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Leixlip Water Treatment Plant Upgrades – Phase 2B

Waste Management Plan

Document Title: Leixlip Water Treatment Plant Upgrades – Phase 2B					
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1.0 Project Overview and Scope of Works

Leixlip Water Treatment Plant is the second largest Water Treatment Plant (WTP) in Ireland, abstracting raw water from the impoundment reservoir behind the ESB-controlled dam on the River Liffey at Leixlip. Following screening, raw water flow is split and routed through two separate treatment processes; namely, the “Old Leixlip WTP” and the “New Leixlip WTP”.

Both the Old and New WTPs consist of coagulation, flocculation, sedimentary clarification, rapid gravity filtration, chlorination and fluoridation. Neither the Old nor the New Leixlip WTPs have functioning process elements pre- coagulation to supress high alkalinity and facilitate the optimisation of coagulation pH. Similarly, neither the Old nor the New Leixlip WTPs have facilities to raise the pH of the final treated water, thereby facilitating plumbosolvency control of water within their distribution networks.

The Old Leixlip WTP is further sub divided into two process streams, which are referred to by the names of the original designers/builders. The 20 no. hopper bottom sedimentary Clarifiers and Filters 1 to 12, first constructed in 1974, are referred to as the Patterson Candy International (PCI) filters. A further upgrade was built and commissioned by Mahon McPhilips (MMP) in the 1990’s. The new flat-bottomed sedimentary clarifiers and Filters 13 to 15, constructed in 1988, are known as the MMP plant.

The New Leixlip WTP, which was built by Aecom and completed in 2014, has a production capacity of 80ML/d. The average cumulative daily production of both WTPs in 2018 was 191,000m^3/day or 191Ml/d, supplying approximately 615,000 consumers. The operation of the plant is carried out by Fingal County Council on behalf of Irish Water under the Service Level Agreement (SLA).

The imposition of 2 boil water notices in late 2019 has meant that operational issues on both streams needed addressing. These issues are currently being advanced through two phases. The first phase, which is currently ongoing as emergency works, is the installation of a UV disinfection system to address the protozoal log credit removal deficit when treating the Liffey source water. The phase 2 project objectives are to address critical protozoa (barrier 4), interruption to supply (barrier 5), trihalomethanes (barrier 6) and plumbosolvency (barrier 8) issues at the Leixlip WTP, which will reduce significant risks to public health.

Scope of works:

- Installation of new sulphuric acid pH adjustment to allow a reduction in the coagulation pH for both the Old and New WTPs;
- Installation of two coagulant control systems on the MMP and PCI streams;
- Installation of new final water pH correction to raise the final water pH for both the Old and New WTPs including de-alkalinisation and air blower system;
- Installation of site telemetry and SCADA for control and alarms;
- Construction of buildings and kiosks as required;
- Demolition of existing carbon building and workshop;

- Construction of new workshop. Fit out to be like-for-like replacement with equipment transferred where possible;
- Introduction of orthophosphate treatment;
- Provision of jar testing as required;
- Carry out initial scoping report for the electrical upgrade;
- Provision of lime dosing lines to the North Kildare supply.

2.0 Programme

Works are currently scheduled to commence in August 2022 with a scheduled duration of approximately 78 weeks. All relevant licences, permits to work and other statutory obligations will be applied for and received where required prior to relevant work phases. All applications shall be made in a timely manner as to avoid disruption to the works schedule and enable an efficient workflow. Glan Agua Ltd will apply for all necessary licences and permits-to-work before works commence. These shall be applied for early to allow the Authorities involved to process them in a timely manner, in accordance with the programme.

2.1 Works Sequence

The sequence of works will be as follows;

Early Works

- Design of package and submittal
- Application for all relevant licences, statutory obligations and permits
- Procurement of required materials
- Selection and engagement of required sub-contractors

Design Build

The Phase 2 Contract involves the upgrade of the existing WTP in order to achieve a combined throughput of 12,500m3/hr at the Leixlip WTP (Old & New WTP Processes). See Section 1.0 for summary of scope of works.

