shall, as a minimum, be sampled and analysed in accordance with Table 2.6.2. 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 selected may no longer be appropriate

Table 2.6.2: Waste Sampling and Analysis		
Waste Description	**Parameters to be measured**	**Frequency**
Bottom Ash	TOC, metals (Sb,As,Cd,Cr,Co,Cu,Pb,Mn,Hg,Ni,Tl,V) & their compounds, dioxins/furans and dioxin-like PCBs.	Quarterly
Air Pollution Control Residues	TOC, metals (Sb,As,Cd,Cr,Co,Cu,Pb,Mn,Hg,Ni,Tl,V) & their compounds, dioxins/furans and dioxin-like PCBs.	Quarterly

2.7 Energy Efficiency

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

Table 2.7 1: Energy efficiency
Documentation reference
Section 2.7.2 of the application

2.7.2 Subject to completion of improvement requirement 9.4, the Operator shall have, as part of the Environmental Management System, an Energy Management Plan. This plan shall aim to maximise the energy efficiency of the Licensed Site. The plan shall be reviewed & updated at least once every year.

2.8 Accident prevention and control

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

Table 2.8.1 : Accident prevention and control
Documentation reference
Section 2.8.1 of the application
Section 2.8.2 of the application

2.9 Noise and vibration

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

Table 2.9.1 : Noise and vibration
Documentation reference
Section 2.9.3 of the application
Section 2.9.4 of the application
Section 2.9.7.2 of the application
Section 6.2 of appendix 7 of the application

2.9.2 The noise emission from the Licensed Site shall not contain tonal or other distinctive characteristics likely to cause annoyance as perceived by an authorised officer of the Department outside the site boundary.

2.9.3 The Operator shall notify the Department at least one working day in advance of the carrying out of any activity, other than in circumstances where the need to carry out the activity could not be foreseen, where that activity is likely to result in levels of noise with the potential to cause annoyance to persons outside the site boundary. Such activity shall not be undertaken if the Department indicates in writing to the Operator that it is not satisfied with the arrangements for carrying out the activity.

2.10 Monitoring

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

Table 2.10.1 : Monitoring
Documentation reference
Section 2.10.1 of the application
Section 2.10.3 of the application
Section 2.10.4 of the application

2.10.2 Where requested in writing by the Department, the Operator shall provide at least 14 days advance notice of undertaking periodic measurements.

2.10.3 There shall be provided:

a) Safe and permanent means of access to enable sampling/monitoring to be

carried out in relation to the emission points specified in Schedule 2, unless otherwise specified in that Schedule; and

b) Safe means of access to other sampling/monitoring points when required by the Department.

2.10.4 The Operator shall make available on the Internet a summary report of the emissions monitoring data in a format and at a frequency agreed with the Department.

2.10.5 The following operating parameters shall be continuously monitored and recorded on both incinerators :

a) Temperature near the inner wall of the combustion chamber (or other representative location agreed in writing with the Department); and

b) Exhaust gas oxygen concentration, temperature, pressure and water vapour content (water vapour content is not required if gases are dried before analysis).

2.10.6 Sampling ports and working platforms shall comply with the requirements of BS EN 13284-1 or other standard agreed in writing with the Department.

2.10.7 Measurements for the determination of concentrations of substances specified in this Licence shall be carried out representatively.

2.10.8 Sampling and analysis of all pollutants, including dioxins and furans, as well as reference measurement methods to calibrate automated measurement systems shall be carried out as specified by the appropriate CEN-standards. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality, as agreed in writing with the Department, shall apply.

2.10.9 The appropriate installation and the functioning of the automated monitoring equipment for emissions into the air and water shall be subject to control and, as a minimum, to an annual surveillance test. Calibration shall be done by means of parallel measurements with appropriate reference methods at least every three years.

2.10.10 All sampling and analytical methods used for non-continuous emissions measurements shall be accredited to an appropriate standard by UKAS unless otherwise agreed in writing by the Department.

