



**APPLICATION FOR AN ENVIRONMENTAL  
PERMIT UNDER THE ENVIRONMENTAL  
PERMITTING (ENGLAND AND WALES)  
REGULATIONS 2016 (AS AMENDED)**

**ENVIRONMENTAL PERMITTING TECHNICAL  
REQUIREMENTS**



**FORWARD WASTE MANAGEMENT  
EAST MOORS ROAD HAZARDOUS WASTE  
TRANSFER STATION, CARDIFF**

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## ACRONYMS / TERMS USED IN THIS REPORT

AMP	Accident Management Plan
ASCR	Application Site Condition Report
BAT	Best Available Techniques
BREF	Best Available Techniques Reference Document
CCA	Climate Change Agreement
CCTV	Closed Circuit Television
CLP	Classification, Labelling and Packaging
DGSA	Dangerous Goods Safety Advisor
EA	Environment Agency
ECL	Environmental Compliance Limited
ELVs	End of Life Vehicles
EMS	Environmental Management System
EP Regulations	Environmental Permitting (England and Wales) Regulations 2016 as amended
EP	Environmental Permit
ERA	Environmental Risk Assessment
FWM	Forward Waste Management Limited
IBC	Intermediate Bulk Container
IED	Industrial Emissions Directive
LED	Light-emitting Diode
NGR	National Grid Reference
NRW	Natural Resources Wales
OS	Ordnance Survey
PG	Packing Group
PPMR	Planned Preventative Maintenance Regime
SEC	Specific Energy Consumption
SHEQ	Safety, Health, Environment and Quality
The Installation	Forward Waste Management East Moors Road Hazardous Waste Transfer Station
WAMITAB	Waste Management Industry Training and Advisory Board
WEEE	Waste Electrical and Electronic Equipment

## **1. INTRODUCTION**

### **1.1. Overview**

- 1.1.1. Environmental Compliance Limited (“ECL”) has been commissioned by Forward Waste Management Limited (“FWM”) to produce a bespoke Environmental Permit application for a waste Installation, hereafter referred to as “the Installation” located at 122-128 East Moors Road, Cardiff, CF24 5EE.
- 1.1.2. FMW is proposing to operate Forward Waste Management East Moors Road Hazardous Waste Transfer Station accepting approximately 22,000 tonnes of hazardous waste and approximately 3,000 tonnes of non-hazardous waste per annum at the Installation.

### **1.2. Installation Location**

- 1.2.1. The Installation is located on East Moors Road, within a large commercial and industrial area to the south east of Cardiff City Centre and is centred on Ordinance Survey (“OS”) National Grid Reference (“NGR”) 319473 175780. The Installation will occupy an area of approximately 0.25ha.
- 1.2.2. The exact location of the Installation and the proposed Environmental Permit Boundary (outlined in green) is indicated on the Site Location Plan (Drawing ECL.010.02.01-01), which is contained within Section 3 of this application submission.

### **1.3. The Applicant**

- 1.3.1. FMW was formed in 2006 and currently operates East Moors Waste Transfer Station permitted under Environmental Permit EPR/ AB3099FT. FWM delivers waste management solutions to all businesses and specifically those within the manufacturing industry. FWM operations are founded on the application of the waste hierarchy; preventing waste production and reusing and recycling redundant resources across the whole spectrum of wastes from recyclables to hazardous materials.
- 1.3.2. FWM is proposing to operate a second waste site as detailed in this Environmental Permit application. This will enable the business to increase their waste acceptance, treatment and recovery capabilities in order to expand their operations in the UK waste sector.

## 2. LISTED ACTIVITIES

### 2.1. Installation Activities

2.1.1. The proposed Schedule 1 Activities under the Environmental Permitting (England and Wales) Regulations 2016 as amended ("EP Regulations") is detailed in Table 1.

**Table 1: Proposed Schedule 1 Activities**

Activity Reference	Schedule 1 Activity	Description of Specified Activity	Limits of Specified Activity
A1	Section 5.3 Part A(1) (a)	Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities: iv) repackaging prior to submission to any of the other activities listed in this Section or in Section 5.1.	From material entering site to final dispatch offsite.
A2	Section 5.6 Part A(1)	(a) Temporary Storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Sections 5.1. 5.2., 5.3 and paragraph (b) of this Section.	From material entering site to final dispatch offsite.

2.1.2. FMW also propose to undertake two Specified Waste Operations as follows:

- the storage of non- hazardous waste with treatment limited to manual or mechanical bulking up of waste for onward transfer from site for disposal or recycling; and
- crushing of hazardous containers via mechanical means limited to a treatment capacity of 5 tonnes per day. The crushed containers will be sent for onward transfer from site for recycling and/or recovery.

2.1.3. The proposed waste codes to be accepted at the Installation are provided in the Proposed Waste Codes and Storage Arrangements Document contained in Appendix I.

2.1.4. The waste management operations to be carried out at the site as specified in Annex I and Annex II of the Waste Framework Directive 2008 are detailed below:

- **R3:** Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes);
- **R4:** Recycling/reclamation of metals and metal compounds;
- **R5:** Recycling/reclamation of other inorganic materials; and
- **R12:** Exchange of wastes for submission to any of the operations numbered R1 to R11 (other than R3-R5);
- **R13:** Storage pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced);
- **D14:** Repackaging prior to submission to any of the operations numbered D1 to D13; and
- **D15:** Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection on the site where it is produced).

## **2.2. Planning**

- 2.2.1. A Certificate of Lawful Use or Development (Planning Reference 92/01306/R) was granted for the site at 122-128 East Moors Road by Cardiff County Council on 14<sup>th</sup> August 1992 for the existing use as indicated on the plan contained in the Decision Notice or as a scrap metal business with such use beginning more than ten years before date of application.
- 2.2.2. Additionally, planning permission (Planning Reference 02/00618/R) was granted on 15<sup>th</sup> May 2002 for the single storey industrial unit which is now constructed following the demolition of the existing unit.

### **3. MANAGEMENT TECHNIQUES**

#### **3.1. Technical Competence**

- 3.1.1. Under the EP Regulations, the activities at the Installation are classified as a relevant waste operation, and, accordingly, a Technically Competent Manager will be required. Mr Craig Housley will fulfil this role; and a copy of his Waste Management Industry Training and Advisory Board ("WAMITAB") Certificate and Continuing Certificate of Competence are provided in Section 1 of this application submission.
- 3.1.2. Additionally, FWM will be employing a Senior Site Chemist and Reception Chemist at the Installation who will both hold relevant chemistry qualifications and will undertake the appropriate WAMITAB course on commencement of employment.

#### **3.2. Overview of Environmental Management System**

- 3.2.1. FWM will operate an Environmental Management System ("EMS") at the Installation which will address environmental aspects of the proposed activities. The EMS will be based on the requirements of the international EMS standard BS EN ISO 14001 adopting the Standard's Plan, Do, Check, Act approach.
- 3.2.2. FWM'S EMS is externally certified to ISO 14001 at their existing East Moors Waste Transfer Station. FWM will expand the scope of their current EMS to incorporate the proposed Installation with the aim of the new Installation also possessing external certification by 2022.
- 3.2.3. FWM's Managing Director has overall responsibility for the Installation. Responsibility for environmental matters at the Installation rests with the Technical Manager. The Safety, Health, Environment and Quality Manager ("SHEQ") Manager will be responsible for the tracking and implementation of procedures.
- 3.2.4. FWM will establish a documented EMS which:
- ensures compliance with all relevant legislation;
  - ensures compliance with the Installation's Environmental Permit;
  - identifies, assesses and minimises the risks of pollution arising from the Installation's activities;
  - comprises a range of written procedures that cover all aspects of the Installation's activities;
  - identifies, sets, monitors and reviews environmental objectives and key performance indicators; and
  - includes a requirement to report annually on environmental performance, objectives, targets and future planned improvements.

#### **3.3. Environmental Policy**

- 3.3.1. A copy of FWM's current Environmental Policy is provided in Appendix II. This Environmental Policy will be expanded to cover the proposed operations at the Installation.



### **3.4. Details of the Environmental Management System**

#### **3.4.1. Plan**

##### **3.4.1.1. The planning element of the EMS will include:**

- identification of environmental impacts and aspects associated with the Installation's activities, and assessing their significance; including an assessment of the potential environmental risks posed by the work of contractors;
- identification and evaluation of relevant legal and other relevant requirements;
- identification of environmental objectives and targets that will be focussed on reducing the impact of the identified significant environmental aspects;
- a series of risk assessments to cover a range of issues, including site operations, maintenance, accidents, training and records; and
- details of how FWM ensure that any relevant standards, guidance and codes of practice are met on an ongoing basis; and
- a Site Closure Plan to demonstrate how the Installation can be decommissioned in its current state to avoid any pollution risk and return the site of operation to a satisfactory state.

##### **3.4.1.2. The outcomes of the above are:**

- a comprehensive understanding of the potential and actual impacts of the permitted activities on the surrounding environment and people's health;
- the correct appropriate measures selected to manage environmental risks and prevent or minimise their effects so as not to cause pollution;
- a series of documented procedures covering all aspects of the Installation's activities; and
- a series of documented environmental objectives and targets, together with an action plan/development programme to ensure that these are met.

#### **3.4.2. Implementation and Operation (Do)**

##### **3.4.2.1. This element will include:**

- ensuring that EMS roles and responsibilities are clearly defined and documented, and that site staff are made aware of these;
- ensuring that the Installation is operated by suitably competent staff who have received the necessary training in all aspects of the plant's operation, including where contractors are used, ensuring that they are suitably competent; in this regard:
  - the skills and competencies necessary for key posts are documented; these key posts include contractors, those responsible for liaising with contractors and those purchasing equipment and materials,
  - training requirements are identified by means of a documented training needs analysis,
  - documented training records are kept and updated as required,
  - training specifically addressee's environmental awareness and environmental permit requirements, and
  - the requirement for ongoing/refresher training is identified;

- ensuring that there are site layout plans - including drainage plans - and that they are revised as required to reflect any changes at the Installation;
- ensuring that there are documented procedures covering internal and external communications;
- ensuring that there are procedures in place for staff and contractors to have access to the Installation's permit and management system requirements; with regard to contractors, ensuring that suitable instructions are provided with regard to protecting the environment whilst working on site;
- the establishment of a documented planned preventative maintenance regime ("PPMR") to ensure that all plant and site infrastructure are kept in suitable condition and operating effectively; this PPMR programme details what maintenance, tests and inspections need to be done and when; this also details the measures required to ensure continuing compliance with the permit conditions during maintenance/shutdown.
- The PPMR also:
  - identifies known or predictable malfunctions associated with the operations and the procedures, spare parts, tools and expertise required to deal with them,
  - includes a record of spare parts held, or details on where they can be sourced from, together with an assessment of how long they would take to obtain,
  - includes a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative regime is appropriate,
  - includes equipment or plant whose failure could directly or indirectly lead to an impact on the environment or human health and 'non-productive' items,
  - ensure the necessary spare parts, tools, and competent staff are available prior to commencing maintenance;
- ensuring that there are documented procedures covering document control;
- ensuring that there are suitable documented record-keeping arrangements in place;
- ensuring that there are documented operational procedures and work instructions covering all aspects of the Installation's operation;
- ensuring that there are documented procedures that incorporate environmental issues into the control of process/equipment change, capital approval and purchasing policy;
- ensuring that there are documented procedures to address non-conformities/non-compliances and the associated corrective and preventative action; these will detail the means by which any such non-conformities/non-compliances are reported to management and the means by which they are reported to Natural Resources Wales ("NRW").
- ensuring that there is a documented procedure for dealing with complaints; this includes requirements to ensure that:
  - an appropriate person deals with the complaint,
  - the complaint is properly recorded,
  - the complaint is properly investigated,
  - any action necessary to deal with the cause of the complaint is recorded,
  - the impact of the activity causing the problem is minimised,
  - steps are taken to ensure that the problem is not repeated,
  - details of any justified complaints are reported to senior management,

- that the complainant (or NRW, as appropriate) is responded to in writing,
- if the complaint came via NRW, a suitable documented response is provided to NRW,
- if the complaint has come from a neighbour or a member of the public, a suitable documented response is provided to the complainant, and, if the complaint is substantiated, a report is provided to NRW, and
- the EMS is amended accordingly to reflect any changes;
- ensuring that there are documented procedures covering emergency preparedness and response; these will cover such incidents as major plant failures, significant spillages of potentially polluting substances, loss of mains electrical power etc.; these will be incorporated into an Accident Management Plan; FWM ensure that suitable measures are in place to communicate the Plan to all employees, management and contractors who work at the site; the Plan details:
  - the arrangements for response to an emergency, including defining specific responsibilities,
  - the measures for dealing with the consequences of an incident,
  - communicating with NRW and other relevant regulatory bodies,
  - communicating with the Installation's neighbours and the local community,
  - the measures for investigating incidents (and near-misses), including identifying suitable corrective action and following up implementation of that action,
  - the measures for recording incidents (and near-misses),
  - the measures for reporting incidents (and near misses) to Senior Management, and
  - the measures for reporting incidents to NRW;
- ensuring that there are documented procedures for carrying out internal audits; these describe how to schedule, conduct, report and manage internal audits;
- ensuring that there is a documented contingency plan in place that:
  - ensures compliance is maintained with all permit conditions and operating procedures during maintenance/shutdown at the Installation or elsewhere,
  - ensures that permitted storage limits are not exceeded and appropriate measures for waste storage and handling continue to be applied, and
  - includes ceasing the acceptance of waste unless a clearly defined method of recovery or disposal has been determined and sufficient permitted storage capacity is available.

3.4.3. The outcome of the above is evidence that day-to-day activities are taking place in accordance with the requirements of the EMS and the Installation's permit, specifically:

- that control measures and procedures are an integral part of the business operation;
- that the EMS is easy for staff to access, understand and use;
- that staff are suitably trained and competent to carry out procedures and control measures; and
- that the requirements of the EMS are effectively communicated to management, staff and contractors.

#### 3.4.4. Check

##### 3.4.4.1. This element includes:

- ensuring that all regulatory requirements in relation to monitoring and measurement are complied with, specifically:
  - the requirements relating to inspection and testing required under Environmental Permit and the associated procedures /work instructions,
  - the requirements relating to inspection and testing required under the applicable health and safety legislation and the associated procedures,
  - the requirements relating to the control of all inspection, measuring and test equipment relating to environmental requirements;
- on-going evaluation of compliance with environmental legal requirements, policy requirements and objectives and targets. Evaluation includes annual review of the legal register, regular site inspections and internal audit procedures;
- ensuring that non-conformities are recorded, investigated and appropriate corrective action is taken by the due date;
- ensuring that the necessary compliance is maintained including reporting and record-keeping required under the Environmental Permit;
- ensuring that internal audits are carried out in accordance with the documented procedures and that any audit actions are followed up; and
- ensuring that the results of all audits are made available to Senior Management.

##### 3.4.4.2. The outcomes of the above will be:

- that checks are carried out to ensure that the EMS is being implemented as intended; and
- the necessary preventative and corrective actions are undertaken to minimise non-compliances.

#### 3.4.5. Review

##### 3.4.5.1. This element will include:

- an annual management review of the EMS to ensure that it is appropriate, fully implemented and current;
- a management review of the EMS when:
  - there are changes on site (in activities and/or plant/equipment),
  - if there is an accident, complaint or breach of permit conditions.
- an annual review of both individual and organisational training needs;
- ensuring that all changes to the EMS are properly recorded;
- an assessment of whether the Installation's objectives, and any targets, have been met and reported;
- a review of the Installation's objectives and targets, and, where appropriate, any revisions to these so as to effect continual improvement.

##### 3.4.5.2. The outcomes of the above will be:

- the EMS is kept up to date, and
- the EMS is continually improved.

## 4. OPERATING TECHNIQUES

### 4.1. Overview

- 4.1.1. FWM is proposing to accept a maximum waste throughput of 22,000 tonnes per annum of hazardous waste, 3,000 tonnes per annum of non-hazardous waste, totalling 25,000 tonnes per annum.

### 4.2. Technical Standards

- 4.2.1. **European Legislation** - The following European Legislation will be used to inform the variation application:

- the Industrial Emissions Directive (“IED”) is intended to be a single legislative instrument for permitting, compliance and enforcement of environmental legislation across all member states. The requirement of the IED will therefore be considered relevant at this time; and
- the Best Available Techniques Reference Document (“BREF”) for Waste Treatment (October 2018) will be considered as it covers Installations associated with a number of waste treatments including recovery and disposal of waste.

- 4.2.2. **National Legislation** – NRW implement the requirements of the IED via the EP Regulations and have provided a number of guidance documents to assist in the preparation of Environmental Permit applications and the ongoing management of permitted Installations. The guidance documents used in the preparation of this application are as follows:

- NRW’s ‘How to comply with your environmental permit’ (Version 8, October 2014); and
- Environment Agency (“EA”) Sector Guidance Note IPPC S5.06 ‘Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste’ (Issue 5, Date 2013). No equivalent NRW guidance is available at the time of writing.

### 4.3. Proposed Waste Activities

#### 4.3.1. Waste Codes to be Accepted at the Installation

- 4.3.1.1. The proposed waste codes to be accepted at the Installation are provided in the Proposed Waste Codes and Storage Arrangements Document contained in Appendix I.

#### 4.3.2. Waste Storage

- 4.3.2.1. A detailed Site Layout Plan (ECL.010.02.01-02) has been submitted as part of this Environmental Permit application.

- 4.3.2.2. The Site Layout Plan should be viewed in conjunction with the Proposed Waste Codes and Storage Arrangements Document contained in Appendix I. This document outlines the proposed waste types and associated waste storage location corresponding to the numbered storage bays on the Site Layout Plan (ECL.010.02.01-02).

- 4.3.2.3. The main purpose of the Installation will be typical waste transfer station operations accepting and storing waste prior to dispatching to Approved Waste Contractors for recycling, recovery, re-processing or disposal if no other route is deemed possible. FWM will implement the Outbound Waste Procedure (FWM HAZ TS OCP – OUTBOUND WASTES) contained in Appendix III which provides details on the proposed waste types and associated recovery/disposal routes.
- 4.3.2.4. Waste categorisation and associated dedicated storage arrangements on site are crucial as FWM will abide by the UN Model Regulations on the Transport of Dangerous Goods classification system assigning each dangerous substance a class that defines the type of danger the substance presents. The packing group (“PG”) then further classifies the level of danger according to PGI, PG II or PG III. The class system and PG dictate how dangerous goods are packaged, labelled and carried. FWM will have a Dangerous Goods Safety Adviser (“DGSA”) possessing the required qualification.
- 4.3.3. The UN classes to be accepted and transported from site will be as follows:
- Class 3 – Flammable Liquids
  - Class 4 – Flammable Solids;
  - Class 5 – Oxidising Substances and Organic Peroxides;
  - Class 6 – Toxic Substances
  - Class 8 – Corrosive Substances; and
  - Class 9 – Miscellaneous Dangerous Substances.
- 4.3.4. Waste Treatment
- 4.3.4.1. Waste treatment at the Installation will be limited to the crushing of hazardous waste containers. FWM is proposing to crush nominally empty waste containers. Due to the flammable substance residue, the containers will be classified as hazardous waste (15 01 10\*).
- 4.3.4.2. Containers will be crushed using a Solutex Can Compactor 206. The machinery specification is provided in Appendix IV.

**Figure 1: Illustration of the Solutex Can Crusher**



- 4.3.4.3. The containers will be crushed in Bay 11 and stored in Bay 7 as shown on the Site Layout Plan (ECL.10.02.01-02). Any residual liquid resulting from the crushing will be directed to a bunded IBC ready for disposal to an appropriately permitted Facility. The waste pre-acceptance procedures will prevent incompatible reactions from residues. Additionally, due to limited residue being present, no emissions to air are anticipated.
- 4.3.4.4. Not all waste packaging will be crushed on site. Uncrushed containers, such as 25l plastic containers or 205l drums will remain on pallets in Bay 7.
- 4.3.4.5. The empty containers will be removed from site and delivered to a single Approved Waste Contractor for refurnacing or shredding and onward recycling.
- 4.3.4.6. Empty containers that are in sound condition and free from residual waste will be sent for recondition and re-use.
- 4.3.4.7. In the event of prolonged periods of maintenance/shutdown, FWM will ensure planning meetings are held prior to shutdowns to preventing the accumulation of waste within the Installation.
- 4.3.5. Waste Pre-Acceptance Arrangements
  - 4.3.5.1. FWM will put in place a fully documented waste pre-acceptance procedure (FWM HAZ TS OCP – PRE ACCEPTANCE contained in Appendix III), the purpose of which will be to ensure that wastes are subject to appropriate technical appraisal prior to acceptance at the site. In turn, this will ensure that unsuitable wastes are not accepted. These checks will be carried out before any decision is made to accept a waste.