Operation Service

The Contract does not involve an Operations Service Period.

3.0 Stakeholder Liaison

In order to successfully complete the project Glan Agua Ltd will liaise with the following stakeholders amongst others

Gas Networks Ireland
Where cables belong to Gas Networks Ireland, are in the path or adjacent to the line of the proposed ducting routes or buildings, Glan Agua Ltd shall consult with the responsible authority prior to the commencement of pipe laying operations and submit detailed method statements for approval by the Employer's Representative. Written permission will be granted for works within the wayleave

EPA
It is anticipated that no interaction with the EPA will be required for the project

Ecology
It is not anticipated that an ecologist will be required to oversee any works. Glan Agua shall carry out works in strict adherence to environmental regulations.

ESB
Existing Underground Services maps requested and site investigations carried out.

EIR
Where Eir overhead lines are present, they will require protection and delineation where appropriate.
Existing Services maps requested to ensure there are no buried lines in the area

Fingal County Council
Consultation with IW & FCC to avoid disruption to operation of the live WTP.

Local Residents, Landholders and General Public
Completion of a letter drop to all local residents

4.0 Site Supervision

Contract Director	
Karl Zimmerer	Tel: 086 8149348
As a director of Glan Agua Ltd, he has the responsibility for ensuring all aspects of Glan Agua Ltd Quality Control, Health and Safety and general management of the contract are adhered to. He shall call to site weekly and will be present for all meetings with the client and client's representative.	

Contract Manager	
Ronan Butler	Tel: 086 8503195
In charge of the overall management of the contract. He shall be present for all meetings with the client and client's representative.	

Project Manager Civil	
Conall Greally	Tel: 086 7775582
Working under the direction of the Contract /Manager, he/she shall be responsible for ensuring that the Glan Agua Ltd Works are carried out productively, safely and to the required standards set out in the contract. He shall be full time on site and will be responsible for the day to day management of site.	

Project Manager MEICA	
Kenneth Kearns	Tel: 086 1301844
Working under the direction of the Contract /Manager, he/she shall be responsible for ensuring that the Glan Agua Ltd Works are carried out productively, safely and to the required standards set out in the contract. He shall be full time on site and will be responsible for the day to day management of site.	

HSQE Advisor	
Bruce Steele	Tel: 087 262 1032
As Health, Safety, Quality and Environmental Advisor of Glan Agua, he shall call to site regularly to advise and instruct the site team on measures to ensure compliance with internal standards and legislative requirements on HSQE matters.	

Resident Engineering Staff
Pearse Cassidy Eamon Connolly

5.0 Introduction

The Waste Management Plan describes how waste will be managed during the Contract (Leixlip WTP Upgrades Phase 2) and specifies controls that will be implemented on site. The purpose of the Waste Management Plan is to:

- To help ensure compliance with legal and contract requirements.
- To act as a site guide for staff to ensure waste is dealt with appropriately.
- To control and, where possible minimise, the environmental impacts of the waste.
- To minimise the risk of causing pollution or a nuisance and associated costs and delays.
- Defines the main guidelines and procedures to be adopted by Glan Agua Ltd to ensure the effective management, reduction where possible and appropriate disposal of waste material generated during the completion of the project.
- The Waste Management Plan has been produced to set out controls that when implemented will ensure that all Client and applicable regulatory requirements for the proposed works at Leixlip.

6.0 Waste Management

Waste is defined in Section 4(1) of the Waste Management Acts 1996 and 2001 as “any substance or object belonging to a category of waste specified in the First Schedule (of the Waste Management Act) or for the time being included in the European Waste Catalogue which the holder discards or intends or is required to discard, and anything which is discarded or otherwise dealt with as if it were waste shall be presumed to be waste until the contrary is proved.”