2.10.11 All sampling and protocols for monitoring of emissions shall be subject to the prior written agreement of the Department.

2.11 Decommissioning

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

Table 2.11.1 : Decommissioning
Documentation reference
Section 2.11 of the application (including appendix 9)

2.11.2 Subject to completion of improvement requirement 9.12, the Operator shall have, as part of the Environmental Management System, a site closure plan which is designed to ensure that, upon definitive cessation of operation, the Licensed Site can be decommissioned with minimum negative environmental impact. This plan shall be reviewed at least once every three years and shall be up-dated as appropriate

2.11.3 Prior to the definitive cessation of operation of the Licensed Site the site closure plan shall be submitted to the Department for approval. Decommissioning shall not commence without the agreement, in writing, of the Department.

3 Records

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

a) any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, has had or might have had an effect on the environmental performance of the Licensed Site. These records shall be kept in a log maintained for that purpose;
b) all monitoring and sampling taken or carried out and any assessment or evaluation made on the basis of such data;
c) CEM data before and after subtraction of the uncertainty errors;
d) raw data for all specified congeners of dioxins/furans and dioxin-like PCBs;
e) all data relating to wind speed and direction collected at the Licensed Site; and
f) any other Specified Records for the Licensed Site as stipulated from time to time by the Department.

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

a) Specified Records;
b) any other records made by the Operator in relation to the operation of the Licensed Site ("Other Records").

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

3.1.4 Specified Records and Other Records shall:

a) be legible;
b) be made as soon as reasonably practicable; and
c) indicate any amendments which have been made and shall include the original record wherever possible.

3.1.5 Specified Records and Other Records shall be retained at the Licensed Site for a minimum period of 4 years from the date when the records were made.

3.1.6 For all waste received at or produced from the Licensed Site, the Operator shall record (and shall retain such records for a minimum of 4 years) :

a) its composition, or as appropriate, description;
b) the best estimate of the quantity received or produced;
c) its disposal routes; and
d) the best estimate of the quantity sent for recovery.

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

4 Reporting

4.1.1 All reports and notifications required by this Licence shall be sent to the Department at the address notified in writing to the Operator by the Department.

4.1.2 The Operator shall report the parameters listed in Tables S2.1, S2.2, S2.3 & S2.4 to Schedule 2 as follows:

a) in respects of the emission points specified;
b) for the reporting periods specified in Tables S2.1, S2.2, S2.3 & S2.4 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
c) giving the information from such results and assessments as may be required by the forms specified in those Tables; and
d) sending the report to the Department within 28 days of the end of the reporting period.

4.1.3 All information reported in accordance with condition 4.1.2, unless otherwise agreed in writing by the Department, shall also be submitted in electronic form to the Department. This information shall be provided not later than 31 January in each year and covering the period from commencement of operation of the Licensed Site to 31 December in the year preceding the submission of the information.

4.1.4 The Operator shall submit an annual performance report on the functioning and monitoring of the incineration plant in a format agreed with the Department by the 31st January each year. The report shall, as a minimum requirement, give an account of the running of the process and the emissions into air and water compared with the emission standards in the Waste Incineration Directive, as required by Article 12(2) of the Waste Incineration Directive.

4.1.5 The Operator shall provide a summary report of the previous year's progress against annual improvement targets applicable to their environmental management system and audits carried out on behalf of the Department, not later than 31st January in each year.

4.1.6 The Operator shall review fugitive emissions on an annual basis and a summary report on this review, detailing such releases and the measures taken to prevent or reduce them, shall be sent to the Department not later than 31 January in each year.

4.1.7 The Operator shall review all complaints concerning the Licensed Site's effect or alleged effect on the environment on an annual basis. A summary report on this review including, where appropriate, proposals for actions to reduce justifiable complaints shall be sent to the Department not later than 31 January in each year.

4.1.8 The Operator shall submit an annual report to the Department on the functioning and monitoring of the incineration lines. This report shall, as a minimum requirement, give an account of the running of the process and the emissions to air and to water compared to the emission limits in this Licence. This report shall be submitted not later than 31 January in each year.