- 4.3.5.2. When a waste enquiry is received the following information must be provided in writing by the waste producer:
- details of the waste producer, including address and contact details;
  - the specific process from which the waste derives; and
  - an indication of the waste streams produced, their quantity, physical form, composition, properties, classification and description.
- 4.3.5.3. Pre-acceptance checks and subsequent assessments will be conducted. For every case, a representative sample will be obtained from the production process/current holder to compare against the description provided by the waste holder. The only exceptions to this would be if a sample and subsequent analysis has already been undertaken by a third party or there is sufficient information provided on a product, such as on an adhesive or paint label.
- 4.3.5.4. Following characterisation of the waste and confirmation of a match against the waste description, a technical assessment of the waste will be undertaken with regard to its suitability for treatment at the Installation.
- 4.3.5.5. The Technical Department will assess the waste producer's audit report. A record of the assessment will be kept, its conclusions, and any actions taken.
- 4.3.5.6. Where the audit report is partially incomplete or inadequate, the Technical Department will request and obtain the required information (or another audit report) prior to accepting the waste.
- 4.3.5.7. Should the Technical Assessment be undertaken by a third party, FWM will:
- ensure that all details of the content of any audit tools or methodologies and assessment criteria used by that party are provided to FWM;
  - ensure that the methodology used by the third party meets FWM's own procedures in relation to pre-acceptance;
  - keep a summary report from the third party which will demonstrate that pre-acceptance and assessment has been conducted on waste from the relevant producer with regard to the Installation which contains the following and that will be updated should any information contained within it change:
    - confirmation of the producer types, waste types, containers etc.
    - confirm a composite waste classification, description, composition, and properties for each waste stream and container type destined for the Installation, derived from each of the pre-acceptance audits and with reference to the permitted wastes for the site,
    - confirmation of any issues that have been identified and what action has been taken with regard to the producers and wastes affected;
  - annually audit a random and representative cross-section of the other party's pre-acceptance checks to ensure both the quality of pre-acceptance checks, subsequent assessments, waste classification and descriptions;
  - keep records of all audits and electronic records of the pre-acceptance report and assessment.
- 4.3.5.8. There is a clear distinction between sales and technical staff roles and responsibilities. In the case that non-technical sales staff are involved in waste enquiries, a final technical assessment prior to approval is made.



- 4.3.5.9. All records relating to pre-acceptance at the site will be kept for a minimum of five years at the FWM Site Office. Electronic copies will be held on site to ensure direct access to those records for cross-reference and verification at the waste acceptance stage.
- 4.3.6. Waste Acceptance Arrangements
- 4.3.6.1. FWM will put in place a fully documented incoming waste acceptance procedure (FWM HAZ TS OCP – ACCEPTANCE contained in Appendix III) at the Installation, the primary purpose of which is confirm that the characteristics of the incoming waste matches the information provided at the pre-acceptance stage.
- 4.3.6.2. The waste is delivered by haulier lorries and on arrival, the lorry will be weighed and issued with waste acceptance paperwork and the following information will be recorded:
- weight;
  - date of arrival on-site;
  - time;
  - original producers' details (or unique identifier); and
  - unique reference number.
- 4.3.6.3. Waste will only be accepted when there is sufficient capacity within the Installation and a clear defined method of recovery or disposal has been determined.
- 4.3.6.4. All documents are checked by the Technical Department prior to the waste being accepted.
- 4.3.6.5. Each delivery is visually checked prior to acceptance to ensure that the waste has been classified, labelled and transported correctly and containment vessels are in good condition with no signs of leakage or loss of integrity.
- 4.3.6.6. Non-conforming waste is described as any waste that:
- the Installation is not authorised to accept;
  - is not recorded on the accompanying waste documentation; or
  - would not be expected, for any other reason, to be present.
- 4.3.6.7. Waste delivered to the Installation must be accompanied by a written description of the waste describing its composition and information specifying the original waste producer and process where required.
- 4.3.6.8. FWM has developed a procedure containing clear and unambiguous criteria for the rejection of wastes, together with a written procedure for tracking and reporting such non-conformance. This is contained in Section 6 of the FWM HAZ TS OCP – ACCEPTANCE procedure contained in Appendix III.
- 4.3.6.9. Any non-conforming waste observed will be removed off site and sent back to the supplier as soon as practically possible, however, such waste will only be stored in the Non-Conforming Waste Quarantine Bay for a maximum of 5 working days.

- 4.3.6.10. There are two quarantine areas shown on the Site Layout Plan (Drawing ECL.010.02.01-02) which has been submitted as part of this application. Non-conforming wastes will be stored within the main building on impermeable concrete in Bay 5 whilst the Quarantine Area required for the Fire Prevention Plan is named “Hot Load Quarantine” and is stored on impermeable concrete in the external yard.
- 4.3.6.11. The supplier will be contacted without delay to inform them of the non-conforming waste and identify measures that can be implemented to prevent recurrence. NRW will also be informed as soon as practicable in the event of waste being rejected.
- 4.3.6.12. Back-up copies of electronic records will be maintained off site at FWM Head Office at Forward House on East Moors Road in Cardiff.

#### 4.3.7. Waste Handling, Storage and Processing

- 4.3.7.1. On arrival into site, vehicles will be required to report to the weighbridge office for waste acceptance checks to be undertaken. Following weighing and initial checks, wastes will be offloaded into the reception area labelled ‘Inbound Waste Reception’ for full acceptance inspection and sampling. Waste will not be deposited if there is inadequate space and the waste will not be stored in this designated bay longer than 5 working days.
- 4.3.7.2. Once the load has been accepted, the vehicle will be directed by an FWM Site Operative to unload into the dedicated covered unprocessed waste bays according to the Proposed Waste Codes and Storage Arrangements Document contained in Appendix I and corresponding Site Layout Plan (ECL.010.02.01-02) which has been submitted as part of this application. The process design and layout results in the streamlining of operations and therefore, no double handling of waste will be required.
- 4.3.7.3. Waste storage arrangements are also described within the Installation’s Fire Prevention Plan (Document Reference ECL.010.02.01/FPP Issue 1) and illustrated on the Site Layout Plan (ECL.010.02.01-02) and Fire Prevention and Mitigation Plan (ECL.010.02.01-04) contained in the FPP.
- 4.3.7.4. The storage areas chosen are located away from sensitive receptors where possible and all storage areas are within the secured perimeter covered by security fencing and Closed Circuit Television (“CCTV”).
- 4.3.7.5. Waste storage bays will be marked and signed with regard to quantity and waste types. The total maximum storage capacity of the site will be stated clearly within the FPP and EMS.
- 4.3.7.6. Aerosols will be stored within a dedicated covered caged bay.
- 4.3.7.7. All containers will be labelled clearly with the date of arrival, relevant hazard codes as per the Classification, Labelling and Packaging (“CLP”) Regulations, chemical identity and composition and the unique reference number linked to the Waste Tracking System. FWM personnel will ensure labels are not obscured during handling or storage.

- 4.3.7.8. The logging within the waste tracking system will prevent hazardous and non-hazardous wastes from being mixed as designated areas, such as hazardous and non-hazardous waste electrical and electronic equipment (“WEEE”) storage areas, will be in place at the Installation.
- 4.3.7.9. Waste treatment at the Installation will be limited to crushing of empty hazardous waste containers as described in Section 4.3.4.
- 4.3.7.10. All other waste to be accepted will be stored in the designated bays prior to sufficient quantity on site ready for dispatch to Approved Waste Contractors for recovery, recycling, re-processing or disposal as described in the FWM HAZ TS OCP – OUTBOUND WASTES procedure contained in Appendix III.
- 4.3.8. Waste Dispatch
  - 4.3.8.1. All waste received at the Installation will be removed from the Installation for recovery or disposal within 6 months of receipt.
  - 4.3.8.2. The majority of wastes will remain in their original packaging, such as drums or IBCs and will be removed from site when the quantity is sufficient to be removed from site by haulage lorry for reprocessing at an approved and appropriately licenced waste Facility or Installation.
  - 4.3.8.3. Liquid materials subject to bulking will be removed from the Installation by road tanker. The FWM HAZ TS OCP – LIQUID BULKING procedure contained in Appendix III will be followed. This procedure includes controls to prevent adverse or unexpected reactions and releases from transfers. Tankers will not be used as reaction vessels.
  - 4.3.8.4. Worst case scenario testing will take place prior to transfer from container to bulk tanker and records kept.
  - 4.3.8.5. This transfer activity will be undertaken in Bay 6 one Intermediate Bulk Container (“IBC”) at a time to ensure control of the transfer at all times and prior to arrival of the tanker, all inbound waste will be moved to the correct designated bay.
  - 4.3.8.6. Prior to undertaking the bulking activity, the bulking activity will be simulated in laboratory conditions by experienced FWM personnel following approval by the Senior Chemist. This simulation will enable any evolved gases and causes of odour to be identified. In the unlikely event that any adverse reactions are observed, an alternative discharge or disposal route will be found.
  - 4.3.8.7. Removal of waste materials from the Installation will be documented in accordance with Duty of Care requirements. All waste materials will be weighed prior to these being removed from the site. This will be achieved by the vehicles being weighed prior to loading and then prior to departure carrying such waste over the weighbridge.

#### 4.3.9. Records

- 4.3.9.1. A waste tracking system will be implemented which will hold all the information generated during the pre-acceptance, acceptance, storage, treatment and removal off site. This system is described in Section 5 of the FWM HAZ TS OCP – ACCEPTANCE procedure contained in Appendix III.
- 4.3.9.2. Records are made and kept up to date on an ongoing basis to reflect deliveries, on-site treatment and despatches. The tracking system operates as a waste inventory control system and includes:
- date of arrival on-site;
  - producers details;
  - all previous holders;
  - a unique reference number;
  - pre-acceptance and acceptance analysis results;
  - load/package type and size;
  - intended treatment/disposal route;
  - the nature and quantity of all wastes held on site (this includes all hazards);
  - the physical location of the wastes in relation to the site layout plan;
  - where the waste is in the designated disposal route; and
  - identification of site staff who have taken any decisions regarding the acceptance or rejection of waste streams and the recovery or disposal options.
- 4.3.9.3. The reporting system can provide reports on the following:
- the total quantity of waste present on site at any one time;
  - a breakdown of the waste quantities being stored pending on-site treatment, classified by treatment route;
  - breakdown of waste quantities on site for storage pending onward transfer;
  - breakdown of waste quantities by hazard classification;
  - the physical locations of the waste in relation to the site layout plan. This will include a record of any movements to different locations on site, however, this would not be normal practice;
  - a comparison of the quantity of waste stored on site against the total permitted to be stored; and
  - a comparison of the time the waste has been stored on site against the permitted limit.
- 4.3.9.4. All records are held in hard copy and electronically within the office/laboratory building located away from hazardous waste storage areas. A backup copy is maintained and stored off site at FWM's Head Office at Forward House in East Moors Road, Cardiff. All digital records will be held for a maximum of 5 years.

#### 4.4. Proposed Infrastructure and Drainage Arrangements

- 4.4.1. The entire Installation benefits from concrete hardstanding and is located within a secure compound, completely enclosed by a block wall, metal palisade fencing and a lockable main entrance gate which is locked out of hours.

- 4.4.2. FWM hold a contract with a specialist security company who maintain the site's CCTV surveillance. The CCTV control panel is located within the Installation's office building and is monitored throughout the day. Senior management also have access to the CCTV footage. Nominated personnel will be available to attend site out of hours if needed.
- 4.4.3. The drainage arrangements at the Installation are illustrated on the Drainage Arrangements Plan (ECL.010.02.01-05) which has been submitted as part of this application.
- 4.4.4. Rainwater runoff from the building guttering and downpipes will be channelled to three storm drains shown on the Drainage Arrangements Plan. The flow is directed into the foul sewer drainage network. Sewerage from the welfare facilities in the laboratory/office building also connects into this foul sewer drainage network.
- 4.4.5. Any surface run off from the external yard area will be directed via the site manhole drains into the foul sewer drainage network.
- 4.4.6. An emergency spill procedure will be implemented to respond to any spillages. This procedure will be contained within the Installation's EMS. This is described in more detail in Section 5.
- 4.4.7. FWM will implement a regime of visual site condition checks to be undertaken weekly to ensure that the infrastructure is maintained in good condition. The site condition inspection checks will be included within the EMS and will cover:
- condition and integrity of the impermeable concrete hardstanding;
  - condition and integrity of the site buildings, fences and gates;
  - condition and integrity of drainage arrangements;
  - condition and operation of site security measures, e.g. CCTV; and
  - condition and integrity of storage bays and bunding.
- 4.4.8. The results of these checks and details of any remedial action and maintenance that may be required in order to ensure good condition will be recorded on check sheets and stored within the 'Facility Checks' file.

## **5. EMISSIONS**

### **5.1. Point Source Emissions to Air – Proposed Arrangements**

5.1.1. There will be no point source emissions to air.

### **5.2. Point Source Emissions to Surface Water – Proposed Arrangements**

5.2.1. There will be no point source emissions to surface water. Only clean surface runoff will be discharged to storm manholes which in turn connect into the foul sewer drainage network.

### **5.3. Point Source Emissions to Sewer – Proposed Arrangements**

5.3.1. There will be no point source emissions to sewer associated with the proposed activities. Only clean surface runoff will be discharged to foul sewer as part of the proposed activities, in addition to the effluent from the on-site welfare facilities.

### **5.4. Point Source Emissions to Land – Current Arrangements**

5.4.1. There will be no emissions to land.

### **5.5. Fugitive Emissions to Air**

5.5.1. The potential sources of fugitive emissions to air from the proposed operations include:

- movement of transport vehicles into and out of site;
- storage of the waste materials; and
- loading of waste.

5.5.2. There will be no tipping of loose waste material. All waste will be containerised. Therefore, the risk of fugitive emissions to air is considered to be low.

### **5.6. Fugitive Emissions to Surface Water, Sewer and Groundwater**

5.6.1. The operational areas are surfaced with impermeable concrete and the Installation boundary is enclosed by a containment concrete bund wall to the north, east and west.

5.6.2. Fugitive releases to the groundwater will be prevented by conducting all operations, including the unloading of deliveries, storage of waste materials, processing (crushing) and handling in areas sealed with an impervious barrier to prevent a pathway for migration to ground and groundwater.

- 5.6.3. All storage vessels will be inspected on arrival at the site as part of the acceptance procedure to ensure that they are in good condition with no obvious signs of leakage or loss of integrity. Any evidence of the above will result in the waste not being accepted at the Installation. The inspections will be repeated daily and any evidence of damage, deterioration or leakage will be recorded and faults repaired or contents transferred to another container.
- 5.6.4. All external storage concrete block bays will be covered by steel supported corrugated sheeting and will benefit from an impermeable rollover policeman. Although the bays will be covered, sleeping policeman/kerbing will ensure that any rainwater runoff will be prevented from entering the drainage network.
- 5.6.5. Sufficient secondary containment bunding will provide 25% of the total capacity of all containers such as IBCs/drums stored in each waste bay.
- 5.6.6. The bay block walls, sleeping policeman/kerbing and barriers will be in place to prevent the risk of vehicle collision with storage vessels.
- 5.6.7. Any residual liquid resulting from the crushing of empty hazardous containers will be directed to a bunded IBC ready for disposal to an appropriately licenced Facility.
- 5.6.8. No fuel oil will be stored at the Installation. Site vehicles will be refuelled at FWM's adjacent site at East Moors Waste Transfer Station (Permit Ref: EPR/AB3099FT). The transfer of fuel oil will be covered by the existing EMS procedure at the Facility. Additionally, all chemicals, such as lubrication oils associated with the maintenance of plant and machinery will also be stored at FWM's other facility on East Moors Road.
- 5.6.9. Plant and equipment will be subject to regular maintenance and servicing as per the Installation's PPMR contained in Section 7 of the application submission. This will ensure they are in good working to reduce the likelihood of fuel leakage at the Installation.
- 5.6.10. Regular site inspections will be undertaken to observe any spillages and to guarantee the continued integrity of bunding and impermeable concrete surfacing. If remedial action is required, this will be undertaken immediately.
- 5.6.11. Any spillages at the Installation will be subject to the Installation's robust EMS which will contain FWM's spill management procedure. This will prevent any potentially polluting materials from entering the Installation's drainage network. Any spillage of hazardous waste will be recorded in the Site Diary and NRW informed if the spillage is greater than 200 litres.
- 5.6.12. All employees will be suitably trained in all aspects of the EMS including spill response, such as the deployment of absorbent mats and drain covers. Spill kits will be strategically located and contents regularly inspected and maintained.

## **6. GENERAL REQUIREMENTS**

### **6.1. Emissions Management**

- 6.1.1. The Environmental Risk Assessment (“ERA”) (Document Reference ECL.010.02.01/ERA) has demonstrated that emissions of substances not controlled by emission limits (i.e. fugitive emissions) are not considered to be significant, consequently, an Emissions Management Plan is not required as part of this application.

### **6.2. Odour Management**

- 6.2.1. FWM are not proposing to accept any waste which is likely to be odorous in nature. Furthermore, the ERA has demonstrated that odour emissions are not considered to be significant. Consequently, an Odour Management Plan is not required as part of this application.

### **6.3. Noise Management**

- 6.3.1. The Installation is located in a predominantly industrial setting and the only processing activity proposed is related to the crushing of empty waste containers. The ERA has demonstrated that noise emissions are not considered to be significant. Consequently, a Noise Management Plan is not required as part of this application.

### **6.4. Pest Management**

- 6.4.1. Due to the nature of waste to be accepted, the risk of the attraction of pests, such as rodents and flies, is deemed not to be significant as detailed in the ERA. Consequently, a Pest Management Plan is not required as part of this application.

### **6.5. Fire Management**

- 6.5.1. As per the requirements of NRW’s *‘Fire Prevention and Mitigation Plan Guidance – Waste Management’* (Version 2.0, August 2017), a Fire Prevention Plan is required for Operators that store any amount of combustible waste material including (but not limited to);
- plastics;
  - rags and textiles;
  - WEEE, such as fridges, computers and televisions containing combustible materials such as plastic; and
  - batteries within End of Life Vehicles (“ELVs”).
- 6.5.2. The Fire Prevention Plan (ECL.010.02.01/FPP) has been prepared and is included in Section 8 as part of this application submission.



- 6.5.3. The Fire Prevention Plan will form part of FMW's EMS and will be reviewed and updated annually or if any of the following occur:
- a fire event at the site;
  - a change or review of legislation;
  - if the site is instructed to do so by NRW; or
  - if there are changes to the listed contractors contained within the document.

## **7. APPLICATION SITE CONDITION REPORT**

- 7.1.** An Application Site Condition Report (“ASCR”) has been prepared to form part of the Environmental Permit application. The ASCR (Document Reference ECL.010.02.01/ASCR) is contained within Section 4 of this application submission.

## **8. MONITORING**

### **8.1. Monitoring of Emissions to Air**

- 8.1.1. There are no point source (i.e. process contributions) emissions to air proposed as part of this application. Consequently, no monitoring of emissions to air is proposed.

### **8.2. Monitoring of Groundwater**

- 8.2.1. Fugitive releases to the groundwater will be prevented by conducting all operations, including the unloading of deliveries, storage of waste materials, processing and handling in areas sealed with an impervious barrier to prevent a pathway for migration to ground or groundwater. Consequently, no monitoring of groundwater is proposed.

### **8.3. Monitoring of Surface Water**

- 8.3.1. There will be no point source (i.e. process contribution) to surface water. Only clean surface water runoff (rainwater) will be discharged via the storm manhole drains which in turn connect to the foul sewer drainage network. Therefore, no monitoring of surface water is proposed.

### **8.4. Monitoring of Foul Water**

- 8.4.1. There will be no point source (i.e. process contributions) to foul water. Only effluent from the site's welfare facilities and clean rainwater from site surfacing will drain via the foul drainage network. Consequently, no monitoring of foul water is proposed.

## 9. RESOURCE EFFICIENCY AND CLIMATE CHANGE

### 9.1. Energy Efficiency Measures

9.1.1. A number of energy efficiency measures will be implemented at the FWM Installation, such as:

- ensuring regularly inspection and maintenance of equipment and plant to achieve optimum efficiency. For example, frequent lubrication of equipment to avoid high friction losses. This will be contained within the PPMR as part of the EMS;
- optimising start-up time, power down time and equipment sequencing;
- optimising operational planning to streamline equipment and plant use;
- energy efficient light-emitting diode ("LED") lighting to be installed within the main building;
- all lights and equipment will be turned off when not in use; and
- employees will be trained in the importance of energy management and basic energy saving practices.

9.1.2. Energy use will be monitored monthly to produce an energy balance record and any opportunities for energy efficiency improvement will be addressed as part of the EMS.

### 9.2. Energy Consumption

9.2.1. It is estimated that 30,000 kWh per annum of electricity will be consumed for general power on site, such as lighting, for the operation of equipment and for use within the main building, office and laboratory.

9.2.2. Table 2 below provides the basic energy data in accordance with BAT 1 of Section 2.7.2. of SGN 5.06.

**Table 2: Energy Consumption**

Energy Source	Use on Site	Estimated Annual Quantity (MW)	Primary Annual Energy (MW)	CO <sub>2</sub> Released Per Annum (tonnes)
Electricity	Lighting/Workshop	30	72	12

Note to Table:

- Conversion factor for delivered energy to primary = 2.4; and
- CO<sub>2</sub> conversion factors used from EA H1 Global Warming Potential Guidance Online – Electricity = 0.166 tonnes/MWh, Gas oil (diesel) = 0.25 tonnes per MWh.

### 9.3. Climate Change Agreement

9.3.1. The FWM site is not subject to a Climate Change Agreement ("CCA"). The basic energy requirements, in addition to the sector specific energy requirements set out in the relevant technical guidance, have been adopted as outlined in Section 9.1 above.

#### **9.4. Raw Material Justification**

- 9.4.1. Site vehicles will be refuelled at FWM's adjacent East Moors Road Waste Transfer Station. No storage of fuel oil is proposed at the Installation.
- 9.4.2. Small quantities of lubricants, Ad Blue and adhesives will also be stored at FWM's adjacent East Moors Road Waste Transfer Station and used as and when required. No chemicals will be stored at the proposed Installation.
- 9.4.3. The Installation's EMS will include a procedure for the annual review of new developments in raw materials and for the implementation of any suitable ones with an improved environmental profile.
- 9.4.4. A procedure will be incorporated into the site's EMS describing the quality assurance procedures for controlling the impurity content of the raw materials. If required, long-term studies will be undertaken into any less polluting options and material substitutions will be identified and then implemented accordingly.