At the start of the project the Management Team, must identify types and categories of wastes likely to be generated by all activities together with a broad indication of the likely quantities. It is best practice to address waste management issues within the project planning, or pre-contract stage, as this allows scope for waste prevention and recycling aspects in the subsequent phases of the project.

If appropriate disposal methods need to be implemented, this should be discussed and responsibility assigned. Prior to the appointment of a Waste Contractor for removal of the waste off-site, the Project Manager must consult F-10-055-G - Register of Approved Supplier - Subcontractor - Waste Contractor to ensure that the Waste Contractor is on our approved list. If they are not currently approved, a copy of their waste collection permit and waste licence will have to be obtained prior to appointment.

C&D waste statistics from 2018 published by the EPA identify the main waste types generated in the construction industry in Ireland as set out in Table 2.

Prior to the commencement of any demolition, excavation or construction works at the site, a full audit of waste that will be generated on site will be carried out. For the purposes of this CEMP a list of expected waste types that may be generated has been drawn up and the European Waste Catalogue Codes pertaining to each waste type is included in the table below which identifies the main waste types generated in the construction industry in Ireland.

Waste Type	% of total (by weight)
Metal	3%
Segregated Wood, glass & plastic	<1%
Bituminous mixtures	1%
Mixed waste	7%
Concrete, bricks, tiles and similar	12%
Soil and stones	77%

An asbestos survey has been undertaken at the sites in 2021 in the existing workshop and carbon building for the purposes of identifying asbestos containing materials in the premises(s) prior to the refurbishment of the area. There were small amounts of asbestos identified in the survey which can be found in the report. These materials and any asbestos containing materials identified below-ground during the works, will be dealt with in accordance with the relevant current legislation.

The existing workshop and carbon building are to be demolished. These are concrete/block structures with concrete floors. Therefore, the majority of demolition waste material will be concrete rubble and some metal pipework, timber and access platforms.

There will be ducting laid beneath existing roadways. This may generate relatively low levels of waste bituminous materials. These shall be segregated, stored on site, and disposed of the proposed licenced facility.

During construction works, outside of the excavation proposed, waste material will be generated mainly from material off-cuts and packaging. The typical waste materials generated again will be concrete rubble, metals, wood, and plastics.

Other waste types generated in smaller quantities on construction sites may include materials such as waste oils, resins, paints, and adhesives. Some of these materials may be hazardous and will require specific handling procedures. It is expected that quantities of these materials will be small.

7.0 Excavation Waste

It is expected that soil and stones waste typically make up a significant proportion of C&D waste.
The proposed development will involve significant excavations for the proposed workshop, lime dosing building and acid dosing building as well as ducting works. Excavation of soil and rock shall be required at this site. It is anticipated that the volume of excavation soil and rock will be in the region of 2250m3. It is expected that the excavated materials will be stockpiled locally and re-used.

8.0 Demolition Management

An outline decommissioning plan for the proposed development which sets out the elements of the site which are to be demolished and the outline sequence of these works in the context of the project is provided below.

All redundant Mechanical & Electrical (M&E) equipment in both buildings shall be decommissioned and removed for disposal.

Following decommissioning and removal of the M&E equipment, the existing buildings shall be demolished and removed from site for disposal.
This element of the demolition works will involve heavy structural demolition which will mostly generate concrete rubble waste and metal waste. It is expected that rigid trucks will be used to remove these larger waste volumes from the site. It is expected that concrete slabs will be cut into c. 1m2 sections and lifted into awaiting truck.

9.0 WASTE HANDLING

9.1 On-Site Waste Management

To ensure that waste management is given adequate consideration throughout the demolition and construction phases, the main contractor will appoint a Waste Manager who will have overall responsibility for implementing this C&DWMP, ensuring that the project remains in compliance with waste legislation.
As a primary measure, waste generation will be avoided, where possible, by ensuring that an excess supply of building materials is not delivered to the site and that only the minimum materials required to meet the construction schedule are available on-site. This will reduce the potential for damage and re-ordering materials which will save on project costs. The ‘Just-in-time’ delivery concept will be applied, where possible, to minimise waste creation.
Maximum segregation of waste materials on-site will be carried out to increase the off-site potential for materials. Skips of varying sizes will be provided strategically around the site to promote source segregation and avoid rubbish build-up and potential for off-site littering. A waste compound shall be set up adjacent to the site

such that skips are located close together which helps promote source segregation and aids collection of skips by the waste contractor. Please refer to Figure 4 for details of the proposed compound location.