5 Notifications

5.1.1 The Operator shall notify the Department without delay of:

a) the detection of an emission of any substance which exceeds any limit or criteria in this Licence specified in relation to the substance;
b) the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;
c) the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution;
d) any accident which has caused or may have the potential to cause pollution;
e) any incident which has led to a period of abnormal operation of incineration plant, as defined in Section 10 Interpretation; and
f) the operation of the bag filter bypass whenever waste is present in the furnace as referred to in condition 2.3.26.

5.1.2 The Operator shall submit written confirmation to the Department of any notification under condition 5.1.1 of this Licence by sending:

a) the information listed in Part A of Schedule 1 to this licence within 24 hours of such notification; and
b) the more detailed information listed in Part B and C of that Schedule as soon as practicable thereafter;
c) for notifications of incidents of abnormal operations under condition ;

and such information shall be in accordance with that Schedule.

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

a) permanent cessation of the operation of any part of or all of the Licensed Site;
b) cessation of the operation of any part of or all of the Licensed Site for a period, likely to exceed 1 year; and
c) resumption of the operation of any part of or all of the Licensed Site after a cessation notified under 5.1.3(b).

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

a) any change in the Operator's trading name, registered name or registered office address;
b) a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary); and
c) any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

5.1.5 The Operator shall notify the Department of the receipt of any complaints concerning the Licensed Site's effect or alleged effect on the environment. Such notifications shall be made within one hour of the receipt of the complaint, if received during office hours, or by 10.00 a.m. the next working day if the complaint is received outside office hours.

5.1.6 The Operator shall notify the Department of any incident on the Licensed Site that has resulted in noise likely to cause annoyance to persons outside the site boundary. Such notifications shall be made within one hour of the incident, if during office hours, or by 10.00 a.m. the next working day if outside office hours.

6 Emissions

6.1 Emissions into air

6.1.1 Emissions to air from the emission points specified in Table 6.1.1 shall only arise from the sources specified in that Table.

Table 6.1.1: Emission points into air		
Emission point reference	**Source**	**Location of emission point**
A1	Flue serving primary incinerator	Point A1 on site plan (figure 2B of the Application)
A2	Flue serving secondary incinerator	Point A2 on site plan (figure 2B of the Application)

6.1.2 The limits for emissions into air for the parameters and emission points set out in Table 6.1.2 shall not be exceeded whenever waste is present in the furnace.

6.1.3 The Operator shall carry out monitoring of the parameters listed in Table 6.1.2, from the emission points specified in that Table in the manner and at least at the frequencies specified in that Table.

Table 6.1.2: Emission limits into air					
Parameters	**Emission Points A1 and A2**				
	Units	**Half Hour Average Limit**	**Daily Average Limit**	**Other Limit**	**Monitoring Requirements** [note 1]
Particulate matter (Total dust)	mg/m^3	30 (43) [note 2]	10 (15) [note 2]	-	Continuous; plus One measurement every 3 months to check CEM calibration. Average value over sample period of at least 1 hour.
VOCs as Total Organic Carbon (TOC)	mg/m^3	20 (29) [note 2]	10 (15) [note 2]	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Hydrogen chloride	mg/m^3	60 (100) [note 2]	10 (17) [note 2]	-	Continuous; plus One measurement every 6 months to check CEM calibration. Average value over sample period of at least 1 hour.
Hydrogen fluoride	mg/m^3	-	-	2	One spot measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours.
Carbon monoxide	mg/m^3	150 (158) [note 2]	50 (56) [note 2]	-	Continuous 95% of all 10-minute averages in any 24-hour period; plus One measurement every 6 months to check CEM calibration.
Sulphur dioxide	mg/m^3	200 (250) [note 2]	50 (63) [note 2]	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Oxides of nitrogen (NO and NO_2 expressed as NO_2)	mg/m^3	400 (500) [note 2]	200 (250) [note 2]	-	Continuous; plus One measurement every 6 months to check CEM calibration. Half-hourly average values over sample period of at least 4 hours.
Ammonia	mg/m^3	-	-	-	Continuous; plus One measurement every 6 months to check CEM calibration. Average value over sample period of at least 1 hour.
Cadmium & thallium and their compounds (total)	mg/m^3	-	-	0.05	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours. [note 3]
Mercury and its compounds (total)	mg/m^3	-	-	0.05	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours. [note 3]
Sb, As, Cr, Co, Cu, Pb, Mn, Ni and V and their compounds (total) [note 4]	mg/m^3	-	-	0.5	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 2 and 8 hours. [note 3]
Polyaromatic hydrocarbons (PAHs)	mg/m^3	-	-	-	One measurement every 6 months. Average value over sample period of at least 2 hours. [note 5]
Dioxin-like PCBs (TEQ) [note 6]	ng/m^3	-	-	-	One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 6 and 8 hours.
Dioxins & furans (TEQ) [notes 6& 7]	ng/m^3	-	-	0.1	Continuous sampling; plus One measurement every 6 months but one every 3 months in first 12 months of operation. Average value over sample period of between 6 and 8 hours.