#### **9.5. Waste Minimisation**

- 9.5.1. The proposed activities to be undertaken at FWM are based on the application of the waste hierarchy and in particular, waste avoidance. All waste materials will be delivered to the Installation with the aim of dispatching to appropriately licenced Facilities or Installations for reprocessing, recycling or recovery, where possible.
- 9.5.2. FWM also commit to the reuse of non-hazardous containers following cleaning and reconditioning where technically and economically possible. Wood pallets used during the transportation of waste materials will be reused on site or sent to the Forward Waste East Moors Road Transfer Station for reuse.
- 9.5.3. For each waste stream, the following will be monitored and recorded as part of the Waste Tracking System;
  - the physical and chemical composition of waste;
  - its hazard characteristics; and
  - handling precautions and substances with which it cannot be mixed.
- 9.5.4. Using the information recorded as part of the waste tracking system, a waste minimisation audit will be undertaken 12 months after the Environmental Permit has been issued. This will allow FWM to set a baseline against which improvement targets can be set and for the availability of viable alternative routes other than disposal to be explored.

## 10. COMPLIANCE WITH BAT CONCLUSIONS

### 10.1. Overview

- 10.1.1. It is considered that the techniques that will be in use at the proposed Installation will constitute Best Available Techniques (“BAT”) and will be appropriate and proportionate for the scale of the activities at the Installation and the risks that are posed to the environment by these activities.
- 10.1.2. The BAT Requirements for the proposed Installation have been taken the *BREF for Waste Treatment* (October 2018) and the EA’s IPPC S5.06 ‘*Recovery and disposal of hazardous and non-hazardous waste*’ (Issue 5, May 2013)
- 10.1.3. Where appropriate, reference has also been made to NRW’s ‘*How to comply with your environmental permit*’ (Version 8, October 2014).
- 10.1.4. A demonstration of compliance with applicable BAT is provided in Tables 3 and 4.

**Table 3: Waste Treatment BREF- General BAT Conclusions**

BAT Ref No.	BAT Requirement	Section of EPTR Document
<b>Overall Environmental Performance</b>		
1	In order to improve the overall environmental performance, BAT is to implement and adhere to an EMS that incorporates all of the following features:	Section 3 - Management Techniques & Section 6 – General Requirements
	I. commitment of the management, including senior management;	
	II. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation;	
	III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment;	
	IV. implementation of procedures;	
	V. checking performance and taking corrective action;	
	VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;	
	VII. following the development of cleaner technologies;	
	VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life;	
	IX. application of sectoral benchmarking on a regular basis;	
	X. waste stream management (see BAT 2);	
	XI. an inventory of waste water and waste gas streams (see BAT 3); - n/a	
	XII. residues management plan (see description in Section 6.6.5); - n/a	
	XIII. accident management plan (see description in Section 6.6.5);	
	XIV. odour management plan (see BAT 12); - n/a	
	XV. noise and vibration management plan (see BAT 17).- n/a.	
2	In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below:	Section 4 – Operating Techniques
	a) set up and implement waste characterisation and pre-acceptance procedures;	
	b) set up and implement waste acceptance procedures;	
	c) set up and implement a waste tracking system and inventory;	
	d) set up and implement an output quality management system;	
	e) ensure waste segregation;	
	f) ensure waste compatibility prior to mixing or blending of waste; and	
	g) sort incoming solid waste.	

**Table 3: Waste Treatment BREF- General BAT Conclusions (Cont.)**

BAT Ref No.	BAT Requirement	Section of EPTR Document
<b>Overall Environmental Performance</b>		
	In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below.	
4	<ul style="list-style-type: none"> <li>a) optimised storage location;</li> <li>b) adequate storage capacity;</li> <li>c) safe storage operation; and</li> <li>d) separate area for storage and handling of packaged hazardous waste.</li> </ul>	Section 4.3. – Proposed Waste Activities
5	In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.	Section 4.3.7 Waste Handling, Storage and Processing
<b>Monitoring</b>		
10	BAT is to periodically monitor odour emissions.	Section 6.2. – Odour Management
11	BAT is to monitor annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.	Section 9.2. – Energy Consumption Section 9.4. – Raw Material Justification Section 9.5. – Waste Minimisation
<b>Emissions to Air</b>		
12	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the EMS.	Section 6.2. – Odour Management
13	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques listed.	
14	In order to prevent, or where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques listed.	Section 6.1. –Emissions Management Section 5.5. Fugitive Emissions to Air



**Table 3: Waste Treatment BREF- General BAT Conclusions (Cont.)**

BAT Ref No.	BAT Requirement	Section of EPTR Document
Noise and Vibrations		
17	<p>In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the EMS, that includes all of the following elements:</p> <ul style="list-style-type: none"><li>I. a protocol containing appropriate actions and timelines;</li><li>II. a protocol for conducting noise and vibration monitoring;</li><li>III. a protocol for response to identified noise and vibration events, e.g. complaints; and</li><li>IV. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</li></ul>	Section 6.3. – Noise Management
18	<p>In order to prevent, or where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.</p> <ul style="list-style-type: none"><li>(a) appropriate location of equipment and buildings;</li><li>(b) operational measures;</li><li>(c) low noise equipment;</li><li>(d) noise and vibration control equipment; and</li><li>(e) noise attenuation.</li></ul>	
Emissions from Accidents and Incidents		
21	<p>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan.</p> <ul style="list-style-type: none"><li>(a) protection measures;</li><li>(b) management of incidental/accidental emissions; and</li><li>(c) incident/accident registration and assessment system.</li></ul>	Section 3.4.2. – Implementation and Operation
Material Efficiency		
22	<p>In order to use materials efficiently, BAT is to substitute materials with waste.</p>	Section 9.4. – Raw Material Justification

**Table 3: Waste Treatment BREF- General BAT Conclusions (Cont.)**

BAT Ref No.	BAT Requirement	Section of EPTR Document
<b>Energy Efficiency</b>		
23	In order to use energy efficiently, BAT is to use both the techniques given below. (a) energy efficiency plan; and (b) energy balance record	Section 9.1. – Energy Efficiency
<b>Reuse of Packaging</b>		
24	In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan.	Section 9.5 – Waste Minimisation

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, 2.1 In Process Controls - Section 2.1.1, Pre-Acceptance Procedures to Assess Waste</b>		
1	<p>From the waste disposal enquiry, the Operator should obtain information in writing relating to:</p> <ul style="list-style-type: none"> <li>• The type of process producing the waste;</li> <li>• The specific process from which the waste derives;</li> <li>• The quantity of waste;</li> <li>• Chemical analysis of the waste (individual constituents and as a minimum their percentage compositions);</li> <li>• The form the waste takes (solid, liquid, sludge etc.);</li> <li>• Hazards associated with the waste; and</li> <li>• Sample storage and preservation techniques.</li> </ul>	Section 4.3.5. – Waste Pre-Acceptance Arrangements
2	Unless a sample and analysis has already been completed by a third party and the Operator has a sufficient written information from them, then the Operator should in every case obtain representative sample(s) of the waste from the production process/current holder and compare it against the written description to ensure it is consistent.	
3	Other than for pure product chemicals or laboratory smalls, the chemical analysis should relate to an actual analysis and not simply be based on product data sheets or an extrapolation of information on product data sheets. For example, taking the concentrations as specified and applying a dilution factor is not acceptable.	
4	Wastes should not be accepted at the installation without a clear method or defined treatment and disposal route being determined in advance and costed before the waste is accepted at the installation.	
5	The Operator should ensure that the sample is representative of the waste and has been obtained by a person who is technically competent to undertake the sampling process.	
6	<p>The type of information that would demonstrate the reliability of the sample includes:</p> <ul style="list-style-type: none"> <li>• location of sample point, for example, effluent tank;</li> <li>• capacity of vessel sampled (for samples from drums an additional parameter would be the total number of drums);</li> <li>• method of sampling, e.g. sampling tap (mid flow), “top” sample;</li> <li>• number of samples and degree of consolidation;</li> <li>• operating conditions at time e.g. normal operation, shut-down, maintenance and/or cleaning; and</li> <li>• preservation techniques.</li> </ul>	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.1.1, Pre-Acceptance Procedures to Assess Waste</b>		
7	Samples should be clearly labelled and any hazard identified.	
8	Sample tracking systems within the installation should be established and be auditable.	
9	Analysis should be carried out by a laboratory with robust quality assurance and quality control methods and record keeping.	
	Analysis required will vary depending upon the nature of the waste, the process to be used and what is known about the waste already. Results of analysis should be kept within the tracking system. These details should include:	
10	<ul style="list-style-type: none"> <li>• check on constituents declared by waste producer/holder to ensure Permit compliance, treatment plant specification and final disposal;</li> <li>• all hazardous characteristics;</li> <li>• physical appearance;</li> <li>• colour;</li> <li>• pH;</li> <li>• presence, strength and description of odour assessment (note COSHH implications).</li> </ul>	
13	Installations accepting waste oil should have the facility to hold and test loads for PCBs or a surrogate test for chlorine at a level of detection to assess compliance with the requirements of the Waste Oils Directive.	Section 4.3.5. – Waste Pre-Acceptance Arrangements
14	Following characterisation of the waste, a technical assessment should be made of its suitability for treatment or storage to ensure Permit conditions are being met.	
15	There must be a clear distinction between sales and technical staff roles and responsibilities. If non-technical sales staff are involved in waste disposal enquiries, then a final technical assessment prior to approval should be made. It is this final technical checking that should be used to avoid build-up of accumulation of waste.	
16	All records relating to pre-acceptance should be maintained at the installation for cross-reference and verification at the waste acceptance stage. These records should be kept for a minimum of 3 years.	
17	For laboratory samples, whether or not the installation Operator packs them on behalf of the producer, a full list of laboratory samples should be created and transported with the waste.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.1.2, Acceptance Procedure When Waste Arrives At The Installation</b>		
<b>Load Arrival</b>		
	On arrival loads should:	
1	<ul style="list-style-type: none"> <li>be weighed, unless alternative reliable volumetric systems linked to specific gravity data are available;</li> <li>not be accepted into site unless sufficient storage capacity exists and site is adequately manned to receive waste;</li> <li>have all documents checked and approved, and any discrepancies resolved before the waste is accepted; and</li> <li>have any labelling that does not relate to the contents of the drum removed before acceptance on site.</li> </ul>	Section 4.3.6. –Waste Acceptance Arrangements
2	Hazardous wastes should only be received under the supervision of a suitably qualified person (HNC qualified chemist or higher).	Section 3.1. – Technical Competence
<b>Load Inspection</b>		
3	Visual inspection. Where possible, confirmatory checks should be undertaken before offloading where safety is not compromised. Inspection must in any event be carried out immediately upon offloading at the installation.	
4	Check every container to confirm quantities against accompanying paperwork. All containers should be clearly labelled and should be equipped with well-fitting lids, caps and valves secure and in place. Any damaged, corroded or unlabelled drums should be put into a quarantine area and dealt with appropriately. Following inspection, the waste should then be unloaded into a dedicated sampling/reception area.	Section 4.3.6. – Waste Acceptance Arrangements
5	At this stage, the waste tracking system unique reference number should be applied to each container. Each container should be also labelled with the date of arrival on-site and primary hazard code.	
7	The inspection, unloading and sampling areas should be marked on a plan and have suitably sealed drainage systems.	Section 4.3.7. – Waste Handling, Storage and Processing
<b>Sampling – Checking - Testing of Wastes - Storage</b>		
8	Other than pure product chemicals and laboratory smalls, no wastes should be accepted at the installation without sampling, checking and testing being carried out. Reliance solely on the written information supplied is not acceptable, and physical verification and analytical confirmation are required. All wastes, whether for on-site treatment or simply storage, must be sampled and undergo verification and compliance testing.	Section 4.3.6. – Waste Acceptance Arrangements Section 4.3.9. - Records

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>Sampling – Checking - Testing of Wastes - Storage</b>		
9	<p>The Operator should ensure that waste delivered to the installation is accompanied by a written description of the waste describing:</p> <ul style="list-style-type: none"> <li>the physical and chemical composition;</li> <li>hazard characteristics and handling precautions;</li> <li>compatibility issues; and</li> <li>information specifying the original waste producer and process.</li> </ul>	
10	<p>On-site verification and compliance testing should take place to confirm:</p> <ul style="list-style-type: none"> <li>the identity of the waste;</li> <li>the description of the waste</li> <li>consistency with pre-acceptance information and proposed treatment method; and</li> <li>compliance with permit.</li> </ul>	Section 4.3.6. – Waste Acceptance Arrangements & Section 4.3.9. - Records
11	The Operator should have clear and unambiguous criteria for the rejection of waste, together with a written procedure for tracking and reporting such non-conformance. This should include notification to the customer/waste producer and the Regulator. Written/computerised records should form part of the waste tracking system information.	
12	Documentation provided by the driver, written results of acceptance analysis, details of offloading point or off-site transfer location should be added to the tracking system documentation.	
13	A record of sampling regime for each load and justification for the selection of this option should be maintained at the installation.	
14	Wastes must not be deposited within a reception area without adequate space.	
15	Wastes in containers should be unloaded into a dedicated reception area pending acceptance sampling. Such storage should be for a maximum period of 5 days. During this period there should be no bulking up or mixing of drums or decanting the contents into bulk storage. Wastes should be stored within this reception area according to compatibility in line with HSE Guidance Note. Appropriate storage must be achieved immediately upon offloading.	Section 4.3.7. – Waste Handling, Storage and Processing
<b>IPPC S5.06, Section 2.1.2, Acceptance Procedure When Waste Arrives At The Installation</b>		
16	Should the inspection or analysis indicate that the wastes fail to meet the acceptance criteria (including damaged or unlabelled drums), and then such loads should be stored in a dedicated quarantine area and dealt with appropriately. Such storage should be more a maximum of five working days. Written procedures should be in place for dealing with wastes held in quarantine, together with a maximum storage volume.	Section 4.3.6. – Waste Acceptance Arrangements Section 4.3.7. – Waste Handling, Storage and Processing

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.1.2, Acceptance Procedure When Waste Arrives At The Installation		
16	Should the inspection or analysis indicate that the wastes fail to meet the acceptance criteria (including damaged or unlabelled drums), and then such loads should be stored in a dedicated quarantine area and dealt with appropriately. Such storage should be more a maximum of five working days. Written procedures should be in place for dealing with wastes held in quarantine, together with a maximum storage volume.	Section 4.3.6. -Waste Acceptance Arrangements Section 4.3.7. Waste Handling, Storage and Processing
17	If the cause of failure to meet acceptance criteria is due to incompatibility, wastes should be segregated immediately to remove the hazard.	
20	The installation should have a designated sampling point or reception area. These should be in close but safe proximity to the laboratory/checking facility and the sampling point should be visible (or covered by CCTV), if sampling is not directly supervised by, for example, laboratory staff.	
21	The offloading, sampling point/reception and quarantine areas should have impervious surface with self-contained drainage, to prevent any spillage entering the storage systems or escaping off-site. Attention should be given to ensuring that incompatible substances do not come into contact resulting from spills from sampling, for example, within a sump serving the sampling point. Absorbents should be made available.	
Sampling of Drummed Waste		
26	The contents can only be identified with certainty if every container is sampled. Acceptance should involve sampling every container. However, analysis of composite samples is acceptable with such a sampling regime. A representative sample must be obtained by taking a core sample to the base of the container. Operators should ensure that lids, bungs and valves are replaced immediately after sampling.	Section 4.3.6. - Waste Acceptance Arrangements
Drum Labelling		
27	For drummed waste, controls should ensure each drum is given a unique label to facilitate a record of:	Section 2.3.9. - Records
	• the location of each drum;	
	• the duration of storage;	
	• the chemical identity of the drums contents; and	
	• the hazard classification for each drum.	
28	Drums should be handled and stored so that the label is readily visible.	Section 4.3.7. – Waste Handling, Storage and Processing

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
Acceptance of Laboratory Smalls		
29	The procedure for accepting laboratory smalls should be essentially identical to that for drummed waste. They differ from normal waste inputs to site in that they are in a pure concentrated form.	Section 4.3.6. – Waste Acceptance Arrangements
30	In situations where the Operator has undertaken the identification and packaging on behalf of the customer, then the onsite verification can be restricted to opening the drums to check that the containers remain undamaged. In such cases the load must be accompanied by documentation confirming the checking and packing. In situations where the drum has been packed by the customer, then full checking and verification should be undertaken. Checking packaging and segregation adequately should include emptying of the drum as soon as possible and in any event at facilities that are operated 24 hours a day within 24 hours. At sites not operated around the clock, checking must be undertaken before the end of the working day. Repackaging the waste must be undertaken as soon as the necessary checks have been undertaken.	
Waste Rejection Procedures		
31	Lab smalls must not be accepted at a facility where this is insufficient suitably qualified personnel to process these wastes within the above timescales.	Section 3.1. – Technical Competence
32	If on opening a drum, it is found that it contains incompatible substances, or that the substances have not been packaged adequately, then the drum should be sorted and repacked immediately and the non-conformance procedure followed.	Section 4.3.6. – Waste Acceptance Arrangements
33	Sorting and repackaging of laboratory smalls should take place in a dedicated area/store. Once wastes sorted according to hazard classification with due consideration for any potential incompatibility problems and repackaged, then these drums should not be stored within the dedicated laboratory smalls area but should be removed to the appropriate storage area.	
34	The operator should have clear and unambiguous criteria for the rejection of wastes, together with a written procedure for tracking and reporting such non-conformance. This should include notification to the customer/waste producer and the Environment Agency. Written/computerised records should form part of the waste tracking system information. The operator should also have a clear and unambiguous policy for the subsequent storage and disposal of such rejected waste. This policy should achieve the following: <ul style="list-style-type: none"><li>identifies the hazards posed by the rejected wastes;</li><li>labels rejected wastes with all information necessary to allow proper storage and segregation arrangements to be put in place; and</li><li>segregates and stores rejected wastes safely pending removal.</li></ul>	
Records		
35	The waste tracking system should hold all the information generated during pre-acceptance, acceptance, storage, treatment and removal off-site. Records should be made and kept up to date on on-going basis to reflect deliveries, on-site treatment and despatches. The tracking system should operate as a waste inventory/stock control system and include requirements listed.	Section 4.3.9. – Records



**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
Records		
36	All records relating to pre-acceptance checks should be maintained and kept readily available at the installation for cross-reference and verification at the waste acceptance stage.	Section 4.3.9. – Records
37	<p>The system adopted should be capable of reporting on all of the following:</p> <ul style="list-style-type: none"><li>• total quantity of waste present on-site at any one time, in appropriate units;</li><li>• breakdown of waste quantities being stored pending on-site treatment, classified by treatment route;</li><li>• indication of where the waste is located on site relative to the site plan;</li><li>• comparison of the quantity on site against total permitted;</li><li>• comparison of time the waste has been on-site against permitted limit.</li></ul> <p>These records should be held in a designated area, as agreed with the Agency, well removed from hazardous activities to ensure their accessibility during any emergency.</p>	
38	Back-up copies of computer records should be maintained off-site.	
General		
39	Wastes should not be accepted at the installation without a clear defined method of recovery or disposal being determined and costed and ensuring there is sufficient capacity being available. These checks should be performed before the waste acceptance stage is reached.	Section 4.3.6. Waste Acceptance Arrangements
40	The Operator should ensure that the installation personnel who may be involved in the sampling, checking and analysis procedures are suitably qualified (HNC qualified chemist or higher) and adequately trained, and that the training is updated on a regular basis.	Section 3.1. – Technical Competence
41	Analysis should be carried out by a laboratory with suitably accredited test methods.	
42	Samples should be retained on-site for a minimum of two days after the waste has been treated or removed off-site including all residues from its treatment.	Section 4.3.5. – Waste Pre-Acceptance Arrangements & Section 4.3.6. – Waste Acceptance Arrangements
43	Once analysis has confirmed that the waste is acceptable, the Operator should only then create a batch for treatment or a load for off-site removal.	
44	There must be a clear distinction between sales and technical staff roles and responsibilities. If non-technical sales staff are involved in waste enquiries then a final technical assessment prior to approval should be made. It is this final technical checking that should be used to avoid build-up of accumulations of wastes and to ensure that sufficient capacity exists.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