All skips will be maintained in good condition and clearly labelled so that there is no confusion as to what materials are to be placed in which skip. The main contractor will appoint an employee to keep the area around the skips clean and to ensure skips are not overflowing with waste.

Waste materials such as gypsum, WEEE, batteries or hazardous waste may require covered skips or containers to prevent contaminated run-off in the event of getting wet. Dedicated bunded storage areas will be provided for storage of liquid wastes such as resins, oils, paints etc.

Bituminous materials shall be segregated, stored on site, and disposed of the proposed licenced facility.

Figure 1 – Proposed on-site waste management locations

9.2 Off-Site Waste Management

The Contractor will appoint a suitably permitted waste contractor(s) to collect waste from the site and transfer to appropriately permitted or licensed waste facilities. It is not possible at this point to identify who the waste contractor(s) will be or to provide their waste collection permit number(s). Similarly, the appointed waste contractor(s) will typically determine the facilities where C&D waste will be taken to. Upon appointment of a waste contractor, details of the waste collection permit(s) and chosen waste facilities will be provided to Fingal County Council. Written confirmation of the acceptance of the material at the chosen facilities will also be obtained and provided to Fingal County Council.

It is anticipated that the majority of excavated soil and stone materials will be stockpiled locally on site and re-used.

Such materials will be tested to provide a classification for off-site recovery or disposal in accordance with the EPA requirements set out in the Waste Classification publication (*EPA, Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous (2015*)). Alternatively, the EPA approved HazWasteOnline application can be used to classify the excavated material as hazardous or non-hazardous. Waste facilities permitted for acceptance of waste materials for landfilling will also require the classification of waste in accordance with the Waste Acceptance Criteria (WAC) set out in EC Council Decision 2003/33/EC (*EC Council Decision 2003/33/EC – establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC*).

It is anticipated that excavated soil and stone will be transferred in tipper lorries/dumpers and will be covered to prevent dust deposition.

Uncontaminated soil and stones can be recovered as engineering fill in landfill facilities or used for ground improvement in soil recovery facilities. As a last resort, excavated materials can be disposed of to landfill. Where appropriate, uncontaminated soil and stones may be classified as a by-product (and not as a waste) in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011, as amended subject to meeting specific requirements as set out in the Regulations and guidance issued by the EPA (EPA, Guidance on classification and notification of soil and stone as a by-product (2017))

A by-product classification on the excavated materials would permit the use of the material in non-waste licenced or permitted sites.

The main construction waste materials such as concrete rubble, metals, plastics, plasterboard, glass, and wood are widely recyclable and will be segregated on site into separate skips insofar as is possible with the space available on-site. These materials will be transferred off-site using dedicated skip lorries to appropriate facilities. It is anticipated that bulk concrete rubble and metals from demolition works will be transferred off-site in rigid trucks.

Any WEEE generated will be stored separately (under cover if required) and transferred to suitable facilities for processing and onward recycling of components. Similarly, where possible, cardboard packaging will be segregated to maximise recycling potential off-site.

A mixed C&D waste skip will be required for non-recyclable wastes or where site constraints do not permit segregation into all of the above waste types. The appointed Waste Manager will monitor site segregation to ensure recyclable materials are placed in dedicated skips where provided and not placed in the mixed C&D waste skip. This material will be transferred off-site for processing and further removal of recoverable materials.

Off-site facilities for processing of C&D waste typically generate a 'fines' material which can be recovered as an engineering material in landfill facilities.
Hazardous waste will only be removed from site by waste contractors permitted to handle hazardous waste. Waste oils, resins and paints may be suitable for off-site recovery and this will be explored with waste contractors.