Notes to Table 6.1.2

Note 1 Monitoring techniques employed shall be in accordance with the conditions in section 2.10 of this Licence.
All emission limit values are expressed at the following conditions :
273K, 101.3kPa, 11%v/v oxygen, dry gas.
References to measurement frequencies have the following meanings :

- 'one every 3 months' means one in each of the periods January-March, April-June, July-September & October-December, with no more than 4 months between successive tests; and
- 'one every 6 months' means one in each of the periods January-June & July-December, with no more than 8 months between successive tests.

Note 2 The figures in brackets are the concentrations that are equivalent to the emission limit values before subtraction of the confidence intervals specified in condition 6.1.4. They do not represent emission limit values but indicate the minimum measured value which is likely to be required to demonstrate, with certainty, a failure to comply with the emission limit value.

Note 3 Emission limit values for metals include the gas, vapour and solid phases of the metals and their compounds, in total, expressed as the metal.

Note 4 Sb means antimony, As means arsenic, Cr means chromium, Co means cobalt, Cu means copper, Pb means lead, Mn means manganese, Ni means nickel & V means vanadium.

Note 5 The Polyaromatic hydrocarbon species to be analysed for are : 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, fluoranthene, indo[1,2,3-cd]pyrene & naphthalene.

Note 6 The respective TEQ sum of the equivalence factors to be reported as a range based upon the following assumptions :

a) All congeners less than the limit of detection are zero; and
b) All congeners less than the limit of detection are at the limit of detection.

Note 7 Compliance with the emissions limit value for dioxins & furans shall be assessed on the basis of the specified periodic measurements to the appropriate standard and using the I-TEF values given in condition 10.1.4. The data from the continuous sampling equipment shall be for information only.

6.1.4 With regard to the calibration of continuous emission monitors, at the daily emission limit value, the values of the 95% confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values :

Carbon monoxide	10%
Sulphur dioxide	20%
Nitrogen dioxide	20%
Total dust	30%
Total organic carbon	30%
Hydrogen chloride	40%

6.1.5 The half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods if no waste is being incinerated) from the measured values after having subtracted the value of the confidence interval specified at condition 6.1.4 above. The daily average values shall be determined from those validated average values

6.1.6 To obtain a valid daily average value no more than five half-hourly average values in any day shall be discarded due to malfunction or maintenance of the continuous measurement system. No more than ten daily average values per year shall be discarded due to malfunction or maintenance of the continuous measurement system.

6.1.7 For periodic measurements, compliance shall be determined from the measured value after having subtracted the uncertainty error for the selected method of sampling and analysis for each relevant pollutant.

6.2 Emissions to land

6.2.1 There shall be no emission to land from the Licensed Site

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

6.3 Emissions to water [other than emissions to sewer]

6.3.1 Emissions to water from the emission points specified in Table 6.3.1 shall only arise from the sources specified in that Table.