BAT Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.1.3, Waste Storage		
Offloading/Discharge of Waste		
1	<p>The Operator should have in place a system to ensure that the correct discharge point or storage area is used. The options for this include:</p> <ul style="list-style-type: none"><li>• ticket systems;</li><li>• supervision by site staff and if relevant CCTV;</li><li>• keys; and</li><li>• colour-coded points/hoses or fittings of a specific size.</li></ul>	Section 4.3.2. – Waste Storage Section 4.3.9 – Records
2	Offloading and quarantine points should have an impervious surface with self-contained drainage, to prevent any spillages entering the storage systems or escaping off-site.	Section 4.3.6. – Waste Acceptance Arrangements Section 4.4. – Proposed Infrastructure and Drainage Arrangements
3	Damaged hoses and connections must not be used.	Section 4.3.8. – Waste Dispatch
4	Only couplings of the correct size for the connection should be used and the coupling should be able to withstand the maximum shut valve pressure of the transfer pump.	
Record Keeping		
5	The Operator should have an internal tracking system which should satisfy the objectives and minimum standards given.	Section 4.3.9. – Records
General Storage Requirements		
6	Storage areas are often the most visible aspects of the installation. Storage areas should be located away from watercourses and sensitive perimeters, for example, those which may be adjacent to public rights of way, housing or schools, and within the security-protected area of the installation to prevent vandalism.	Section 4.3.7. – Waste Handling, Storage and Processing
7	Storage areas should be located to eliminate or minimise the double handling of wastes within the installation.	
8	Storage areas should be clearly marked and signed with regard to the quantity and hazardous characteristics of the wastes stored therein.	
9	The total maximum storage capacity of the site should be clearly and unambiguously stated in writing, accompanied with details of the method used to calculate the volumes held against this maximum and set out in the site plan. The stated maximum capacity of storage areas should not be exceeded and the site plan updated to reflect any changes before they are implemented.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
10	All containers should be clearly labelled with the date of arrival, relevant hazard code(s), chemical identity and composition of the waste and a unique reference number or code enabling identification through stock control and cross-reference to pre-acceptance and acceptance records.	Section 4.3.7. – Waste Handling, Storage and Processing
11	Storage area drainage infrastructure should ensure that all contaminated run-off is contained, that drainage from incompatible wastes cannot come into contact with each other and that fire cannot spread between storage/treatment areas via the drainage system.	Section 4.4. – Proposed Infrastructure and Drainage Arrangements Section 5.6. – Fugitive Emissions to Surface Water, Sewer and Groundwater
12	Procedures must be in place for the regular inspection and maintenance of storage areas, including drums, vessels, pavements and bunds. Inspections should pay particular attention to signs of damage, deterioration and leakage. Records should be kept detailing action taken. Faults must be repaired as soon as practicable. If containment capacity or capability of bund, sump or pavement is compromised, (unless effecting a repair is more expedient and working with wastes in close proximity does not compromise safety), then waste must be immediately removed until the repair is completed.	
13	There should be daily inspection of the condition of containers and pallets and written records should be kept of these inspections. If a container is found to be damaged, leaking or in a state of deterioration, it should immediately be over-drummed or the contents transferred to another container or processed.	
15	There should be vehicular, for example, forklift, and pedestrian access at all times to the whole of the storage area.	
16	All spillages of hazardous wastes should be logged, where spillages >200 litre then additionally the Regulator should be informed.	
17	Activities that create a clear fire risk should not be carried out within the storage area, even if it is not formally classified as hazardous. Examples include grinding, welding or brazing of metalwork, smoking, parking of normal road vehicles except while unloading, charging of the batteries of fork lift trucks.	Fire Prevention Plan – ECL.010.02.01/FPP
<b>Turnover</b>		
18	Storage within the reception area should be for a maximum of five working days. Following receipt, wastes should be treated or removed off-site as soon as possible. The total storage time will depend upon the characteristics of a particular site and the waste types being stored.	Section 4.3.7. – Waste Handling, Storage and Processing
<b>Storage of Drummed Waste and other Containerised Wastes such as IBCs</b>		
19	Storage under cover for drummed waste has the advantage of reducing the amount of potentially contaminated water that may be produced in the event of any spillage and extending the useful life of the container. It is preferable that wastes are stored under cover. This should also apply to any container that is held in storage pending sampling and emptied containers. Covered areas must have adequate provision for ventilation by means of wall or roof vents or construction of the area, for example, open barn. Any such warehousing should meet the requirements of HSG71 (see Ref 4).	Section 5.6. – Fugitive Emissions to Surface Water, Sewer and Groundwater

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>Storage of Drummed Waste and other Containerised Wastes such as IBCs</b>		
20	Containers should be stored in such a manner that leaks and spillages could not escape over bunds/edge of the sealed drainage area.	Section 5.6. Fugitive Emissions to Surface Water, Sewer and Groundwater
21	Containers should be stored with well-fitting lids, caps and valves, secured and in place	
22	Storage areas for containers holding substances that are known to be sensitive to heat and light or reactive with water or moisture should be under cover and protected from water, heat and direct sunlight	
23	Storage areas for containers holding flammable or highly flammable wastes should meet the requirements of HSG 51, HSG71 and HSG76 (see Ref 4).	Section 4.3.2. – Waste Storage
<b>Aged Stock</b>		
24	It is important to avoid accumulations of waste, which may in turn lead to deterioration in the container resulting in spillage or, in extreme cases, the deformation of the container to such an extent that it cannot be moved.	Fire Prevention Plan ECL.010.02.01/FPP
<b>Segregation</b>		
25	In addition to the requirements of this document, the segregation of wastes should meet the requirements of HSG71 and be justified by risk assessment.	Section 4.3.2. – Waste Storage
26	HSG 71 provides no guidance on the use of fire walls to achieve separation or segregation of different types of waste in outdoor storage. Fire walls which are impervious to liquid, at least 2m high, and capable of withstanding an intense fire on one side without collapse, can be used to reduce the 3m separation required for some combinations of materials marked as 'keep apart'. No more than two sides of a storage area should be provided with fire walls, because it would prevent good ventilation.	Fire Prevention Plan ECL.010.02.01/FPP
<b>Storage of Aerosols</b>		
27	Storage of aerosols should take place under cover in closed containers or cages. Aerosols should not be stored in open containers.	Section 4.3.7. – Waste Handling, Storage and Processing

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
Storage of Laboratory Smalls		
28	<p>Written procedures for the segregation and packing of laboratory smalls should be produced identifying:</p> <ul style="list-style-type: none"><li>• how the hazards associated with each package are identified;</li><li>• how the risks of adverse reactions occurring between individual packages are assessed, and by whom;</li><li>• the level of competence, qualification and training required by those undertaking this assessment;</li><li>• how incompatible substances (i.e. those that could react to generate heat, fire or hazardous reaction products) are prevented from being stored within the same drum;</li><li>• how the wastes are to be packed and stored; and</li><li>• how the wastes are to be recovered or disposed.</li></ul>	Section 4.3.6. – Waste Pre-Acceptance Arrangements
29	Incompatible substances should not be stored within the same drum.	Section 4.3.6. – Waste Acceptance Arrangements
30	Sorting and repackaging of laboratory smalls should take place in a dedicated area/store. Once the wastes have been sorted according to hazard classification, with due consideration for any potential incompatibility problems, and repacked, then these drums should not be stored within the dedicated laboratory smalls area but should be removed to the appropriate storage area.	
Compatibility Testing		
31	<p>In order to prevent any adverse or unexpected reactions and releases before transfer involving the following activities, testing should take place prior to transfer:</p> <ul style="list-style-type: none"><li>• tanker discharge to bulk storage;</li><li>• tank-to-tank transfer;</li><li>• transfer from container to bulk tank;</li><li>• bulking into drums/IBCs; and</li><li>• bulking of solid waste into drums or skips.</li></ul>	Section 4.3.8 – Waste Dispatch
32	Any evolved gases and cause of odour should be identified. If any adverse reaction is observed, an alternative discharge or disposal route should be found.	
Transfer from Tanker, Drums and Other Containers in Bulk Storage		
33	Due consideration should be taken of the implications of scale-up from laboratory compatibility testing to bulk transfer and the Guidance is given in HSG143.	
34	Wastes in containers should be transferred into storage vessels by dip pipe to minimise splash, fume and odour.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
Transfer from Tanker, Drums and Other Containers in Bulk Storage (Cont.)		
35	Transfer/discharge should only take place after compatibility testing has been completed and then only with the sanction of an appropriate manager. Approval should specify which batch/load of material is to be transferred, the receiving storage vessel, equipment required, including spillage control and recovery equipment, and any special provisions relevant to that batch/load.	Section 4.3.8 – Waste Dispatch
36	During bulking to tankers, vapour balance lines connected to appropriate abatement equipment should be used.	
37	Tankers must not be used as reaction vessels. Blending by bulking into tankers should only take place following a risk assessment and once suitable verification and compatibility testing has been carried out.	
38	If flammable chemicals are being transferred, particular caution has to be taken to avoid the generation of static electricity, with the subsequent risk of ignition. Guidance on the safe use and handling of flammable liquids is provided by the HSE and is contained within HSG140. There may be other regulatory requirements to consider such as the Dangerous Substances and Explosive Atmospheres Regulations.	
39	A representative sample of the receiving tank/vessel/container should be mixed in a proportional ratio with a sample of incoming waste stream that is proposed to add to the tank/vessel/container. The two samples should take account of the “worst case” scenario of likely constituents. The particular test parameters will be driven by the wastes being bulked. Records of testing should be kept including the reactions listed.	
Bulk Storage Vessels		
44	Bulk storage vessels should be located on an impervious surface that is resistant to material being stored, with sealed construction joints within a bunded area with a capacity of at least 110% of the largest vessel or 25% of the total tankage volume, whichever is greater.	Section 5.6. –Fugitive Emissions to Surface Water, Sewer and Groundwater
45	Vessels supporting structures, pipes, hoses and connections should be resistant to the substance (and mix of substances) being stored. There should be a routine programmed inspection of tanks, mixing and reaction vessels including periodic thickness testing. In the event of damage or significant deterioration, the contents should be transferred to appropriate storage. Inspections carried out by expert staff and written records maintained of inspection and remedial action taken.	
46	Vessels should not be used beyond the specified design life or used in a manner or for substances that they were not designed. Vessels should be inspected at regular intervals, with written records kept to prove that they remain fit for purpose. See HSE Guidance Note PM75.	
47	As a general rule, no open topped tanks, vessels or pits should be used for storage or treatment of hazardous or liquid wastes. Exceptions would require justification in the permit application.	
48	No uncontrolled venting to atmosphere should be allowed, and all vents should be linked to suitable scrubbing and abatement systems. Vapour balance lines should be connected to suitable abatement systems.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
Bulk Storage Vessels (Cont.)		
49	Tank and vessel optimum design should be considered in each case, taking into account waste type, storage time, overall tank design and mixing system to prevent sludge accumulation and to ease desludging. Storage and treatment vessels should be regularly desludged.	Section 5.6. –Fugitive Emissions to Surface Water, Sewer and Groundwater
50	Tanks and vessels should be equipped with suitable abatement systems and level meters with both audible and visual high level alarms. These systems should be sufficiently robust and regularly maintained to prevent foaming and sludge build up affecting the reliability of the gauges.	
51	Storage vessels holding flammable or highly flammable wastes should meet the requirements of HSG51, HSG716 and HSG176.	
52	All connections between vessels must be capable of being closed via suitable valves. Overflow pipes should be directed to a contained drainage system, which may be the relevant bunded area or to another vessel provided suitable control measures are in place.	
54	Plant and equipment taken out of use should be decontaminated and removed.	
55	Pipework should preferably be routed above ground; if below ground it should be contained within suitable inspection channels.	
Tank and Process Pipework Labelling		
58	All vessels should be clearly signed as to their contents and capacity and should have a unique identifier. Tanks should be appropriately labelled.	Section 4.3.7. – Waste Handling, Storage and Processing
59	Labelling should differentiate between wastewater and raw process water, combustible liquid and combustible vapour and direction of flow.	
61	A suitable pipework coding system should be used, for example, RAL European Standard colour coding.	
62	All valves should be tagged with a unique identifier shown on the process and instrumentation diagram. All connections should be correctly sized and maintained in an undamaged state.	
Other Storage Requirements		
63	Waste or raw materials in non-waterproof packaging should be kept under cover.	Section 5.6. –Fugitive Emissions to Surface Water, Sewer and Groundwater

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>Container Movement</b>		
64	Drums and other mobile containers should only be moved between different locations (or loaded for removal off-site) in accordance with written procedures. The waste tracking system should be amended to record these changes.	Section 4.3.9. – Records
<b>IPPC S5.06, Section 2.1.13 Drum Washing, Crushing, Shredding and Cutting</b>		
1	Empty containers that are in sound condition and free from residual waste should be sent for recondition and re-use. Those drums that are not able to be re-used should be cleaned to facilitate recycling or recovery by other means.	Section 4.3.4. – Waste Treatment
2	BAT for pre-acceptance criteria, waste characterisation and process control as outlined in earlier BAT should be followed to prevent incompatible reactions from wash waters or residues.	
3	Drums containing flammable and highly flammable wastes and volatile substances that cannot be recovered should be subject to crushing unless the residues have been removed and the drum cleaned.	
4	Processing of containers should only be undertaken following written instruction, such as which containers to be processed and type of container to hold residues.	
5	Emissions to air should be controlled with drum crushing and shredding plant fitted with extractive vent system linked to abatement and system should be interlocked so that the plant cannot operate unless the abatement system is working.	Section 5.6. – Fugitive Emissions to Surface Water, Sewer and Groundwater
6	BAT techniques for emissions to water include: <ul style="list-style-type: none"> <li>• keep skips for the storage of crushed/cut drums covered;</li> <li>• sealed system e.g. chute for containment of residues; and</li> <li>• sealed drainage.</li> </ul>	
7	BAT for fugitive emissions to air are outlined in Section 2.2.4. of the Guidance Document.	
8	Necessary measures for accident prevention are outlined in Section 2.8 of the Guidance Document.	Section 3.4.2. – Implementation and Operation



**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.2.4, Fugitive Emissions to Air		
1	<p>Dust - The following general techniques should be employed where appropriate:</p> <ul style="list-style-type: none"><li>• covering of skips and vessels</li><li>• avoidance of outdoor or uncovered stockpiles (where possible)</li><li>• where dust creation is unavoidable, use of sprays, binders, stockpile management techniques, windbreaks and so on</li><li>• regular wheel and road cleaning (avoiding transfer of pollution to water and wind blow)</li><li>• closed conveyors, pneumatic or screw conveying (noting the higher energy needs), minimising drops. Filters on the conveyors to clean the transport air prior to release</li><li>• regular housekeeping</li><li>• enclosed silos (for storage of bulk powder materials) vented to fabric filters. The recycling of collected material should be considered under Section 2.6; and</li><li>• enclosed containers or sealed bags used for smaller quantities of fine materials.</li></ul>	Section 5.5. –Fugitive Emissions to Air
3	For information on odour, see Section 2.2.6.	Section 6.2. –Odour Management
IPPCS5.06, Section 2.2.5, Fugitive Emissions to Surface Water, Sewer and Groundwater		
3	<p>For surfacing:</p> <ul style="list-style-type: none"><li>• design appropriate surfacing and containment or drainage facilities for all operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement; falls, materials of construction, permeability, resistance to chemical attack, and inspection and maintenance procedures;</li><li>• have an inspection and maintenance programme for impervious surfaces and containment facilities; and</li><li>• unless the risk is negligible, have improvement plans in place where operational areas have not been equipped with:<ul style="list-style-type: none"><li>○ an impervious surface</li><li>○ spill containment kerbs</li><li>○ sealed construction joints</li><li>○ connection to a sealed drainage system.</li></ul></li></ul>	<p>Section 4.4. –Proposed Infrastructure and Drainage Arrangements</p> <p>Section 5.6. – Fugitive Emissions to Surface Water, Foul and Groundwater</p>

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.2.5, Fugitive Emissions to Surface Water, Sewer and Groundwater		
4	<p>All above-ground tanks containing liquids whose spillage could be harmful to the environment should be bunded. Bunds should:</p> <ul style="list-style-type: none"><li>be impermeable and resistant to the stored materials;</li><li>have no outlet (that is, no drains or taps) and drain to a blind collection point;</li><li>have pipework routed within bunded areas with no penetration of contained surfaces;</li><li>be designed to catch leaks from tanks or fittings;</li><li>have a capacity greater than 110 percent of the largest tank or 25 percent of the total tankage, whichever is the larger;</li><li>be subject to regular visual inspection and any contents pumped out or otherwise removed</li><li>under manual control after checking for contamination;</li><li>where not frequently inspected, be fitted with a high-level probe and an alarm, as appropriate;</li><li>where possible, locate tanker connection points within the bund, otherwise provide adequate containment;</li><li>be subject to programmed engineering inspection (normally visual, but extending to water testing where structural integrity is in doubt).</li></ul>	<p>Section 4.4. –Proposed Infrastructure and Drainage Arrangements</p> <p>Section 5.6. – Fugitive Emissions to Surface Water, Foul and Groundwater</p>
IPPCS5.06, Section 2.3., Management		
1	<p>Effective operational and maintenance systems should be employed on all aspects of the process whose failure could impact on the environment, in particular there should be:</p> <ul style="list-style-type: none"><li>documented procedures to control operations that may have an adverse impact on the environment;</li><li>a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative maintenance regime is appropriate;</li><li>documented procedures for monitoring emissions or impacts;</li><li>a preventative maintenance programme covering all plant, whose failure could lead to impact on the environment, including regular inspection of major ‘non-productive’ items such as tanks, pipework, retaining walls, bunds ducts and filters.</li></ul>	<p>Section 3.4.2. – Implementation and Operation</p>
2	<p>The maintenance system should include auditing of performance against requirements arising from the above and reporting the result of audits to top management.</p>	<p>Section 3.4.3. – Check</p>

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.3., Management		
Competence and Training		
3	Training systems, covering the following items, should be in place for all relevant staff which cover: <ul style="list-style-type: none"><li>• awareness of the regulatory implications of the Permit for the activity and their work activities;</li><li>• awareness of all potential environmental effects from operation under normal and abnormal circumstances</li><li>• awareness of the need to report deviation from the Permit; and</li><li>• prevention of accidental emissions and action to be taken when accidental emissions occur.</li></ul>	Section 3.1 – Technical Competence Section 3.2. Overview of EMS
4	The skills and competencies necessary for key posts should be documented and records of training needs and training received for these posts maintained.	
5	The key posts should include contractors and those purchasing equipment and materials;	
6	The potential environmental risks posed by the work of contractors should be assessed and instructions provided to contractors about protecting the environment while working on site.	
7	Where industry standards or codes of practice for training exist (e.g. WAMITAB) they should be complied with.	
Accidents/Non Conformances		
8	There should be an accident plan which: <ul style="list-style-type: none"><li>• identifies the likelihood and consequence of accidents; and</li><li>• identifies actions to prevent accidents and mitigate any consequences.</li></ul>	Section 3.4.2. – Implementation and Operation
9	There should be written procedures for handling, investigating, communicating and reporting actual or potential non-compliance with operating procedures or emission limits	
10	There should be written procedures for handling, investigating, communicating and reporting environmental complaints and implementation of appropriate actions.	
11	There should be written procedures for investigating incidents, (and near misses) including identifying suitable corrective action and following up.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.3., Management (Cont.)</b>		
<b>Organisation</b>		
13	<p>The company should adopt an environmental policy and programme which:</p> <ul style="list-style-type: none"> <li>includes a commitment to continual improvement and prevention of pollution;</li> <li>includes a commitment to comply with relevant legislation and other requirements to which the organisation subscribes; and</li> <li>identifies, sets, monitors and reviews environmental objectives and key performance indicators independently of the Permit.</li> </ul>	Section 3.3. - Environmental Policy
14	<p>The company should have demonstrable procedures (e.g. written procedures) which incorporate environmental considerations into the following areas:</p> <ul style="list-style-type: none"> <li>the control of processes and engineering change on the installation;</li> <li>design, construction and review of new facilities and other capital projects (including provision of decommissioning)</li> <li>capital approval; and</li> <li>purchasing policy.</li> </ul>	Section 3.4.1. – Plan Section 3.4.2. – Implementation and Operation
15	The company should conduct audits, at least annually, to check that all activities are being carried out in conformity with the above requirements. Preferably, these should be independent.	
16	The company should report annually on environmental performance, objectives and targets, and future planned improvements. Preferably, these should be published environmental statements.	
17	The company should operate a formal Environmental Management System. Preferably, this should be registered or certified EMS/ISO 140001 system (issued and audited by an accredited certification body).	Section 3.2. – Overview of EMS
18	<p>The company should have a clear and logical system for keeping records of, amongst others:</p> <ul style="list-style-type: none"> <li>policies;</li> <li>roles and responsibilities;</li> <li>targets;</li> <li>procedures;</li> <li>results of audits;</li> <li>results of reviews.</li> </ul>	Section 3.4.4. – Check