10.0 Hazardous Waste

For a substance to be a hazardous waste, the Waste Management Act requires that it must;

- Fall within the definition of waste as described in the WMA
- Feature on the Hazardous Waste List
- Exhibit certain hazardous properties (such as flammability or toxicity) which are listed in the Second Schedule of the WMA.

All of the three elements must be satisfied for a substance to be defined as a hazardous waste. Like the definition of general waste, the definition of hazardous waste may be complex and therefore you should always consult with the Environmental Manager to ensure correct classification. It may be sometimes necessary to get clarification from the local authority, the EPA or a suitably qualified expert.

There are a number of conditions associated with the temporary storage of hazardous waste on site;

- The quantities of waste being stored at any one time cannot exceed 25,000 litres of liquid waste or 40 m^3 of non-liquid waste.
- The storage period must be less than six months

There is a requirement that all hazardous waste producers must keep specified records of any hazardous waste arising from the site / premises. These records must set out the following information;

- The quantity, nature and origin of the waste
- Any treatment carried out.
- The quantity, nature, destination, frequency of collection and mode of transport of any hazardous waste transferred to another person.

Contact the Environmental Manager for information on the correct management and to disposal of hazardous waste.

- A Waste Transfer Form (WTF) must be completed on-line for each proposed consignment of hazardous waste transported or transferred within Ireland.
- Details relating to the following must be completed:

– the Consignor
– the Consignee
– Waste Consignment
– Date Shipped

- Waste will not be accepted by a facility unless it is accompanied by a valid WTF.
- The company must ensure that records are maintained concerning the source of, collection, transport, delivery and receipt of, hazardous waste for a minimum period of three years.
- Hazardous waste, for which a certificate is issued under the Waste Management (Shipments of Waste) Regulations 2007 does not require the Waste Transfer Form (WTF) specified.

11.0 Project Specific Waste Data

Below is a table showing initial estimates of types and quantities of waste that will be generated during the completion of the project. Materials shall be temporarily stockpiled on site prior to removal utilising a licensed haulier to a licensed disposal facility.

Waste Type	Quantity (T)
Timber Waste	20T
Domestic Waste	20T
Rebar/Steel/Cladding Waste	Not currently anticipated
Concrete/Block/rubble waste	30T
General Waste	10T

12.0 House Keeping

House Keeping is essential in order to maintain a safe and quality site. The following should be used as guidance;

- Clear up all spills and leaks immediately.
- Dispose of the used spill kits in the appropriate hazardous waste container in the main yard.
- Call the HSQE Advisor / Emergency Crew for larger spills.
- Do not leave litter on the spread.
- Dispose of your litter in designated bins or appropriate skips around the proposed construction site.
- If you do not know which skip to use, ask.
- Portaloos/welfare facilities should be regularly serviced. If they need additional cleaning report it to the Site Agent or Site Safety Representative.
- No burning of waste on site.

13.0 Recycling

Recycling should occur where possible. During the design and procurement stage products and materials shall be evaluated on the amount of waste generated with packaging etc. and the volume of materials that can be recycled. All recyclable materials shall be segregated with a separate bin provided on site.

14.0 Record Keeping

Once a waste contractor(s) has been appointed, the Waste Manager will request copies of their waste collection permits which will be held on file at the site office. The waste collection permits must include an up-to-date list of approved vehicle registrations associated with the permit which can be spot checked by the Waste Manager. The waste contractor will also be requested to identify where waste materials will be taken to, and copies of waste licences/permits for each facility will be requested to hold on file in the site office. The Waste Manager will confirm that the waste collection permits, and facility licences/permits are appropriate for the waste types proposed.