Table 6.3.1: Emission points into water

Emission Point Reference	Source	Receiving Water
Point W1 on site plan (figure 2B of the Application)	Effluent released from the biological treatment vessel for the treatment of foul sewage.	Middle River
Point W2 on site plan (figure 2B of the Application)	Uncontaminated surface and roof water, and boiler water via an oil/water separator, released from the underground water sump.	Middle River

6.3.2 Limits for the emissions to water for the parameters and emission points set out in Tables 6.3.2a and 6.3.2b shall not be exceeded.

6.3.3 The Operator shall carry out monitoring of the parameters listed in Tables 6.3.2a and 6.3.2b, from the emission points and at least at the frequencies specified in those Tables.

Table 6.3.2a : Emission limits into water		
Parameter	**Emission Point W1**	**Monitoring Requirements** [note 1]
Suspended solids (mg/l)	60	The timing of spot sampling should be varied so as not to fall at the same time or on the same day every month. Test frequency = once per month [note 3]
BOD (mg/l) [note 2]	40	
pH minimum	6	
pH maximum	9	
Visible oil	Nil	

Notes to Table 6.3.2a

Note 1 Monitoring techniques and protocols employed shall be in accordance with the conditions in section 2.10 of this Licence.

Note 2 BOD means Biochemical Oxygen Demand

Note 3 The emission limit values for suspended solids, BOD and pH are expressed as monthly averages.

Table 6.3.2b : Emission limits into water		
Parameter	**Emission Point W2**	**Monitoring Requirements** [note 1]
pH minimum	6	Continuous measurement.
pH maximum	10	
Conductivity	-	
Temperature maximum	30°C	
Flow duration (hrs.mins)	-	When overflow occurs
Suspended solids (mg/l)	-	Spot sample to be taken and analysed at least once in every 3 month period during which a discharge has taken place. [note 2]
COD (mg/l) [note 3]	-	
Sulphides (mg/l)	-	
Metals (mg/l) [note 4]	-	
Visible oil	Nil	
Ammonia (N)	0.6 mg/l	Spot sample when the boiler water drain down has occurred.

Notes to Table 6.3.2b

Note 1 Monitoring techniques and protocols employed shall be in accordance with the conditions in section 2.10 of this Licence.

Note 2 'every 3 month period' means each of the periods January-March, April-June, July-September & October-December. If appropriate discharges have taken place there should be no more than 4 months between successive tests.

Note 3 COD means Chemical Oxygen Demand.

Note 4 Metals means antimony, arsenic, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, thallium and vanadium.

6.3.4 There shall be no emission into water from the Licensed Site of any of the following substances – mercury and its compounds; cadmium and its compounds; all isomers of hexachlorocyclohexane; all isomers of DDT; pentachlorophenol and its compounds; hexachlorobenzene; hexachlorobutadiene; aldrin; dieldrin; endrin; polychlorinated biphenyls; dichlorvos; 1,2-dichloroethane; all isomers of trichlorobenzene; atrazine; simazine; tributyltin compounds, triphenyltin compounds; trifluralin; fenitrothion; azinphos-methyl; malathion; and endosulphan - except in concentrations which are no greater than the background concentration.

6.4 Emissions to sewer

6.4.1 No emission shall be made into any sewer from the Licensed Site.

6.5 Emissions of heat

6.5.1 Any heat generated by the incineration process shall be recovered as far as practicable.

6.5.2 The Operator shall provide and maintain systems to ensure that opportunities for the use of heat, either from steam or hot water, may be capitalised upon should they become practicable.

6.6 Emissions of noise and vibration

6.6.1 There are no conditions relating to on-site noise levels.

7 Transfer to effluent treatment plant

7.1.1 No transfers to effluent treatment plant are controlled under this part of this Licence. Emissions to water are controlled under 6.3 and 6.4

8 Off site conditions

8.1.1 The Operator shall undertake reasonable and justifiable monitoring in the surrounding environment for such parameters and in such manner as may be notified to the Operator, from time to time, in writing by the Department.