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.4., Raw Materials		
1	The Operator should maintain a list of raw materials and their properties as noted above.	Section 9.4 – Raw Material Justification
2	The Operator should have procedures for the regular review of new developments in raw materials and for the implementation of any suitable ones with an improved environmental profile.	
3	The Operator should have quality-assurance procedures for controlling the impurity content of raw materials.	
4	The Operator should complete any longer-term studies needed into the less polluting options and should make any material substitutions identified.	
IPPCS5.06, Section 2.6., Waste Recovery or Disposal		
1	Waste production should be avoided wherever possible. Any waste that is produced should be recovered, unless it is technically or economically impractical to do so.	Section 9.5. – Waste Minimisation
2	Where waste must be disposed of, the Operator should provide a detailed assessment identifying the best environmental options for waste disposal – unless the Regulator agrees that this is unnecessary.	
3	The filter cake arising from the treatment of acidic and alkali solutions and metal precipitation can contain percentage levels of metals such as zinc and copper. Dry solids content should not be less than 15% w/w to facilitate handling.	
Contaminated Containers		
5	Most drums and IBC’s are designed, manufactured and marked to enable reconditioning/refurbishment. As such, 250l drums, 800l and 1000l IBCs should be cleaned and reconditioned to enable re-use where technically and economically possible.	Section 9.5. – Waste Minimisation
6	Containers that cannot be re-used where there is no reconditioning market and which have been cleaned can be released into the secondary materials market.	
7	Recovered Oil where it cannot be recycled, utilisation as secondary fuel oil may be acceptable.	
IPPCS5.06, Section 2.7., Energy		
Basic Energy Requirements (1)		
1	The Operator should provide the energy consumption information, shown in the table on page 86 of IPPC S5.06 Sector Guidance Note, in terms of delivered energy and also, in the case of electricity, converted to primary energy consumption.	Section 9.1. – Energy Efficiency
2	The Operator should provide the following Specific Energy Consumption (SEC) information. Define and calculate the SEC of the activity (or activities) based on primary energy consumption for the products or raw material inputs that most closely match the main purpose or production capacity of the installation. Provide a comparison of SEC against any relevant benchmarks available for the sector.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.7., Energy		
Basic Energy Requirements (1) (Cont.)		
3	The Operator should provide associated environmental emissions. This is dealt with in the Operator’s response to the emissions inventory using the H1 software tool.	Section 9.1. – Energy Efficiency
Basic Energy Requirements (2)		
1	Operating, maintenance and housekeeping measures should be in place in the following areas, where relevant: <ul style="list-style-type: none"><li>operation of motors and drives;</li><li>lubrication to avoid high-friction losses;</li><li>boiler operation and maintenance e.g. optimising excess air; and</li><li>other maintenance relevant to the activities within the installation.</li></ul>	Section 9.1. – Energy Efficiency Section 9.2. – Energy Consumption
2	Basic low cost physical techniques should be in place to avoid gross inefficiencies. These should include insulation, containment methods (such as seals and self-closing doors) and avoidance of unnecessary discharge of heated water or air (fitting simple control systems such as timers and sensors).	
3	Energy efficient building services should be in place.	
4	Energy management techniques should be in place, in particular, the need for monitoring of energy flows and targeting of areas for reductions.	
5	An energy efficiency plan should be provided that: <ul style="list-style-type: none"><li>Identifies all techniques relevant to the installation, estimates of CO<sub>2</sub> savings that would be achieved by each measure over its lifetime and in the case that the activities are not covered by CCA or DPA, provides information on the equivalent annual costs of implementation of the technique, the costs per tonne CO<sub>2</sub> saved and the priority for implementation.</li></ul>	
Further Energy Efficiency Requirements		
1	The following techniques should be implemented where they are judged to be BAT based on a cost/benefit appraisal according to the methodology provided in Appendix 4 of the Guidance Note H2 Energy Efficiency for IPPC	Section 9.2. – Energy Consumption
2	The listed energy supply techniques should be considered, such as use of combined heat and power, generation of energy from waste or use of less polluting fuels.	
3	The Operator should provide justification that the proposed or current situation represents BAT: <ul style="list-style-type: none"><li>the choice of fuel impacts upon emissions other than carbon dioxide, e.g. sulphur dioxide;</li><li>the potential for practical energy recovery from waste conflicts with energy efficiency requirements.</li></ul>	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.8., Accidents</b>		
1	A formal structured accident management plan ("AMP") should be in place.	
	The AMP should include: <b>A – Identification of hazards</b> to the environment posed by the installation using a methodology akin to a Hazop study. Areas to consider include, but should not be limited to, the following:	
2	<ul style="list-style-type: none"> <li>• arrangements for the receipt, and checking of incoming wastes, including rejection and quarantine;</li> <li>• arrangements for the storage, segregation and separation of differing waste types;</li> <li>• procedures for the internal transfers, including "bulking up" of waste materials;</li> <li>• transfer of substances (e.g. filling or emptying vessels);</li> <li>• overfilling of vessels;</li> <li>• emissions from plant or equipment (e.g. leaking from joints, over-pressurisation of vessels, blocked drains);</li> <li>• failure of containment (e.g. physical failure or overfilling of bunds or drainage sumps);</li> <li>• failure to contain fire waters;</li> <li>• wrong connections made in drains or other systems;</li> <li>• incompatible substances allowed to come into contact;</li> <li>• unexpected reactions or runaway reactions;</li> <li>• failure of main services (e.g. power, steam, cooling water);</li> <li>• operator error; and</li> <li>• vandalism.</li> </ul>	Section 3.4.2. – Implementation and Operation
3	<b>B – assessment of the risks.</b> The hazards having been identified, the process of assessing the risks should address six basic questions: <ol style="list-style-type: none"> <li>1. How likely is the particular event to occur?</li> <li>2. What substances are released and how much of each?</li> <li>3. Where do the released substances end up?</li> <li>4. What are the consequences?</li> <li>5. What are the overall risks?</li> <li>6. What can prevent or reduce the risk?</li> </ol>	
4	The depth and type of assessment will depend on the characteristics of the installation and its location. The main factors to take into account include the scale and nature of hazards, the risks to receptors, the nature of the installation and complexity of activities and the relative difficulty in deciding and justifying the adequacy of the risk-control technique.	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.8, Accidents</b>		
5	<b>C - Identification of the techniques necessary to reduce the risks.</b> The listed techniques are relevant to most installations:	
	• there should be an up to date inventory of substances, present or likely to be present, which could have environmental consequences if they escape.	Section 3.4.2. – Implementation and Operation
	• up to date site plan showing the precise location of wastes having specific hazard characteristics with clear identification of the perimeters of the various designated storage areas and their maximum storage capacity;	
	• procedures for checking and handling raw materials and wastes to ensure compatibility with other substances;	
	• storage arrangements for raw materials, products and wastes should be designed and operated to minimise risks to the environment;	
	• automatic process controls backed up by manual supervision to minimise the frequency of emergency situations and to maintain control;	
	• physical protection should be in place where appropriate;	
	• appropriate secondary containment;	
	• techniques and procedures should be in place to prevent overfilling of tanks;	
	• security systems to prevent unauthorised access;	
	• formal systems for logging and recording all incidents etc.;	
	• procedures for responding to and learning from incidents etc.;	
	• roles and responsibilities to personnel involved in incident management;	
	• guidance available on how each accident scenarios might be best managed;	
	• procedures should be in place to avoid incidents occurring as a result of poor communication during maintenance periods;	
	• safe shutdown should be in place;	
	• communication channels with emergency services and other relevant authorities should be established and available for use in the event of an incident. Procedures should be in place to include assessment of harm.	
	• appropriate control technique should be in place to limit the consequences of an accident, such as fire walls etc.	
	• personnel training requirements should be identified and training provided;	
	• the systems for the prevention of fugitive emissions are generally relevant (Section 2.2.4 and Section 2.2.5);	



**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.8, Accidents</b>		
5	<ul style="list-style-type: none"> <li>• duplicate or standby plant should be provided where necessary, with maintenance and testing to the same standards as the main plant;</li> <li>• spill contingency procedures should be in place to minimise accidental release and then to prevent their entry into water;</li> <li>• process waters, potentially contaminated site drainage waters, emergency firewater, chemically-contaminated waters and spillages should be contained and, where necessary, routed to the effluent system and treated before emission to controlled waters or sewer. Sufficient storage should be provided to ensure that this can be achieved. Any emergency firewater collection system should take account of the additional firewater flows and fire-fighting foams, and emergency storage lagoons may be needed to prevent contaminated firewater reaching controlled waters;</li> <li>• spillage prevention controls must be in place during the transfer of substances (for example, transfer of bulk liquid waste from tanker to storage vessels). <ul style="list-style-type: none"> <li>○ The weakest link and subsequently the main source of spillage during transfer from the vehicle to storage arises from the transfer hoses. This is due to either:</li> <li>○ “tanker drive-off” - a vehicle pulling away whilst still coupled (systems should be in place to prevent this);</li> <li>○ or because the hose couplings have become damaged or are incompatible. Although the spillages tend to be relatively small, measures should be taken to ensure that the couplings are the correct fit and system. This will prevent the coupling loosening or becoming detached, and in turn will also be helped by the installation providing and maintaining its own hoses;</li> <li>○ A more serious event would occur if the coupling were unable to withstand the maximum shut valve pressure of the transfer pump;</li> <li>○ Although the volume lost during routine operations due to ill-fitting or damaged hoses may be relatively small, persistent spillage may have a cumulative effect on the surface of the area, which in the long term may damage the surface and lead to a fugitive emission;</li> <li>○ spillages of this nature may also be a source of odour (see Section 2.2.6 on page 72) and represent poor “housekeeping” practice, requiring constant attention and cleaning. Protection of the transfer hose may not be necessary where a gravity feed system is in place. It will however still be important to maintain a sound coupling at each end of the transfer hose; and</li> <li>○ a more acute accident situation may arise due to the failure of plant or equipment. This may include the failure of a pump seal or the blockage of a filter pot commonly used at transfer points. The prevention of these situations should be addressed by the provision of routine maintenance.</li> </ul> </li> </ul>	Section 3.4.2. – Implementation and Operation

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPPC S5.06, Section 2.8, Accidents</b>		
5 (cont.)	<ul style="list-style-type: none"> <li>○ A further type of acute incident is associated with the failure of the seal on the road tanker. The prevention of such an incident is outside the control of the Operator of the installation (though not necessarily beyond that of the company that operates the installation). Some provision made within the installation for emergency storage for leaking vehicles.</li> <li>○ in addition to accidents connected with some failure in the transfer equipment, measures should be taken to ensure that the correct waste is discharged to the correct transfer point and that the waste is then transferred to the correct storage point. In order to prevent an unauthorised discharge, a lockable isolating valve should be fitted to loading connection. It should be kept locked during periods when there is no supervision of the unloading points.</li> <li>○ drainage from discharge points can be connected or transferred to relevant storage for wastes that have been sampled and checked.</li> <li>● unloading/movement of drums and containers: <ul style="list-style-type: none"> <li>○ typically drums and containers are delivered on wooden pallets and the pallets are unloaded by forklift. The drums are usually secured together often by shrink-wrap. All pallets should be sound and undamaged and forklift drivers should be trained in the handling of palletised goods.</li> <li>○ any damaged pallets should be replaced on arrival and not transferred into storage. Transfer of damaged pallets may lead to other pallets being stored on top, resulting in further damage and possible collapse of the stack</li> <li>○ adequate space should be provided within drum storage areas and drivers should be adequately trained to minimise forklift truck damage to the integrity of drums.</li> </ul> </li> <li>● accumulations of liquids in bunds, sumps, etc., should be dealt with promptly.</li> <li>● such accumulations requiring removal should be analysed to ensure the correct disposal route, for example, pH, COD, heavy metals and other known contaminants from the spillage.</li> </ul>	Section 3.4.2. – Implementation and Operation
<b>IPPC S5.06, Section 2.9, Noise</b>		
1	The Operator should employ basic good practice measures for the control of noise, including adequate maintenance of any parts of plant or equipment whose deterioration may give rise to increases in noise (for example, bearings, air handling plant, the building fabric, and specific noise attenuation kit associated with plant or machinery).	Section 6.3. – Noise Management
2	The Operator should employ such other noise control techniques necessary to ensure that the noise from the installation does not give rise to reasonable cause for annoyance, in the view of the Regulator. In particular, the Operator should justify where Rating Levels (LAeq, T) from the installation exceed the numerical value of the Background Sound Level (LA90, T).	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.9, Noise		
3	Further justification will be required should the resulting field rating level (LAR,TR) exceed 50 dB by day and a facade rating level exceed 45 dB by night, with day being defined as 07:00 to 23:00 and night 23:00 to 07:00.	Section 6.3. – Noise Management
4	In some circumstances “creeping background” (i.e. creeping ambient) may be an issue. Where this has been identified in pre-application discussions or in previous discussions with the local authority, the Operator should employ such noise control techniques as are considered appropriate to minimise problems to an acceptable level with the BAT criteria.	
5	Noise surveys, measurements, investigations (e.g. on sound power levels of individual items of plant) or modelling may be necessary for either new or for existing installations, depending upon the potential for noise problems. Where appropriate, the Operator should have a noise management plan as part of its management system.	
IPPCS5.06, Section 2.10 Monitoring		
1	Monitoring should generally be undertaken during all phases of operation (i.e. commissioning, start up, normal operation and shutting down) unless the Regulator agrees that it is inappropriate.	Section 8 – Monitoring Section 5.6. – Fugitive Emissions to Surface Water, Sewer and Groundwater
Monitoring and Reporting of Air Emissions		
6	Where appropriate, periodic visual and olfactory assessment of releases should be undertaken to ensure that all final releases to air should be essentially colourless, free from persistent trailing mist or fume and free from droplets.	
Monitoring and Reporting of Waste Emissions		
10	For waste emissions, the following should be monitored and recorded: <ul style="list-style-type: none"><li>the physical and chemical composition of waste;</li><li>its hazard characteristics; and</li><li>handling precautions and substances with which it cannot be mixed.</li></ul>	Section 9.5. – Waste Minimisation
Environmental Monitoring (beyond the installation)		
1	The Operator should consider the need for environmental monitoring to assess the effects of emissions to controlled water, groundwater, air or land, or emissions of noise or odour.	Section 6 – General Requirements

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
IPPCS5.06, Section 2.10 Monitoring (Cont.)		
Monitoring of Emissions to Air		
5	Daily visual monitoring to air for smoke, dust, litter, plumes and daily olfactory odour monitoring	Environmental Risk Assessment ECL.010.02.01/ERA
Monitoring of Process Variables		
1	Some process variables may affect the environment and these should be identified and monitored as appropriate – resource use: energy consumption.	Section 9.2. – Energy Consumption
IPPCS5.06, Section 2.11 Closure		
1	Operations during the life of the IPPC Permit should not lead to any deterioration of the site if the requirements of the other sections of this and the specific-sector notes are adhered to. Should any instances arise which have, or might have, impacted on the state of the site, the Operator should record them along with any further investigation or ameliorating work carried out. This will ensure that there is a coherent record of the state of the site throughout the period of the IPPC Permit. This is as important for the protection of the Operator as it is for the protection of the environment. Any changes to this record should be submitted to the Regulator.	Section 3.4.1. – Plan
2	Care should be taken at the design stage to minimise risks during decommissioning. For existing installations, where potential problems are identified, a programme of improvements should be put in place to a timescale agreed with the Regulator.	
3	A site closure plan should be maintained to demonstrate that, in its current state, the installation can be decommissioned to avoid any pollution risk and return the site of operation to a satisfactory state. The plan should be kept updated as material changes occur.	
IPCC S5.06, Section 4.2. The Waste Management Licensing Regulations		
1	In relation to activities involving the disposal or recovery of waste, the Regulators are required to discharge their functions in accordance with the relevant objectives as set out in Schedule 4 of the Waste Management Licensing Regulations 1994.	Section 4.3.7. Waste Handling, Storage and Processing
Objectives are as follows:		
2	<ul style="list-style-type: none"><li>Ensuring the waste is recovered or disposed of without endangering human health and without using process or methods which could harm the environment and in particular without risk to water, air, soil, plants or animals or causing nuisance through noise or odours or adversely affecting the countryside or places of special interest;</li><li>Implementing, as far as material, any plan made under the plan-making provisions</li></ul>	

**Table 4: IPPC S5.06 Guidance Document - Techniques for Pollution Control: BAT Requirements (Cont.)**

Ref No.	BAT Requirement	Section of EPTR Document
<b>IPCC S5.06, Section 4.2. The Waste Management Licensing Regulations (Cont.)</b>		
3	Operators should identify any development plans made by the local planning authority, including any waste local plan and Waste Strategy 2000 commenting on the extent to which the proposals accord with the contents of any such plan.	Section 2.2. – Planning
<b>IPCC S5.06, Section 4.3. The Habitats Regulations</b>		
1	Operators should provide an initial assessment of whether the installation is likely to have a significant effect on any European site in the UK (either alone or in combination with other relevant plans or projects) and, if so, an initial assessment of the implications of the installation for any such site. The application of BAT is likely to have gone some way towards addressing the potential impact of the installation on European sites and putting into place techniques to avoid any significant effects. The Operator should provide a description of how the BAT assessment has specifically taken these matters into account, bearing in mind the conservation objectives of any such site.	Environmental Risk Assessment ECL.010.02.01/ERA
2	European sites are defined in Regulation 10 of the Habitats Regulations to include Special Areas of Conservation (SACs); sites of community importance (sites that have been selected as candidate SACs by member states and adopted by the European Commission, but which are not yet formally classified); and Special Protection Areas (SPAs). It is also Government policy (set out in PPG 9 on nature conservation) that potential SPAs and candidate SACs should be considered to be European sites for the purposes of Regulation 10.	
4	The Regulator will need to consider the Operator's initial assessment. If it concludes that the installation is likely to have a significant effect on a European site, then the Regulator will need to carry out an “appropriate assessment” of the implications of the installation in view of that site's conservation objectives. The Regulations impose a duty on the Regulator to carry out these assessments, so it cannot rely on the Operator's initial assessments. Therefore the Regulator must be provided with any relevant information upon which the Operator’s assessment is based.	

# **APPENDIX I**

## **PROPOSED WASTE CODES AND STORAGE ARRANGEMENTS DOCUMENT**

CODE AND DESCRIPTION	COMBUSTIBLE-C NON COMBUSTIBLE-N POSSIBLY COMBUSTIBLE P	WASTE TYPE	STORAGE LOCATION
<b>02 01 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>			
02 01 08* M Agrochemical waste containing dangerous substances	C	MISC	8 & 10
02 01 09 Agrochemical waste other than those mentioned in 02 01 08	C	MISC	8 & 10
<b>02 02 Wastes from the preparation and processing of meat, fish and other foods of animal origin</b>			
02 02 03 Materials unsuitable for consumption or processing	C	MISC	8 & 10
<b>02 03 Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation</b>			
02 03 02 Wastes from preserving agents	P	MISC	8 & 10
02 03 03 Wastes from solvent extraction	P	MISC	8 & 10
02 03 04 Materials unsuitable for consumption or processing	C	MISC	8 & 10
02 03 05 Sludges from on-site effluent treatment	C	SLUDGE	8 & 10
<b>02 05 Wastes from the dairy products industry</b>			
02 05 01 Materials unsuitable for consumption or processing	C	MISC	8 & 10
<b>02 06 Wastes from the baking and confectionery industry</b>			
02 06 01 Materials unsuitable for consumption or processing	C	MISC	8 & 10
02 06 02 Wastes from preserving agents	P	MISC	8 & 10
<b>02 07 Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>			
02 07 02 Wastes from spirits distillation	C	MISC	8 & 10
02 07 03 Wastes from chemical treatment	C	MISC	8 & 10
02 07 04 Materials unsuitable for consumption or processing	C	MISC	8 & 10
<b>03 02 Wastes from wood preservation</b>			
03 02 01* A Non-halogenated organic wood preservatives	N	LIQUID	1 TO 4
03 02 02* A Organochlorinated wood preservatives	N	LIQUID	1 TO 4
03 02 03* A Organometallic wood preservatives	N	LIQUID	1 TO 4
03 02 04* A Inorganic wood preservatives	N	LIQUID	1 TO 4
03 02 05* M Other wood preservatives containing dangerous substances	N	LIQUID	1 TO 4
03 02 99 Wood preservatives not otherwise specified	N	LIQUID	1 TO 4
<b>03 03 Wastes from pulp, paper and cardboard production and processing</b>			
03 03 02 Green liquor sludge (from recovery of cooking liquor)	C	SLUDGE	8 & 10
03 03 05 De-inking sludges from paper recycling	C	SLUDGE	8 & 10
03 03 11 Sludges from on-site effluent treatment other than those mentioned in 03 03 10	C	SLUDGE	8 & 10
<b>04 01 Wastes from the leather, fur and textile industries</b>			
04 01 03* M Degreasing wastes containing solvents without a liquid phase	C	SLUDGE	8 & 10
04 01 04 Tanning liquor containing chromium	N	LIQUID	1 TO 4
04 01 05 Tanning liquor free of chromium	P	LIQUID	8 & 10
04 01 06 Sludges, in particular from on-site effluent treatment containing chromium	P	SLUDGE	8 & 10
04 01 07 Sludges, in particular from on-site effluent treatment free of chromium	C	SLUDGE	8 & 10
04 01 08 Waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium	C	SOLID	8 & 10
<b>04 02 Wastes from the textile industry</b>			
04 02 09 Wastes from composite materials (impregnated textile, elastomer, plastomer)	C	SOLID	8 & 10
04 02 10 Organic matter from natural products (for example grease, wax)	C	SOLID	8 & 10
04 02 14* M Wastes from finishing containing organic solvents	C	MISC	8 & 10
04 02 15 Wastes from finishing other than those mentioned in 04 02 14	C	MISC	8 & 10
04 02 16* M Dyestuffs and pigments containing dangerous substances	C	LIQUID	8 & 10
04 02 17 Dyestuffs and pigments other than those mentioned in 04 02 16	C	LIQUID	8 & 10
04 02 19* M Sludges from on-site effluent treatment containing dangerous substances	C	LIQUID	8 & 10
04 02 20 Sludges from on-site effluent treatment other than those mentioned in	C	SLUDGE	8 & 10

<b>06 01 wastes from the manufacture, formulation, supply and use (MFSU) of acids</b>			
06 01 01* sulphuric acid and sulphurous acid	N	LIQUID	1 TO 4
06 01 02* hydrochloric acid	N	LIQUID	1 TO 4
06 01 03* hydrofluoric acid	N	LIQUID	1 TO 4
06 01 04* phosphoric and phosphorous acid	N	LIQUID	1 TO 4
06 01 05* nitric acid and nitrous acid	N	LIQUID	1 TO 4
06 01 06* other acids	N	LIQUID	1 TO 4
<b>06 02 wastes from the MFSU of bases</b>			
06 02 01* calcium hydroxide	N	LIQUID / SOLID	1 TO 4
06 02 03* ammonium hydroxide	N	LIQUID / SOLID	1 TO 4
06 02 04* sodium and potassium hydroxide	N	LIQUID / SOLID	1 TO 4
06 02 05* other bases	N	LIQUID / SOLID	1 TO 4
<b>06 03 wastes from the MFSU of salts and their solutions and metallic oxides</b>			
06 03 11* solid salts and solutions containing cyanides	N	SOLID	1 TO 4
06 03 13* solid salts and solutions containing heavy metals	N	SOLID	1 TO 4
06 03 14 solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13	N	SOLID	1 TO 4
06 03 15* metallic oxides containing heavy metals	N	LIQUID / SOLID	1 TO 4
06 03 16 metallic oxides other than those mentioned in 06 03 15	N	LIQUID / SOLID	1 TO 4
<b>06 04 metal-containing wastes other than those mentioned in 06 03</b>			
06 04 03* wastes containing arsenic	N	MISC	1 TO 4
06 04 04* wastes containing mercury	N	MISC	1 TO 4
06 04 05* wastes containing other heavy metals	N	MISC	1 TO 4
<b>06 05 sludges from on-site effluent treatment</b>			
06 05 02* sludges from on-site effluent treatment containing hazardous substances	N	SLUDGE	1 TO 4
06 05 03 sludges from on-site effluent treatment other than those mentioned in 06 05 02	N	SLUDGE	1 TO 4
<b>06 08 wastes from the MFSU of silicon and silicon derivatives</b>			
06 08 02* wastes containing hazardous chlorosilanes	N	LIQUID / SOLID	1 TO 4
<b>06 09 wastes from the MFSU of phosphorous chemicals and phosphorous chemical processes</b>			
06 09 02 phosphorous slag	N	SOLID	1 TO 4
06 09 03* calcium-based reaction wastes containing or contaminated with hazardous substances	N	LIQUID / SOLID	1 TO 4
<b>06 10 wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture</b>			
06 10 02* wastes containing hazardous substances	P	MISC	8 & 10
<b>06 11 wastes from the manufacture of inorganic pigments and opacifiers</b>			
06 11 01 calcium-based reaction wastes from titanium dioxide production	N	MISC	1 TO 4
<b>06 13 wastes from inorganic chemical processes not otherwise specified</b>			
06 13 01 inorganic plant protection products, wood-preserving agents and other biocides.	N	LIQUID	1 TO 4
<b>07 01 wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals</b>			
07 01 01 aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 01 03 organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 01 04 other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 01 07 halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 01 08 other still bottoms and reaction residues	N	SOLID	1 TO 4
07 01 09 halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 01 10 other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 01 11 sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 01 12 sludges from on-site effluent treatment other than those mentioned in 07 01 11	P	SLUDGE	8 & 10



<b>07 02 wastes from the MFSU of plastics, synthetic rubber and man-made fibres</b>			
07 02 01* aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 02 03* organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 02 04* other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 02 07* halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 02 08* other still bottoms and reaction residues	N	SOLID	1 TO 4
07 02 09* halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 02 10* other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 02 11* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 02 12 sludges from on-site effluent treatment other than those mentioned in 07 02 11	P	SLUDGE	8 & 10
07 02 13 waste plastic	C	SOLID	8 & 10
07 02 14* wastes from additives containing hazardous substances	P	MISC	8 & 10
07 02 15 wastes from additives other than those mentioned in 07 02 14	P	MISC	8 & 10
07 02 16* wastes containing hazardous silicones	N	MISC	1 TO 4
07 02 17 wastes containing silicones other than those mentioned in 07 02 16	N	MISC	1 TO 4
<b>07 03 wastes from the MFSU of organic dyes and pigments (except 06 11)</b>			
07 03 01* aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 03 03* organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 03 04* other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 03 07* halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 03 08* other still bottoms and reaction residues	N	SOLID	1 TO 4
07 03 09* halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 03 10* other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 03 11* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 03 12 sludges from on-site effluent treatment other than those mentioned in 07 03 11	P	SLUDGE	8 & 10
<b>07 04 wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides</b>			
07 04 01* aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 04 03* organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 04 04* other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 04 07* halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 04 08* other still bottoms and reaction residues	N	SOLID	1 TO 4
07 04 09* halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 04 10* other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 04 11* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 04 12 sludges from on-site effluent treatment other than those mentioned in 07 04 11	P	SLUDGE	8 & 10
07 04 13* solid wastes containing hazardous substances	P	SOLID	8 & 10
<b>07 05 wastes from the MFSU of pharmaceuticals</b>			
07 05 01* aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 05 03* organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 05 04* other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 05 07* halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 05 08* other still bottoms and reaction residues	N	SOLID	1 TO 4
07 05 09* halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 05 10* other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 05 11* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 05 12 sludges from on-site effluent treatment other than those mentioned in 07 05 11	P	SLUDGE	8 & 10
07 05 13* solid wastes containing hazardous substances	P	SOLID	8 & 10
07 05 14 solid wastes other than those mentioned in 07 05 13	P	SOLID	8 & 10
<b>07 06 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics</b>			
07 06 01* aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 06 03* organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 06 04* other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 06 07* halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 06 08* other still bottoms and reaction residues	N	SOLID	1 TO 4
07 06 09* halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 06 10* other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 06 11* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 06 12 sludges from on-site effluent treatment other than those mentioned in 07 06 11	P	SLUDGE	8 & 10

<b>07 07 wastes from the MFSU of fine chemicals and chemical products not otherwise specified</b>			
07 07 01* aqueous washing liquids and mother liquors	N	LIQUID	1 TO 4
07 07 03* organic halogenated solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 07 04* other organic solvents, washing liquids and mother liquors	P	LIQUID	8 & 10
07 07 07* halogenated still bottoms and reaction residues	N	SOLID	1 TO 4
07 07 08* other still bottoms and reaction residues	N	SOLID	1 TO 4
07 07 09* halogenated filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 07 10* other filter cakes and spent absorbents	N	FILTER CAKE	1 TO 4
07 07 11* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
07 07 12 sludges from on-site effluent treatment other than those mentioned in 07 07 11	P	SLUDGE	8 & 10
<b>08 01 wastes from MFSU and removal of paint and varnish</b>			
08 01 11* waste paint and varnish containing organic solvents or other hazardous substances	C	MISC	8 & 10
08 01 12 waste paint and varnish other than those mentioned in 08 01 11	C	MISC	8 & 10
08 01 13* sludges from paint or varnish containing organic solvents or other hazardous substances	C	SLUDGE	8 & 10
08 01 14 sludges from paint or varnish other than those mentioned in 08 01 13	C	SLUDGE	8 & 10
08 01 15* aqueous sludges containing paint or varnish containing organic solvents or other hazardous substances	C	SLUDGE	8 & 10
08 01 16 aqueous sludges containing paint or varnish other than those mentioned in 08 01 15	C	SLUDGE	8 & 10
08 01 17* wastes from paint or varnish removal containing organic solvents or other hazardous substances	C	MISC	8 & 10
08 01 18 wastes from paint or varnish removal other than those mentioned in 08 01 17	N	MISC	1 TO 4
08 01 19* aqueous suspensions containing paint or varnish containing organic solvents or other hazardous substances	C	LIQUID	8 & 10
08 01 20 aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19	N	LIQUID	1 TO 4
08 01 21* waste paint or varnish remover	C	MISC	8 & 10
<b>08 02 wastes from MFSU of other coatings (including ceramic materials)</b>			
08 02 01 waste coating powders	N	SOLID	1 TO 4
08 02 02 aqueous sludges containing ceramic materials	N	SLUDGE	1 TO 4
08 02 03 aqueous suspensions containing ceramic materials	N	LIQUID	1 TO 4
<b>08 03 wastes from MFSU of printing inks</b>			
08 03 07 aqueous sludges containing ink	N	SLUDGE	1 TO 4
08 03 08 aqueous liquid waste containing ink	N	LIQUID	1 TO 4
08 03 12* waste ink containing hazardous substances	N	LIQUID	1 TO 4
08 03 13 waste ink other than those mentioned in 08 03 12	N	LIQUID	1 TO 4
08 03 14* ink sludges containing hazardous substances	N	SLUDGE	1 TO 4
08 03 15 ink sludges other than those mentioned in 08 03 14	N	SLUDGE	1 TO 4
08 03 16* waste etching solutions	N	LIQUID	1 TO 4
08 03 17* waste printing toner containing hazardous substances	N	SOLID	1 TO 4
08 03 18 waste printing toner other than those mentioned in 08 03 17	N	SOLID	1 TO 4
08 03 19* disperse oil	P	LIQUID	8 & 10
<b>08 04 wastes from MFSU of adhesives and sealants (including waterproofing products)</b>			
08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances	P	MISC	8 & 10
08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09	P	MISC	8 & 10
08 04 11* adhesive and sealant sludges containing organic solvents or other hazardous substances	P	MISC	8 & 10
08 04 12 adhesive and sealant sludges other than those mentioned in 08 04 11	P	SLUDGE	8 & 10
08 04 13* aqueous sludges containing adhesives or sealants containing organic solvents or other hazardous substances	N	SLUDGE	1 TO 4
08 04 14 aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13	N	SLUDGE	1 TO 4
08 04 15* aqueous liquid waste containing adhesives or sealants containing organic solvents or other hazardous substances	N	LIQUID	1 TO 4
08 04 16 aqueous liquid waste containing adhesives or sealants other than those mentioned in 08 04 15	N	LIQUID	1 TO 4
08 04 17* rosin oil	C	LIQUID	8 & 10
<b>08 05 wastes not otherwise specified in 08</b>			
08 05 01* waste isocyanates	P	MISC	8 & 10

<b>10 01 wastes from power stations and other combustion plants (except 19 )</b>			
10 01 04* oil fly ash and boiler dust	C	DUST	8 & 10
10 01 09* sulphuric acid	N	LIQUID	1 TO 4
10 01 13* fly ash from emulsified hydrocarbons used as fuel	C	DUST	8 & 10
10 01 14* bottom ash, slag and boiler dust from co-incineration containing hazardous substances	N	DUST	1 TO 4
10 01 16* fly ash from co-incineration containing hazardous substances	N	DUST	1 TO 4
10 01 18* wastes from gas cleaning containing hazardous substances	N	MISC	1 TO 4
10 01 20* sludges from on-site effluent treatment containing hazardous substances	P	SLUDGE	8 & 10
10 01 22* aqueous sludges from boiler cleansing containing hazardous substances	N	SLUDGE	1 TO 4
10 01 25 wastes from fuel storage and preparation of coal-fired power plants	N	MISC	1 TO 4
10 01 26 wastes from cooling-water treatment	N	LIQUID	1 TO 4
<b>10 08 wastes from other non-ferrous thermal metallurgy</b>			
10 08 08* salt slag from primary and secondary production	P	SOLID	8 & 10
10 08 10* dross and skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities	P	SOLID	8 & 10
10 08 12* tar-containing wastes from anode manufacture	P	SOLID	8 & 10
10 08 15* flue-gas dust containing hazardous substances	P	DUST	8 & 10
10 08 17* sludges and filter cakes from flue-gas treatment containing hazardous substances	P	SLUDGE	8 & 10
10 08 19* wastes from cooling-water treatment containing oil	P	LIQUID / SOLID	8 & 10
<b>10 09 wastes from casting of ferrous pieces</b>			
10 09 09* flue-gas dust containing hazardous substances	P	DUST	8 & 10
10 09 11* other particulates containing hazardous substances	P	DUST	8 & 10
10 09 13* waste binders containing hazardous substances	P	SOLID	8 & 10
10 09 14 waste binders other than those mentioned in 10 09 13	P	SOLID	8 & 10
10 09 15* waste crack-indicating agent containing hazardous substances	P	LIQUID	8 & 10
10 09 16 waste crack-indicating agent other than those mentioned in 10 09 15	P	LIQUID	8 & 10
<b>10 10 wastes from casting of non-ferrous pieces</b>			
10 10 09* flue-gas dust containing hazardous substances	P	DUST	8 & 10
10 10 11* other particulates containing hazardous substances	P	DUST	8 & 10
10 10 13* waste binders containing hazardous substances	P	SOLID	8 & 10
10 10 14 waste binders other than those mentioned in 10 10 13	P	SOLID	8 & 10
10 10 15* waste crack-indicating agent containing hazardous substances	P	LIQUID	8 & 10
10 10 16 waste crack-indicating agent other than those mentioned in 10 10 15	P	LIQUID	8 & 10
<b>10 11 wastes from manufacture of glass and glass products</b>			
10 11 09* waste preparation mixture before thermal processing, containing hazardous substances	N	MISC	1 TO 4
10 11 11* waste glass in small particles and glass powder containing heavy metals (for example from cathode ray tubes)	N	DUST	1 TO 4
10 11 13* glass-polishing and -grinding sludge containing hazardous substances	N	SLUDGE	1 TO 4
10 11 15* solid wastes from flue-gas treatment containing hazardous substances	N	SOLID	1 TO 4
10 11 17* sludges and filter cakes from flue-gas treatment containing hazardous substances	N	SLUDGE	1 TO 4
10 11 19* solid wastes from on-site effluent treatment containing hazardous substances	N	SOLID	1 TO 4
<b>10 12 wastes from manufacture of ceramic goods, bricks, tiles and construction products</b>			
10 12 01 waste preparation mixture before thermal processing	N	MISC	1 TO 4
10 12 03 particulates and dust	N	DUST	1 TO 4
10 12 08 waste ceramics, bricks, tiles and construction products (after thermal processing)	N	SOLID	1 TO 4
10 12 09* solid wastes from gas treatment containing hazardous substances	N	SOLID	1 TO 4
10 12 11* wastes from glazing containing heavy metals	N	SOLID	1 TO 4
10 12 13 sludge from on-site effluent treatment	N	SLUDGE	1 TO 4

<b>10 13 wastes from manufacture of cement, lime and plaster and articles and products made from them</b>			
10 13 12* solid wastes from gas treatment containing hazardous substances	N	SOLID	1 TO 4
10 13 13 solid wastes from gas treatment other than those mentioned in 10 13 12	N	SOLID	1 TO 4
<b>10 14 waste from crematoria</b>			
10 14 01* waste from gas cleaning containing mercury	P	DUST	8 & 10
<b>11 01 wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)</b>			
11 01 05 pickling acids*	N	LIQUID	1 TO 4
11 01 06 acids not otherwise specified*	N	LIQUID	1 TO 4
11 01 07 pickling bases*	N	LIQUID	1 TO 4
11 01 08 phosphatising sludges	N	LIQUID	1 TO 4
11 01 09* sludges and filter cakes containing hazardous substances	N	SLUDGE	1 TO 4
11 01 10 sludges and filter cakes other than those mentioned in 11 01 09	N	SLUDGE	1 TO 4
11 01 11* aqueous rinsing liquids containing hazardous substances	N	LIQUID	1 TO 4
11 01 12 aqueous rinsing liquids other than those mentioned in 11 01 11	N	LIQUID	1 TO 4
11 01 13* degreasing wastes containing hazardous substances	N	LIQUID	1 TO 4
11 01 14 degreasing wastes other than those mentioned in 11 01 13	N	LIQUID	1 TO 4
11 01 15* eluate and sludges from membrane systems or ion exchange systems containing hazardous substances	N	MISC	1 TO 4
11 01 16 saturated or spent ion exchange resins	N	SLUDGE	1 TO 4
11 01 98* other wastes containing hazardous substances	N	MISC	1 TO 4
<b>11 02 wastes from non-ferrous hydrometallurgical processes</b>			
11 02 02* sludges from zinc hydrometallurgy (including jarosite, goethite)	N	SLUDGE	1 TO 4
11 02 03 wastes from the production of anodes for aqueous electrolytical processes	N	MISC	1 TO 4
11 02 05* wastes from copper hydrometallurgical processes containing hazardous substances	N	MISC	1 TO 4
11 02 06 wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05	N	MISC	1 TO 4
11 02 07* other wastes containing hazardous substances	N	MISC	1 TO 4
<b>11 03 sludges and solids from tempering processes</b>			
11 03 01* wastes containing cyanide	N	MISC	1 TO 4
11 03 02* other waste	N	MISC	1 TO 4
<b>11 05 wastes from hot galvanising processes</b>			
11 05 01 hard zinc	N	SOLID	1 TO 4
11 05 02 zinc ash	N	DUST	1 TO 4
11 05 03* solid wastes from gas treatment	N	SOLID	1 TO 4
11 05 04* spent flux	N	SOLID	1 TO 4
<b>12 01 wastes from shaping and physical and mechanical surface treatment of metals and plastics</b>			
12 01 06* mineral-based machining oils containing halogens (except emulsions and solutions)	C	LIQUID	8 & 10
12 01 07* mineral-based machining oils free of halogens (except emulsions and solutions)	C	LIQUID	8 & 10
12 01 08* machining emulsions and solutions containing halogens	C	LIQUID	8 & 10
12 01 09* machining emulsions and solutions free of halogens	C	LIQUID	8 & 10
12 01 10* synthetic machining oils	C	LIQUID	8 & 10
12 01 12* spent waxes and fats	C	SOLID	8 & 10
12 01 13 welding wastes	C	SOLID	8 & 10
12 01 14* machining sludges containing hazardous substances	P	SLUDGE	8 & 10
12 01 15 machining sludges other than those mentioned in 12 01 14	P	SLUDGE	8 & 10
12 01 16* waste blasting material containing hazardous substances	P	DUST	8 & 10
12 01 17 waste blasting material other than those mentioned in 12 01 16	P	DUST	8 & 10
12 01 18* metal sludge (grinding, honing and lapping sludge) containing oil	C	SLUDGE	8 & 10
12 01 19* readily biodegradable machining oil	C	LIQUID	8 & 10
12 01 20* spent grinding bodies and grinding materials containing hazardous substances	P	DUST	8 & 10
12 01 21 spent grinding bodies and grinding materials other than those mentioned in 12 01 20	P	DUST	8 & 10

<b>13 01 waste hydraulic oils</b>			
13 01 01* hydraulic oils, containing PCBs	C	LIQUID	8 & 10
13 01 04* chlorinated emulsions	C	LIQUID	8 & 10
13 01 05* non-chlorinated emulsions	C	LIQUID	8 & 10
13 01 09* mineral-based chlorinated hydraulic oils	C	LIQUID	8 & 10
13 01 10* mineral based non-chlorinated hydraulic oils	C	LIQUID	8 & 10
13 01 11* synthetic hydraulic oils	C	LIQUID	8 & 10
13 01 12* readily biodegradable hydraulic oils	C	LIQUID	8 & 10
13 01 13* other hydraulic oils	C	LIQUID	8 & 10
<b>13 02 waste engine, gear and lubricating oils</b>			
13 02 04* mineral-based chlorinated engine, gear and lubricating oils	C	LIQUID	8 & 10
13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils	C	LIQUID	8 & 10
13 02 06* synthetic engine, gear and lubricating oils	C	LIQUID	8 & 10
13 02 07* readily biodegradable engine, gear and lubricating oils	C	LIQUID	8 & 10
13 02 08* other engine, gear and lubricating oils	C	LIQUID	8 & 10
<b>13 03 waste insulating and heat transmission oils</b>			
13 03 01* insulating or heat transmission oils containing PCBs	C	LIQUID	8 & 10
13 03 06* mineral-based chlorinated insulating and heat transmission oils other than those mentioned in 13 03 01	C	LIQUID	8 & 10
13 03 07* mineral-based non-chlorinated insulating and heat transmission oils	C	LIQUID	8 & 10
13 03 08* synthetic insulating and heat transmission oils	C	LIQUID	8 & 10
13 03 09* readily biodegradable insulating and heat transmission oils	C	LIQUID	8 & 10
13 03 10* other insulating and heat transmission oils	C	LIQUID	8 & 10
<b>13 05 oil/water separator contents</b>			
13 05 01* solids from grit chambers and oil/water separators	C	SOLID	8 & 10
13 05 02* sludges from oil/water separators	P	SLUDGE	8 & 10
13 05 03* interceptor sludges	P	SLUDGE	8 & 10
13 05 06* oil from oil/water separators	C	LIQUID	8 & 10
13 05 07* oily water from oil/water separators	P	LIQUID	8 & 10
13 05 08* mixtures of wastes from grit chambers and oil/water separators	P	MISC	8 & 10
<b>13 07 wastes of liquid fuels</b>			
13 07 01* fuel oil and diesel	C	LIQUID	8 & 10
13 07 03* other fuels (including mixtures)	C	LIQUID	8 & 10
<b>13 08 oil wastes not otherwise specified</b>			
13 08 02* other emulsions	P	LIQUID	8 & 10
<b>14 06 waste organic solvents, refrigerants and foam/aerosol propellants</b>			
14 06 01* chlorofluorocarbons, HCFC, HFC	P	SOLID	8 & 10
14 06 02* other halogenated solvents and solvent mixtures	P	LIQUID	8 & 10
14 06 03* other solvents and solvent mixtures	P	LIQUID	8 & 10
14 06 04* sludges or solid wastes containing halogenated solvents	P	SLUDGE	8 & 10
14 06 05* sludges or solid wastes containing other solvents	P	SLUDGE	8 & 10
<b>15 01 packaging (including separately collected municipal packaging waste)</b>			
15 01 02 plastic packaging	C	EMPTY PACKAGING	7
15 01 04 metallic packaging	P	EMPTY PACKAGING	7
15 01 05 composite packaging	Y	EMPTY PACKAGING	7
15 01 10* packaging containing residues of or contaminated by hazardous substances	C	EMPTY PACKAGING	7
15 01 11* metallic packaging containing a hazardous solid porous matrix (for example asbestos), including empty pressure containers	P	EMPTY PACKAGING	7