8.1.2 The Operator shall undertake reasonable and justifiable monitoring of noise at the locations, frequencies and in the manner notified to the Operator by the Department.

9 Improvement Programme

9.1.1 The Operator shall provide an annual improvement programme in agreement with the Department by the 31st January each year. For each of the subject areas identified in the appropriate technical guidance the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in the appropriate guidance. The assessment methodologies used should be based on those given in appropriate guidance and should justify where potential improvements are not planned to be implemented. The Operator shall send written notification of the date of completion of each requirement to the Department, at the Reporting Address, within 14 days of the completion of each such requirement.

10 Interpretation

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

‘annual’
means occurring once in every year.

‘annual release’
means the total release during any year.

‘APCRs’
means air pollution control residues.

‘application’
means the application (received 10th July 2003 Reference: UN0340009A) by the Operator for a Waste Disposal Licence and any amendments to that application made in accordance with condition 11.1.1.

‘background concentration’
means in relation to the release of a substance resulting from the activity, the concentration of that substance in water supplied to the Licensed Site or in precipitation onto the Licensed Site, as appropriate.

‘Best Available Technique’
has the same meaning as in the UK Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973).

‘BOD’
means biochemical oxygen demand.

‘boiler ash’
means ash collected directly from the waste heat boilers.

‘bottom ash’
means ash collected directly from the grate or hearth and, where this has been combined with boiler ash, means the mixture of bottom ash and boiler ash.

‘calorific value’
means the amount of heat produced by a specified quantity of material.

‘CEM’
means continuous emission monitor.

‘CEN’
means Commite Europeen de Normalisation.

‘COD’
means chemical oxygen demand.

‘commissioning’
means the period after construction during which the process is being prepared to begin normal operation.

‘daily’
means every period of 24 hours commencing at 00.00hrs.

‘Daily average’

For releases of substances to air means the average of half-hourly averages over a calendar day during normal operation. Where any of abnormal operation, start-up or shut-down occur during the day in such a way that there are less than 43 half-hourly averages recorded during normal operation, no daily average shall be recorded for that day.

‘dioxins and furans’

means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

‘EWC’

means the European Waste Catalogue established by Commission Decision 2000/532/EC pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Article 1(4) of Council Directive 91/689/EEC on hazardous waste.

‘fugitive emission’

means a release into the environment from any point other than those specified in the Tables in part 6 of this Licence.

‘gas oil’

has the same meaning as in Council Directive 93/12/EEC as amended.

‘half-hourly’

means each of the periods of 30 minutes commencing on the hour and at 30-minutes past the hour.

‘hazardous waste’

means any solid or liquid waste as defined in Article 1(4) of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste.

‘impermeable surfacing’

means surfacing which prevents the passage of substances present in that area.

‘ISO’

means International Standards Organisation.

‘Licensed Site’

means the activities and the limits to those activities described in Table 1.1.1 and the area upon which those activities take place as indicated in condition 1.1.2.

‘monitoring’

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

‘monthly’

means every calendar month.

‘3 monthly’

means each of the periods January-March, April-June, July-September & October-December.

‘6 monthly’

means each of the periods January-June & July-December.

‘operation’

means the carrying out of the authorised activities on the Licensed Site for the purpose of the disposal of waste by incineration.

'Operator'
means the Holder of this Waste Disposal Licence, i.e. SITA Waste (Isle of Man) Limited.

'pollution'
means emissions as a result of human activity which may be harmful to human health or the quality of the environment, cause offence to any human senses, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment; and 'pollutant' means any substance, vibration, heat or noise released as a result of such an emission which may have such an effect.

'PCBs'
means polychlorinated biphenyls.

'reporting address'
means the address most recently notified to the Operator by the Department of Local Government and the Environment for the purposes of reporting.

'shut-down'
means any period during which the plant is non-operational or is being put into a non-operational state.

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

'start-up'
means any period during which heat is being applied to the furnace in preparation for the feeding of waste into that furnace.