<b>15 02 absorbents, filter materials, wiping cloths and protective clothing</b>			
15 02 02* absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	C	NON HAZ ABSORBENTS / TEXTILES / FILTERS	8 & 10
15 02 03 absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	C	HAZ ABSORBENTS / TEXTILES / FILTERS	8 & 10
<b>16 01 end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)</b>			
16 01 07* oil filters	C	SOLID	8 & 10
16 01 08* components containing mercury	P	SOLID	8 & 10
16 01 09* components containing PCBs	C	SOLID	8 & 10
16 01 13* brake fluids	C	LIQUID	8 & 10
16 01 14* antifreeze fluids containing hazardous substances	P	LIQUID	8 & 10
16 01 15 antifreeze fluids other than those mentioned in 16 01 14	P	LIQUID	8 & 10
16 01 21 *hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14	P	SOLID	8 & 10
<b>16 02 wastes from electrical and electronic equipment</b>			
16 02 09* transformers and capacitors containing PCBs	C	WEEE	HAZ WEEE STORE
16 02 10* discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09	C	WEEE	HAZ WEEE STORE
16 02 11* discarded equipment containing chlorofluorocarbons, HCFC, HFC	C	WEEE	HAZ WEEE STORE
16 02 13* discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12	C	WEEE	HAZ WEEE STORE
16 02 14 discarded equipment other than those mentioned in 16 02 09 to 16 02 13	C	WEEE	NON HAZ WEEE STORE
16 02 15* hazardous components removed from discarded equipment	C	WEEE	HAZ WEEE STORE
16 02 16 components removed from discarded equipment other than those mentioned in 16 02 15	C	WEEE	NON HAZ WEEE STORE
<b>16 03 off-specification batches and unused products</b>			
16 03 03* inorganic wastes containing hazardous substances	P	MISC	8 & 10
16 03 04 inorganic wastes other than those mentioned in 16 03 03	P	MISC	8 & 10
16 03 05* organic wastes containing hazardous substances	P	MISC	8 & 10
16 03 06 organic wastes other than those mentioned in 16 03 05	P	MISC	8 & 10
16 03 07* metallic mercury	N	LIQUID	1 TO 4
<b>16 05 gases in pressure containers and discarded chemicals</b>			
16 05 04* gases in pressure containers (including halons) containing hazardous substances	P	GAS	9
16 05 05 gases in pressure containers other than those mentioned in 16 05 04	P	GAS	9
16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals	P	MISC	9
16 05 07* discarded inorganic chemicals consisting of or containing hazardous substances	P	MISC	9
16 05 08* discarded organic chemicals consisting of or containing hazardous substances	P	MISC	9
16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08	P	MISC	9
<b>16 06 batteries and accumulators</b>			
16 06 01* lead batteries	P	BATTERY	BATTERY STORE
16 06 02* Ni-Cd batteries	P	BATTERY	BATTERY STORE
16 06 03* mercury-containing batteries	P	BATTERY	BATTERY STORE
16 06 04 alkaline batteries (except 16 06 03)	P	BATTERY	BATTERY STORE
16 06 05 other batteries and accumulators	P	BATTERY	BATTERY STORE
16 06 06* separately collected electrolyte from batteries and accumulators	P	LIQUID / SOLID	8 & 10
<b>16 07 wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)</b>			
16 07 08* wastes containing oil	C	MISC	8 & 10
16 07 09* wastes containing other hazardous substances	P	MISC	8 & 10
<b>16 08 spent catalysts</b>			
16 08 01 spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)	N	SOLID	1 TO 4
16 08 02* spent catalysts containing hazardous transition metals or hazardous transition metal compounds	C	SOLID	8 & 10
16 08 03 spent catalysts containing transition metals or transition metal compounds not otherwise specified	C	SOLID	8 & 10
16 08 04 spent fluid catalytic cracking catalysts (except 16 08 07)	N	LIQUID	1 TO 4
16 08 05* spent catalysts containing phosphoric acid	N	LIQUID	1 TO 4
16 08 06* spent liquids used as catalysts	N	LIQUID	1 TO 4
16 08 07* spent catalysts contaminated with hazardous substances	P	LIQUID	8 & 10

<b>16 09 oxidising substances</b>			
16 09 01* permanganates, for example potassium permanganate	N	LIQUID / SOLID	OXIDISING SOLIDS / LIQUIDS STORES
16 09 02* chromates, for example potassium chromate, potassium or sodium dichromate	N	LIQUID / SOLID	OXIDISING SOLIDS / LIQUIDS STORES
16 09 03* peroxides, for example hydrogen peroxide	N	LIQUID	OXIDISING SOLIDS / LIQUIDS STORES
16 09 04* oxidising substances, not otherwise specified	N	LIQUID / SOLID	OXIDISING SOLIDS / LIQUIDS STORES
<b>16 10 aqueous liquid wastes destined for off-site treatment</b>			
16 10 01* aqueous liquid wastes containing hazardous substances	N	LIQUID	1 TO 4
16 10 02 aqueous liquid wastes other than those mentioned in 16 10 01	N	LIQUID	1 TO 4
16 10 03* aqueous concentrates containing hazardous substances	N	LIQUID	1 TO 4
16 10 04 aqueous concentrates other than those mentioned in 16 10 03	N	LIQUID	1 TO 4
<b>17 06 insulation materials and asbestos-containing construction materials</b>			
17 06 01* insulation materials containing asbestos	N	SOLID	1 TO 4
17 06 03* other insulation materials consisting of or containing hazardous substances	P	SOLID	8 & 10
17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03	P	SOLID	8 & 10
17 06 05* construction materials containing asbestos	N	SOLID	1 TO 4
<b>17 09 other construction and demolition wastes</b>			
17 09 02* construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB-containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors)	C	MISC	8 & 10
17 09 03* other construction and demolition wastes (including mixed wastes) containing hazardous substances	P	MISC	8 & 10
<b>20 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>			
<b>20 01 separately collected fractions (except 15 01)</b>			
20 01 13* solvents	C	LIQUID	8 & 10
20 01 14* acids-	N	LIQUID / SOLID	1 TO 4
20 01 15* alkalines	N	LIQUID / SOLID	1 TO 4
20 01 17* photochemicals	P	LIQUID	8 & 10
20 01 19* pesticides	C	LIQUID / SOLID	8 & 10
20 01 21* fluorescent tubes and other mercury-containing waste	N	SOLID	1 TO 4
20 01 23* discarded equipment containing chlorofluorocarbons	C	SOLID	8 & 10
20 01 25 edible oil and fat	C	LIQUID	8 & 10
20 01 26* oil and fat other than those mentioned in 20 01 25	C	LIQUID	8 & 10
20 01 27* paint, inks, adhesives and resins containing hazardous substances	C	MISC	8 & 10
20 01 28 paint, inks, adhesives and resins other than those mentioned in 20 01 27	P	MISC	8 & 10
20 01 29* detergents containing hazardous substances	P	LIQUID	8 & 10
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	C	BATTERY	BATTERY STORE
20 01 34 batteries and accumulators other than those mentioned in 20 01 33	C	BATTERY	BATTERY STORE
20 01 35* discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	C	WEEE	HAZ WEEE STORE
20 01 36 discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	C	WEEE	NON HAZ WEEE STORE

WASTE TYPE	COMBUSTIBLE-C NON COMBUSTIBLE-N POSSIBLY COMBUSTIBLE-P	CONTAINMENT / "STATE"	DAILY TONNAGE	STORED AT ANY ONE TIME (100% CAPACITY) Tonnes
LIQUID	C / P	IN CONTAINERS (IBC / DRUM)	5	16
SOLID	C / P	IN CONTAINERS (IBC / DRUM)	5	10
LIQUID / SOLID	C / P	IN CONTAINERS (IBC / DRUM)	5	6
LIQUID	N	IN CONTAINERS (IBC / DRUM)	6.00	22.00
SOLID	N	IN CONTAINERS (IBC / DRUM)	6.00	22.00
LIQUID / SOLID	N	IN CONTAINERS (IBC / DRUM)	6.00	12.00
SLUDGE	C / P	IN CONTAINERS (IBC / DRUM)	7	6
DUST	C / P	IN CONTAINERS (IBC / DRUM)	6	6
SLUDGE	N	IN CONTAINERS (IBC / DRUM)	7.00	14.00
DUST	N	IN CONTAINERS (IBC / DRUM)	5.00	14.00
FILTER CAKE	N	IN CONTAINERS (IBC / DRUM)	5.00	12.00
EMPTY PACKAGING HAZ	C	IN CONTAINERS (IBC / DRUM) & ON PALLETS / BULK CONTAINERS	5	8
EMPTY PACKAGING NON HAZ	C	IN CONTAINERS (IBC / DRUM) & ON PALLETS / BULK CONTAINERS	5	8
CRUSHED CONTAINERS	C	FEL CONTAINER	n/a	2
BATTERY	P	IN CONTAINERS	3	10
WEEE HAZ	C	IN CONTAINERS	3	8
WEEE NON HAZ	C	IN CONTAINERS	3	8
GAS	C	IN CONTAINERS (IBC / DRUM) CAGED BAY	2	4.8
NON HAZ ABSORBENTS / TEXTILES / FILTERS	C	IN CONTAINERS (IBC / DRUM) & ON PALLETS / BULK CONTAINERS	6	2
HAZ ABSORBENTS / TEXTILES / FILTERS	C	IN CONTAINERS (IBC / DRUM) & ON PALLETS / BULK CONTAINERS	6	4

Weekly 481 t  
Annual 25000 t  
Daily 96 t  
Types 17 t  
Tonnes per Type 5.7 t avg

96.00 NOT COMBUSTIBLE

50 COMBUSTIBLE - NOT CATEGORISED ELSEWHERE

98.8 all combustible

194.8

Excluding Bay 5, 6, & 11



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## **APPENDIX II**

# **ENVIRONMENTAL POLICY**

## Forward Waste Management Environmental Policy

Forward Waste Management Limited is committed to minimising the environmental impact its operations have on both the local and global environment.

We are committed to the optimum application of the waste hierarchy and will strive to achieve best available techniques for the infrastructure we establish, the technology we operate and the collection services we manage.

The company operates in accordance with the internationally recognised management standard ISO 14001:2015, which was achieved in April 2018.

We will:

- Comply with all relevant environmental legislation
- Wherever possible, source equipment and service product ranges to minimise the environmental impact of our business
- Ensure adequate services are made available and that all individuals are aware of their roles and responsibilities to facilitate effective environmental management
- Minimise waste by constantly evaluating operations and ensuring they are as efficient as possible
- Measure our impact on the environment and set targets for continuous improvement

A handwritten signature in black ink, appearing to be "Lyndon Ward", written over a horizontal line.

Lyndon Ward  
Managing Director

Date: 30<sup>th</sup> April 2019

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## **APPENDIX III WASTE PROCEDURES**



## **PRE-ACCEPTANCE PROCEDURE**

### **Purpose**

To ensure that waste legislation, the requirements of SGN 5.06, and the Environmental Permit are complied with to prevent the acceptance of unsuitable wastes for storage and / or onward processing.

### **Scope**

Forward Waste Management East Moors Rd Hazardous Waste Transfer Station.

### **Responsibility**

Technical Manager  
Senior Site Chemist  
Site Chemist  
Industrial Waste Analyst (Sales)

### **Records**

ISYS  
COS  
MID (Material Identification Doc – Sampling)  
Chain of Custody (internal or suppliers)  
Waste Declaration Form

COS -> MID (If required for samples) + Chain of Custody (internal or suppliers) -> Waste Pre-Acceptance Form

## **1. WASTE ENQUIRY INFORMATION**

From the waste disposal enquiry or a subsequent site survey, the Operator (Sales Representative or appointed Technical staff) will obtain information in writing in relation to:

- The type of process producing the waste.
- The specific process from which the waste derives.
- The quantity of waste.
- The form the waste takes (solid, liquid, sludge, etc).
- Hazards associated with the waste.
- Chemical analysis of the waste (individual constituents and as a minimum their percentage compositions).
- Sample storage and preservation techniques.
- Assign Hazard Codes and Risk Phrases to the waste stream.



The Sales Representative and appointed Technical staff will assist the customer / Producer in the provision of the information, but the customer will be required to confirm in writing that the information is correct. The information may be obtained over a series of communications with the customer and should give consideration to possible or residual contamination.

Indicative quotes may be given but the waste stream **shall not be approved for acceptance to the site until the full information has been received from the customer and assessed for acceptability by the Technical Dept.** The information gathered at this stage shall be recorded on the Waste Declaration Form, COS and / or the Chain of Custody Form (samples). These forms will then be stored either digitally on the Operations server or as a hard copy.

## 2. PRE-ACCEPTANCE INFORMATION AND SAMPLING

### Information

In instances where the generic characteristics of the waste are known and where a sample would not be required, the information will be detailed on the Waste Declaration Form by the Producer, with the assistance of the IWA (Sales) and supported by existing classifications and / or MSDS.

The purpose of pre acceptance information / sampling is to provide information to determine the appropriate management, storage and treatment route and to facilitate the safe handling of the waste on site.

The following will be undertaken for each waste stream:

- Nominally empty containers – MSDS will be obtained.
- Solidified resins (fully cured and generally non hazardous in this state) – MSDS will be obtained / state of material will be confirmed by Technical.
- Oily rags and contaminated PPE – Subject to technical assessment and contaminant.
- Pure / raw products\*.
- Laboratory smalls – subject to technical assessment (see below for procedure).
- Aerosols (nil Isocyanate, toxic, corrosive etc) - subject to technical assessment
- Gas canisters (empty and fully discharged) – subject to technical assessment.
- Batteries (fully identifiable and intact. If not intact, correctly overpacked).
- WEEE (hazardous and non-hazardous) - subject to technical assessment.
- Bonded asbestos – subject to technical assessment.
- Oils, greases and oil based lubricants - MSDS will be obtained / state of material will be confirmed by Technical
- Domestic type detergents and cleaning chemicals - MSDS will be obtained / state of material will be confirmed by Technical
- Waste process chemicals such as acids and bases - MSDS will be obtained / state of material will be confirmed by Technical
- Sealants and glues - MSDS will be obtained / state of material will be confirmed by Technical
- Fuels and solvents - MSDS will be obtained / state of material will be confirmed by Technical
- Filter cakes and sludges - subject to technical assessment



- Dusts - subject to technical assessment
- Paints - MSDS will be obtained / state of material will be confirmed by Technical
- Empty contaminated packaging - MSDS will be obtained / state of material will be confirmed by Technical

\* - a Pure product waste in this case is defined as a mixture or preparation that has been manufactured to a defined recipe to produce a material with a specific function and consistent properties.

A waste product can be produced by the following:

- out of date
- over production
- off specification
- contamination by a substance at levels which will not increase the hazardous properties of the substance e.g. petrol contaminated with water.
- washings where a product has been washed out using water.

Where a sample is not taken the justification will be recorded on the Waste Declaration Form.

## Sampling

In instances where a sample is required, unless a sample and analysis has already been completed by a third party and this is within a 3 month window (variable wastes) and 6 months (non-variable wastes) of the date of the enquiry, FWM should in every case obtain representative sample(s) of the waste from the production process / current holder and compare it against the written description to ensure that it is consistent.

Samples will be taken in accordance with Forward Waste Management sampling procedures.

Other than for pure-product chemicals or laboratory smalls, the chemical analysis should relate to an accredited analysis and not based on product data sheets or an interpretation of information on product data sheets.

In the first instance, samples of the waste should only be retrieved by the Producer under guidance by IWA in conjunction with FWM Technical Dept.

Samples can also be obtained by one of the following:

- FWM Technical.
- Suitably qualified or experienced third party,

The information is recorded on the chain of custody form (FWM MID FORM). Where a sample is taken by the customer, advice will be given regarding the completion of the chain of custody form. The IWA (Sales) and/or Technical will assist the customer in the provision of the information.



The sample will be labelled with the appropriate hazard diamond(s) and the chain of custody form (FWM MID FORM) will be completed to identify chemical concentration, hazards and transport classification.

The samples and their accompanying documents will be stored in the locked interim cabinet and passed onto Technical from there. The sample and documentation will be logged onto the sample register and stored in the processing cabinet prior to establishing suitable candidates for onward recycling /disposal. Once a suitable outlet is sourced a sample is despatched under limited quantities via courier and logged on the sample register.

Only UKAS accredited laboratories will be used for off-site analysis, included but not limited to:

- WAC (Waste Acceptance Criteria)
- Basic Chemical Characterisation
- Testing criteria according to ADR
- EWC analysis and classification report using WM3 Guidance.

Analysis required will vary depending upon the nature of the waste, the process to be used and what is known about the waste already. Results of analysis should be kept within the tracking system.

These details should include:

- check on constituents declared by waste producer/holder to ensure Permit compliance, treatment plant specification and final disposal.
- all hazardous characteristics.
- physical appearance.
- colour.
- pH.
- presence, strength and description of odour assessment (note COSHH implications)

Further analysis may include other parameters relevant to the treatment method or waste stream e.g.:

- presence of oxidants
- acidity and alkalinity
- COD
- ammonia
- flashpoint
- presence of sulphide
- presence of cyanide
- List I and List II substances
- other substances of environmental significance

Also, for example in the case of oil recovery:

- chlorine
- sulphur
- metals
- PCBs

The above analysis will be conducted in conjunction with both FWM Laboratory facilities and 3<sup>rd</sup> party suppliers. The scope of the analysis will be determined by the Technical Dept.



The information necessary for verification at the waste acceptance stage is entered on the COS by the IWA (Sales) and the Waste Declaration Form which is issued to the inspecting Site Chemist.

The following forms as a minimum shall be stored:

- COS (Cost of Sales form).
- Official or email Quote with evidence of customer declaration.
- Pre-acceptance analysis or MSDS (as required).
- Waste Declaration Form
- Waste Acceptance Form

**The full technical assessment is carried out and approved, only by Technical Dept.**

### **Lab Smalls**

Where possible, in all instances FWM will endeavour to provide a full, compliant Technical service supported by qualified Chemist and DGSA (Dangerous Goods Safety Advisor) for the correct packaging of “lab smalls”. This will include:

- Initial documentation / listing of the materials.
- Creation of compliant segregation lists.
- Support on completion of Waste Declaration Forms.
- Supply of consumables – compliant drums / “overpacks” and packing media.
- Compliant transport labelling.
- Waste documentation and supporting inventory.
- Compliant physical packing of the materials for loading, transport and unloading.

For Lab Small packed by the Producer, the following information must be supplied by the Producer / IWA (Sales) in conjunction with Technical Dept. (Technical Manager, Senior Site Chemist, Site Chemist):

- The information required to complete Waste Declaration Form.
- What chemicals are prohibited by FWM permit (e.g. radioactive chemicals, Clinical wastes, explosives,)
- How to identify the waste laboratory chemical.
- How to establish and record the hazards posed by the chemical.
- Supporting documentation required (e.g. manufacturers data, material safety data sheets).
- Segregation guidance to avoid mixing of incompatible wastes in the same drum.
- How to physically pack the chemicals.
- The required information to accompany the waste.
- The preparation of the “overpacks” to ensure compliant loading, transport and unloading.

**Any discrepancies will be documented and communicated via email to the Producer / IWA (Sales) and the materials will not be progressed to booking / acceptance until the items have been fully assessed and cleared / reworked and approved by Technical Dept.**





### **3. Booking of inbound wastes into site**

The outbound disposal / recycling route will be detailed on the Waste Acceptance Form. The defined disposal / recycling route will be suitably approved via Control of Contractors criteria and all relevant documentation recorded on the Approved Suppliers List.

When the waste is approved for acceptance, a booking will be created specifying when the waste can be accepted at the site and will allow an appropriate time for the unloading, inspection and sampling of the waste. A booking will be requested from Operations and confirmed by Technical Dept. A Waste Booking Form will be completed and the booking will be entered, by Operations on the operational software system (ISYS).

Wastes will be appropriately designated for storage by waste type and hazardous / non-hazardous classification in segregated bays (Toxic, corrosive, basic etc.). These storage locations will be detailed on the Waste Booking Form. All records will be retained for a minimum of 3 years and will be stored on both hard copy and digitally.

Servers are backed up on a weekly basis.



## ACCEPTANCE, STORAGE AND HANDLING PROCEDURE

### Purpose

To ensure that waste legislation, the requirements of SGN 5.06, and the Environmental Permit are complied with to prevent the acceptance of unsuitable wastes for storage and / or onward processing.

### Scope

Forward Waste Management Ltd, East Moors Rd Hazardous Waste Transfer Station.

### Responsibility

Technical Manager

Senior Site Chemist

Site Chemist

Industrial Waste Analyst (Sales)

### Records

ISYS

Insert Internal Chain of Custody form

COS

MID (Material Identification Doc – Sampling)

Waste Declaration Form (to be created)

Waste Booking Form

Waste Acceptance Form – **includes: Load inspection, paperwork compliant, location of waste, sampling regime.**

Waste tracking system

COS -> MID (If required for samples) + Chain of Custody (if required for samples) -> Waste Declaration Form -> Waste Booking Form -> Waste Acceptance form

## 1. Load Arrival

### **On arrival, all loads will:**

- be weighed, unless alternative reliable volumetric systems linked to specific gravity data are available
- not be accepted into site unless there is a sufficient storage capacity and the site is adequately manned to receive waste.
- have all documents checked and approved, and any discrepancies resolved before the waste is accepted.
- have any labelling that does not relate to the contents of the drum removed before acceptance for unloading is approved.
- Have pre-acceptance confirmation of a costed and approved onward disposal / recycling route.
- All wastes (hazardous / non-hazardous) should only be received under the supervision of a suitably qualified person. (HNC qualified chemist or above).



The procedural management of acceptance of incoming waste is undertaken by a suitably qualified Site Chemist / Senior Site Chemist. The acceptance of waste comprises four stages:

- Checking of paperwork,
- 1<sup>st</sup> stage inspection from the ground before unloading,
- Inspection of the delivery after unloading
- Sampling, verification and testing

On arrival at the site, the driver of the delivery vehicle will be required to provide the load delivery paperwork which will include part or all of the following:

- Delivery note
- Consignment note – mandatory for Hazardous waste
- Duty of Care transfer note – mandatory for all wastes
- Batch list

## **2. Load inspection and Receipt**

On arrival, the vehicle will be required to be weighed in and the tare, gross and nett weights recorded on a weight ticket.

The accompanying waste documentation (Waste Transfer Note, Consignment Note etc) will be compared to the Waste Booking Form for the to ensure that the description and quantities of the waste delivered is consistent with the waste booked.

The process will be undertaken by a Site Chemist or another trained person. If the documentation is not consistent with the details on the Waste Booking Form, a non-conformance will be raised in accordance with - 6. Non Conformance Procedure.

Before off-loading the vehicle, a 1<sup>st</sup> stage inspection supervised by the Site Chemist will be conducted. The Site Chemist will ensure that the any relevant health and safety instructions are followed and that the load is visually inspected from the ground to determine the condition of the load.

Checks will include, for packaged waste - stability, compatibility, condition of containers, seepages and odour to the extent that can be observed from the ground. Any waste that is determined unfit for transport or presenting a risk to the site shall be dealt with on site in accordance with - 6. Non Conformance Procedure and appropriately packed in line with ADR / CDG.

Once the 1<sup>st</sup> stage checks are completed, the waste will be offloaded into the bunded reception area where it is inspected and sampled (inspection, unloading and sampling area is designated on the site plan as "Inbound waste reception").

Non-hazardous items will be identified and these will be placed into a separate row / area within the reception area.

Each container will be inspected to ensure that it is in a fully sound condition, correctly orientated, with all lids capped and valves closed and that there is no critical damage present. Each waste



container will then be verified against the description provided on the paperwork (WTN, CN and Waste Booking Form) and sampled where necessary. The technical information / analysis data will be compared (where applicable) to the specification detailed in the Waste Declaration Form.

Inbound wastes will not be stored in the waste reception area for longer than 3 hours prior to commencement of sampling and ongoing storage – such storage will be for a maximum of 5 days.

Waste will not be offloaded into the reception area unless sufficient space is available to safely and appropriately assess such loads. Inbound waste booking will be controlled in full by the Technical Dept.

### **3. Sampling**

Every waste container will be suitably sampled and a core sample obtained. For compatible liquids of the same “product” or “line” a composite sample will be suitable.

The Chemist will ensure that all lids or caps etc are closed after a sample is obtained.

The sample analysis will be compared to the pre-acceptance documentation to ensure the waste is consistent with preliminary assessments. Any non-conforming containers will be documented in line with 6. Non-Conformance Procedure.

Samples will be retained for a minimum of 2 days after the waste and its residues have left site.

The sampling regime for each load is recorded on the Waste Acceptance Form.

### **4. Storage**

The accompanying paperwork will detail the relevant reference number (FWMID) for each “product” or “line” and this will be applied to each container via a label detailing

- The unique FWMID number
- The arrival date
- Primary hazard (eg Class 3 – Flammable Liquid / Non hazardous).
- Location of storage (eg Bay number)
- Chemical identity
- EWC Code
- 

Each container should be stored so that the label is easily accessible.

Any non-hazardous, clean and uncontaminated packaging such as cardboard / LDPE / film / paper / wood etc will be transferred to EMR1 baling facility.

Load documentation will be compiled and retained in hard copy and digitally in server location



The location of each item will be recorded in the Waste Acceptance Form and within the waste tracking system.

Each container will be segregated and stored in the appropriate bay, assigned by its combustibility and its hazard class and will remain segregated until assigned to an outbound load for off-site processing. All liquids will be stored on bunded platforms.

Non-hazardous wastes will be segregated and stored in the appropriate bays or storage vessels e.g. WEEE non hazardous skip.

## **5. Waste Tracking System**

The Waste Tracking system will hold the records relating to:

- Date of arrival on-site of wastes.
- Producers details.
- All previous holders.
- The unique reference number (FWMID).
- The EWC code.
- Pre acceptance and acceptance analysis and assessment results.
- Package type and size.
- Intended treatment/disposal route.
- Record accurately the nature and quantity of wastes held on site, including all hazards and identification of primary hazards.
- Where the waste is physically located in relation to a site plan.
- Where the waste is, in the designated disposal route.
- Identification of staff who have taken any decisions regarding acceptance or rejection of waste streams and have decided upon recovery / disposal options.

All hard copy documents will be retained for a minimum of 5 years. These will be stored in the site office.

All digital records will be stored at the Office facility located at Forward House, East Moors Road and will be retained on the company server which is backed up on a weekly basis.

## **6. Non-conformance Procedure**

If at any point in the process chain a waste stream / waste container is found to be non-compliant to either site permitted requirements or to the original producer declaration / pre-acceptance assessment, it shall be determined as a non-conformance.

The waste will be routed to the appropriate quarantine area on site and labelled / stored.

If appropriate, the Site Chemist will store non-conforming items in the area of the site appropriate to the waste (eg by Hazard Class). If, In the event that the nature or condition of the waste is such that



it cannot be quarantined safely with other waste, it will be placed and separated in the quarantine facility on a dedicated bund and such storage should be for a maximum of five working days.

As soon as practicable after the waste has been quarantined, the appropriate Sales Representative / Customer Account Manager shall be contacted and arrangements made to either:

- retest the waste stream to validate acceptability to site if differing from the original producer declaration / pre-acceptance assessment; or
- reject the waste from site.

In the case of retesting waste, should the analysis required be outside of the scope of the sited laboratory, the appropriate accredited laboratory shall be provided with an acceptable sample without delay and the necessary chain of custody protocol followed. If it becomes apparent due to laboratory turn-around times that the 5 day maximum period cannot be met, the regulator will be contacted without delay to seek approval to extend the time period. This action will be recorded in the site diary. If the extension request is denied the waste must be rejected from site within the 5-day storage limit.

Once the non-conformance is concluded, the relevant Sales Representative / Customer Account Manager will be contacted to resolve any cost implications or a return of the waste to the Producer. All actions and conclusions will be recorded on the Non-Conformance Form and any service-related issues recorded.

#### **Specifically, for Lab Smalls**

If on opening a drum it is found that it contains incompatible substances, or that the substances have not been packaged adequately, then the drum will be non-conformed and documented in line with 6. Non-Conformance Procedure. The drum will be placed in the quarantine area to be sorted and repacked immediately by a suitably qualified Chemist and the non-conformance procedure followed.

Sorting and repackaging of laboratory smalls should take place in a dedicated area (quarantine area).

Once the wastes have been sorted according to hazard classification, with due consideration for any potential incompatibility problems, and repacked, then these drums should be removed to the appropriate storage area, defined by the appropriate hazard class.

#### **Specifically, for crushing of steel empty tins**

Empty steel tins (previously containing paint, solvents, glues etc) will be assessed for crushing suitability by the Chemist / Senior Site Chemist. Excess residues will be transferred to a UN Approved 205lt drum and stored in the bunded area within the FPP area for flammable liquids.

Once assessed, the suitable tins will be placed in the tin crushing area and assigned for crushing. Once crushed, they will be transferred to the FEL for storage and bulking prior to removal from site.

## Forward Waste Management Hazardous Waste Transfer Station

Issue 1.0 25/03/20 Created by – WL (Tech Manager)

Approved by – ND (COO)



**Bulk liquid wastes (via road tanker / portable tank etc) are not permitted for acceptance and discharge.**



## **LIQUID BULKING PROCEDURE**

### **Purpose**

To ensure that Waste Legislation, the requirements of SGN 5.06, and the Environmental Permit are complied with to prevent the removal, loading or delivery of unsuitable wastes for onward processing.

### **Scope**

Forward Waste Management Ltd, East Moors Rd Hazardous Waste Transfer Station.

### **Responsibility**

Technical Manager  
Senior Site Chemist  
Site Chemist

### **Records**

ISYS  
Waste Tracking System

### **Generic Bulking Procedure**

1. The appropriate road tanker will be arranged and booked to attend site and remove liquids from identified containers on an agreed date.
2. The nominated and labelled batch containers will be arranged in the reception area on the day of collection prior to the arrival of the tanker.
3. Each container will be checked against the batch list and confirmed.
4. On arrival, the road tanker Operator / Driver will weigh in and attend the Site Office and report to the Site Chemist / Senior Site Chemist for approval to enter the Bulking Zone. They will provide a tank cleaning certificate when applicable.
5. The vehicle will safely reverse into the Bulking bay, only under the direction of a banksman.
6. The vehicle will halt in the correct position, apply braking and switch off the main engine. Chocks will be placed in order to prevent accidental movement of the vehicle during loading.
7. The Operator / Driver will don the appropriate PPE and connect the suitable pipework and valve assemblies to the rear inlet valve of the barrel.
8. The earthing system will be engaged and checked.
9. The nominated and labelled batch containers will be presented one pallet / IBC at a time to the designated and bunded area for the Operator / Driver to insert pipework and remove the liquid via vacuum barrel operation. Any containers not bearing a Batch Label will not be presented for loading and will be placed in the quarantine area for assessment by the Site Chemist / Senior Site Chemist.
10. During the operation the sample valve will be used to obtain samples for temperature assessment. FOR ACID / ALKALI BULKING THE pH MUST ALSO BE MONITORED.
11. Once batch container/s have been emptied. The empty container/s will be returned to the Reception Area.
12. The process will be repeated until the full composite load is transferred to the road barrel.





13. The Driver / Operator will vent and purge pipework and return it to the storage points on the vehicle. All valves will be closed and checked, the earthing system will be dis-engaged.
14. Wheel chocks will be removed and the vehicle will mobilise to the weighbridge for a second weight.
15. Paperwork will be completed by all parties and copies retained by the Site Chemist / Senior Site Chemist.

### **Oils**

Drums / IBC's containing oils will be identified using FWMID numbers and analysed via GC to determine their properties and appropriately assessed for compatibility in preparation for bulking via road tanker.

An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids and water, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases.

Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC's will be labelled with a Batch Label and arranged for collection by an approved supplier for bulking and onward treatment / disposal. The source drums / IBC's will be updated on the Waste Tracking System upon collection to remove them from the live stock.

Loading via road barrel of the nominated batch will be conducted as per "Generic liquid bulking procedure".

Oils will be transported as "not classified as dangerous by road"

### **Chlorinated oil**

Drums / IBC's containing Chlorinated oils will be identified using FWMID numbers and analysed via GC to determine their properties (such as Chlorine content) and appropriately assessed for compatibility in preparation for bulking via road tanker.

An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids and water, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases.



Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC's will be labelled with a Batch

Label and arranged for collection by an approved supplier for bulking and onward treatment / disposal. Due to the nature of Chlorinated oils this may remain in drums / IBC's for consigning from site.

Loading via road barrel of the nominated batch will be conducted as per "Generic liquid bulking procedure" detailed above

Chlorinated oils will be transported under UN 3077 PGIII Environmentally Hazardous Substance, Liquid.

### **Oily water**

Drums / IBC's containing oily waters will be identified using FWMID numbers and analysed via GC / XRF to determine their properties and appropriately assessed for compatibility in preparation for bulking via road tanker.

An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids and water, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases.

Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC's will be labelled with a Batch Label and arranged for collection by an approved supplier for bulking and onward treatment / disposal.

Loading via road barrel of the nominated batch will be conducted as per "Generic liquid bulking procedure".

Oils will be transported as "not classified as dangerous by road"



### **Aqueous non-hazardous liquids**

Drums / IBC's containing aqueous non-hazardous liquids will be identified using FWMID numbers and analysed via XRF / bench test to determine their properties and appropriately assessed for compatibility in preparation for bulking via road tanker.

An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases.

Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC's will be labelled with a Batch Label and arranged for collection by an approved supplier for bulking and onward treatment / disposal. The source drums / IBC's will be updated on the Waste Tracking System upon collection to remove them from the live stock.

Loading via road barrel of the nominated batch will be conducted as per "Generic liquid bulking procedure".

Aqueous non-hazardous liquids will be transported as "not classified as dangerous by road"

### **Corrosive Acidic Liquids**

Drums / IBC's containing corrosive acidic liquids will be identified using FWMID numbers and analysed via XRF / bench test to determine their properties and appropriately assessed for compatibility in preparation for bulking via road tanker.

An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases. The pH will be monitored and balanced.

Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC's will be labelled with a Batch Label and arranged for collection by an approved supplier for bulking and onward treatment / disposal. The source drums / IBC's will be updated on the Waste Tracking System upon collection to remove them from the live stock.



Loading via road barrel of the nominated batch will be conducted as per “Generic liquid bulking procedure”.

Corrosive acidic liquids will be transported under their specific UN number and proper shipping name if the acid type is known (Hydrochloric / Phosphoric acid etc).

If the acid is non-specific, then a generic UN number and proper shipping name will be used and the packing group assigned from the known percentage concentration of the components.

### **Corrosive Basic (alkali) Liquids**

Drums / IBC`s containing corrosive basic liquids will be identified using FWMID numbers and analysed via XRF / bench test to determine their properties and appropriately assessed for compatibility in preparation for bulking via road tanker.

An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases. The pH will be monitored and balanced.

Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC`s will be labelled with a Batch Label and arranged for collection by an approved supplier for bulking and onward treatment / disposal. The source drums / IBC`s will be updated on the Waste Tracking System upon collection to remove them from the live stock.

Loading via road barrel of the nominated batch will be conducted as per “Generic liquid bulking procedure”.

Corrosive basic liquids will be transported under their specific UN number and proper shipping name if the base type is known (Sodium Hydroxide etc).

If the base is non-specific, then a generic UN number and proper shipping name will be used and the packing group assigned from the known percentage concentration of the components.

### **Flammable solvent liquids**

Drums / IBC`s containing flammable liquids will be identified using FWMID numbers and analysed via GC to determine their properties (such as Chlorine content and will have their Flash Point determined) and appropriately assessed for compatibility in preparation for bulking via road tanker.



An appropriate sized core sample will be obtained from each source and a composite sample created from all nominated containers. The composite sample should be homogenous, free from solids and water, it should not exhibit any form of reaction (such as evolved gases, temperature changes, polymerisation or viscosity change, separation or precipitation of solids, odour etc) and not consist of separation phases.

Any source containing incompatible or unsuitable material will be removed from the potential composite assessment and identified and labelled accordingly.

Only materials of Packing Group II (flash point >23 degrees C and boiling point > 35 degrees C) and III (flash point >23 degrees - <65 degrees C and boiling point > 35 degrees C) are permitted for bulking.

**Materials of Packing Group I (boiling point <35 degrees C) will not be permitted for bulking. Weather conditions will be taken into account for the bulking of any flammable liquids.**

Once a successful composite sample has been created, this will be signed off by the Senior Chemist and updated on the Waste Tracking System. The source drums / IBC's will be labelled with a Batch Label and arranged for collection by an approved supplier for bulking and onward treatment/disposal.

Due to the nature of flammable liquids this may remain in drums / IBC's for consigning from site. Loading via road barrel of the nominated batch will be conducted as per "Generic liquid bulking procedure".

Due to the complexity of the components, flammable liquids will be transported under UN 1993 Flammable Liquid N.O.S and the Packing Group assigned from the flash point testing in line with ADR principles of classification.



## OUTBOUND WASTE PROCEDURES

### **Purpose**

To ensure that Waste Legislation, the requirements of SGN 5.06, and the Environmental Permit are complied with to prevent the removal, loading or delivery of unsuitable wastes for onward processing.

### **Scope**

Forward Waste Management Ltd, East Moors Rd Hazardous Waste Transfer Station.

### **Responsibility**

Technical Manager  
Senior Site Chemist  
Site Chemist

### **Records**

ISYS

Waste Acceptance Form – **includes : Load inspection, paperwork compliant, location of waste, sampling regime.**

Waste Tracking System

## **1. Overview**

Prior to any wastes being received for acceptance and storage on site, compliant and commercially viable options for onward processing, recycling or disposal will be sourced.

Full technical information and any samples required will be obtained in advance via the OCP PRE ACCEPTANCE / ACCEPTANCE procedures.

Potential Suppliers will be engaged to determine suitable and environmentally reputable consignees that can provide stable, consistent and commercially proficient acceptance routes for all outbound wastes.

Once a suitable Supplier has been established and all necessary Approve Supplier procedures (ISO 9001) are met, the potential site will be approved for delivery of wastes.

Where applicable, samples will be provided to Suppliers and / or a site visit will be arranged for the Supplier to assess potential wastes for receipt.

In order to maximise stock efficiency, Suppliers will be selected by compliance, capability, availability for stock, location and commercial viability.

Where possible, a contractual agreement will be made including terms for agreed delivery slots within a set time period.



Control of all aspects of outbound movements of wastes and for any materials being removed from site:

1. Identifying wastes / materials suitable for removal.
2. Further analysis to identify chemical components etc.
3. Liaising with Suppliers (Consignees).
4. Assigning waste to outbound loads.
5. Arranging delivery slots and requesting transport bookings.
6. Creation of transport documents and labels.
7. Overseeing the movement / relocation of stock assigned to outbound loads.
8. Inspection and labelling of stock assigned to outbound loads.
9. Overseeing the loading of stock assigned to outbound loads.
10. Completion of paperwork.
11. Updating of operational software.
12. Updating of the Waste Tracking System.
13. Management of any non-conformances raised.

**This will be solely managed by the Technical Dept (Senior Site Chemist / Site Chemist / Technical Manager DGSA).**

## **2. Procedure**

Wastes will be located via the Waste Tracking System and assigned to an outbound "Load". During this process, required documentation (consignment note) and labelling (transport labelling) will be raised.

Suitable transport will be organised, and the collection added to the operational software with all relevant purchase orders and data entry completed,

Selected wastes will be assembled in the Waste Reception Area, immediately prior to loading to allow for:

1. Container inspection – assuring package is suitable for transport by road and all required closures are secured.
2. To remove FWM container labelling to facilitate stock changes on the Waste Tracking System.
3. To adhere suitable ADR transport labelling as required.
4. Carry out any load stabilisation such as shrink-wrapping or pallet configurations.

*Any non-conformances raised will be documented and managed via the non-conformance procedure.*

Wastes will then be loaded onto the vehicle and relevant documents completed. The vehicle will then be weighed and recorded.

Operational software and Waste Tracking System will be updated accordingly.



### **3. Assigning wastes to outbound loads.**

Waste will be assigned to Suppliers using (but not limited to) the following criteria:

#### **Class 3 (Flammable Liquids) / Class 4.1 (Flammable Solids)**

Clean, liquid, flammable solvent-based waste which can be recovered or recycled will be routed to appropriate recovery facilities for reclamation and recycling into new products.

Heavily contaminated, liquid / solid solvent-based wastes which cannot be recovered or recycled will be routed to appropriate reprocessing facilities for use as secondary fuels or kiln fuels.

#### **Class 8 (Corrosive Acidic) Liquids / solids**

Clean, liquid aqueous acids will be routed to appropriate physico-chemical treatment facilities for recovery and re-use where possible.

Heavily contaminated liquid aqueous / solid acid wastes will be routed to appropriate physico-chemical treatment facilities for treatment such as metal recovery and/or neutralisation.

#### **Class 8 (Corrosive Basic) Liquids / solids**

Clean, liquid aqueous basic materials will be routed to appropriate physico-chemical treatment facilities for recovery and re-use where possible.

Heavily contaminated liquid aqueous / solid basic materials will be routed to appropriate physico-chemical treatment facilities for treatment such as metal recovery and/or neutralisation.

#### **Class 9 (Misc) Liquids / solids (primarily Environmentally Hazardous)**

Wastes such as (but not limited to) :

- Drummed or overpacked env haz glues / mastiks etc.
- Articles contaminated with env haz glues / mastiks etc/oils / Chlorinated oils.
- Chlorinated oil liquids.
- Drummed or overpacked hardeners etc.

These will be routed based on potential for reprocessing and / or blending via an Approved Supplier.

#### **Misc Hazardous wastes**

Wastes such as:

- Waste non-hazardous packaging / pallets etc prior to reprocessing at EMR1 Non haz TS.
- Waste hazardous packaging – crushed / non-crushed.





- WEEE wastes.
- Oils – (these will be segregated from other wastes within the bay).
- Solid / liquid wastes deemed non-hazardous by WM3.
- Aerosols.
- Sludges.
- Dusts.
- Contaminated textiles will be directed to EMR1 for baling and storage.

These will be routed based on potential for reprocessing and / or blending via an Approved Supplier.

#### **Class 5 & 6.1 (Toxic) Liquids / solids**

Wastes such as (but not limited to):

- Pesticides / insecticides.
- Toxic liquids from industries such as surface metal finishing, photographic etc.
- Non specific toxic liquids / solids.

These will be routed based on potential for reprocessing via an Approved Supplier.

#### **Aerosols**

Storage area for used / spent or full aerosol containers in vented closed containers. Stored prior to delivery to an Approved Supplier for recycling.

**EXAMPLE WASTE TRACKING SYSTEM - PAGE 1**

[illegible]

[illegible][illegible]

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# **APPENDIX IV**

## **SOLUTEX CAN COMPACTOR 206**

### **MACHINERY SPECIFICATION**

# Solutex Drum Compactors

## CAN CRUSHER

Pneumatic Can crusher for cans up to 30 litre capacity. Semi-automatic cycle. Fitted with safety interlock.

## HIGHLIGHTS

Economic unit ideal for paint tins

ATEX Approved II 3GD

Easy to use

Ideal for small workshops, car bodyshops etc

## INSTALLATION

Supplied ready to use,

Simply connect to compressed air supply.

## CONTACT US

For more information on any of our products or services please contact us :



[info@solutex.co.uk](mailto:info@solutex.co.uk)



+44 (0) 1691 622225



Reduce  
waste



Specification	
Compaction force	1600 kgs at 8 bar
Compaction cycle	Semi-automatic
Cycle time	25 secs
Compaction chamber size	370 x 350 x 580 mm high
Overall dimensions	500 x 450 x 1780 mm high
Weight	100 kgs
Power	Pneumatic

[www.solutex.co.uk](http://www.solutex.co.uk)



Can Compactor 206

2020