'support fuels'
means materials which are burned in order to ensure that the required temperature for the incineration of waste is achieved or maintained.

'TEF'
means toxic equivalence factor.

'I-TEF'
means international toxic equivalence factor.

'TEQ'
means the toxic equivalent concentration.

'I-TEQ'
means the international toxic equivalent concentration.

'TOC'
means total organic carbon.

'UKAS'
means United Kingdom Accreditation Service

'VOCs'
means volatile organic compounds, i.e. all organic compounds present in exhaust gas emissions.
unfit for the use for which it was originally intended.

‘waste oil’

means a mineral-based lubrication or industrial oil which has become unfit for the use for which it was originally intended.

‘WHO’

means the World Health Organisation.

‘year’

means calendar year starting 1 January and ending 31 December.

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

10.1.3 Unless otherwise stated, any references in this Licence to concentrations of substances in emissions into air means the concentration in dry gas at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen concentration of 11%.

10.1.4 For the determination of the toxic equivalent concentration (I-TEQ and WHO-TEQ for dioxins/furans; UK-COT and WHO-TEQ for PCBs) of dioxins/furans and dioxin-like PCBs stated as a release limit and/or reporting requirement, the mass concentrations of the following congeners have to be multiplied by their respective toxic equivalence factors (TEF) before summing.

TEF schemes for dioxins and furans				
Congener	**I-TEF (1990)**	**WHO-TEF (1997/8)**		
		Human/ 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	0.0001	-	-
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.05	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.5	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	0.0001	0.0001	0.0001

TEF schemes for PCBs				
Congener	**UK COT (1997)**	**WHO-TEF (1997/8)**		
		Human/ Mammals	**Fish**	**Birds**
Non-ortho PCBs				
3,4,4',5-TCB (81)	-	0.0001	0.0005	0.1
3,3',4,4'-TCB (77)	0.0005	0.0001	0.0001	0.05
3,3',4,4',5 – PeCB (126)	0.1	0.1	0.005	0.1
3,3',4,4',5,5'-HxCB(169)	0.01	0.01	0.00005	0.001
Mono-ortho				
2,3,3',4,4'-PeCB (105)	0.0001	0.0001	<0.000005	0.0001
2,3,4,4',5-PeCB (114)	0.0005	0.0005	<0.000005	0.0001
2,3',4,4',5-PeCB (118)	0.0001	0.0001	<0.000005	0.00001
2',3,4,4',5-PeCB (123)	0.0001	0.0001	<0.000005	0.00001
2,3,3',4,4',5-HxCB (156)	0.0005	0.0005	<0.000005	0.0001
2,3,3',4,4',5'-HxCB (157)	0.0005	0.0005	<0.000005	0.0001
2,3',4,4',5,5'-HxCB (167)	0.00001	0.00001	<0.000005	0.00001
2,3,3',4,4',5,5'-HpCB (189)	0.0001	0.0001	<0.000005	0.00001
Di-ortho				
2,2',3,3',4,4',5-HpCB (170)	0.0001			
2,2',3,4,4',5,5'-HpCB (180)	0.00001			

The respective toxic equivalent concentration is to be reported as a range based upon :

1. all congeners less than the detection limit assumed to be zero; and
2. all congeners less than the detection limit assumed to be at the detection limit.

11 Written agreement to changes

11.1.1 The Operator shall seek the agreement of the Department to any proposed change that would modify information contained within the application and referred to in this Licence. The Operator shall seek such agreement in the following manner:

a) the Operator shall give the Department written notice of the details of the proposed change, indicating the relevant part(s) of this Licence; and
b) such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Licensed Site.

Following the agreement 'in principle' of such change the Operator shall submit the relevant amended pages of the application, together with an up-dated 'tracking sheet', for the final approval of the Department. The Operator shall not implement such change prior to the final written approval of the Department.

11.1.2 Any change to any information contained within the application but not referred to in this Licence shall be notified to the Department by submission of the relevant amended pages of the application together with an up-dated 'tracking sheet'.