A waste log will be set up by the Waste Manager to record all outgoing waste movements from the site. The waste collection vehicle driver will be required to supply an individual signed waste docket (waster transfer form for hazardous waste) for each waste movement off-site which must specify the waste collection permit number, waste type, list of waste code, waste treatment, source of the waste and waste destination. The docket provided by the driver may also include the weight of waste where the collection vehicle is equipped with a load cell or the weight of waste is known. Alternatively, the weight of the waste may be determined from a weighbridge at the receiving facility and the weight of waste provided to the Waste Manager as soon as possible after receipt at the off-site facility. Regardless, the waste contractor must be able to provide an accurate measurement of the waste tonnage to the Waste Manager. The waste contractor will also be required to provide feedback on waste collected identifying the percentage of waste recovered and disposed of.

The waste log will be used to identify the main waste types being generated and can be linked to delivery records to identify the percentage of waste from incoming building materials. The Waste Manager will be able to analyse these records to improve efficiency and seek to reduce wastage.

15.0 Training, Responsibilities & Auditing

The main contractor will include the importance of source segregation, maintaining a clean site and the locations of skips on the site in site inductions for all new employees to the site.

The appointed Waste Manager will be in charge of setting up the waste log and checking waste dockets as described in the previous section. The Waste Manager will also be given responsibility for providing toolbox talks on waste management, organising specific training where required and educating workers throughout the project. The Waste Manager will also liaise with Fingal County Council to provide details on the waste facilities to be used and provide waste data as required. It is also beneficial for the Waste Manger to provide feedback on waste statistics to the project team on a regular basis to acknowledge good performance or identify areas for improvement.

The Waste Manager will be familiar with the content of this document and will ensure compliance with the measures set out herein for the duration of the project. Where appropriate on large projects, the Waste Manager may delegate responsibility to others for management of waste in particular areas of the site or may seek appointment of Waste Mangers for specific sub-contracts.

The Waste Manager will also establish an audit checklist to inspect skips and waste containers across the site and identify contamination of skips or other waste related issues which may arise. A review of waste records held for each movement of waste off-site should also be carried out. The waste log should be cross-checked with hard copy dockets and any missing details filled in. Depending on the nature of the wastes generated, the Waste Manager may also carry out an audit of the receiving waste facilities to confirm that the waste sent from the site is being treated as described on the waste dockets.

The costs associated with waste management should also be reviewed during the project and highlighted to the Project/Site Manager as to where savings can be made, if any. Typically, maximum on-site segregation of waste reduces the costs associated with mixed C&D waste collection which is required to be processed off-site.

16.0 Interaction with other bodies

The Waste Manager will ensure coordination with relevant bodies throughout the project. This will include compliance with any construction traffic management requirements identified by the project team or imposed by Fingal County Council.

The Waste Manager will provide details to Fingal County Council on the destinations of waste materials from the site and will provide waste records to the local authority as required. The Site Manager contact details will also be provided to Fingal County Council.

14.0 Appendices

Appendix 1 Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-hazardous.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Waste Classification

List of Waste & Determining if Waste is Hazardous or Non-hazardous

APPLICABLE FROM 5 JULY 2018

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

Advocacy: *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

Our Responsibilities

Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities (*e.g. landfills, incinerators, waste transfer stations*);
- large scale industrial activities (*e.g. pharmaceutical, cement manufacturing, power plants*);
- intensive agriculture (*e.g. pigs, poultry*);
- the contained use and controlled release of Genetically Modified Organisms (*GMOs*);
- sources of ionising radiation (*e.g. x-ray and radiotherapy equipment, industrial sources*);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

National Environmental Enforcement

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by coordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

Water Management

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

Monitoring, Analysing and Reporting on the Environment

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government (*e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports*).

Regulating Ireland's Greenhouse Gas Emissions

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

Environmental Research and Development

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

Strategic Environmental Assessment

- Assessing the impact of proposed plans and programmes on the Irish environment (*e.g. major development plans*).

Radiological Protection

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

Guidance, Accessible Information and Education

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (*e.g. My Local Environment, Radon Maps*).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

Awareness Raising and Behavioural Change

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

Management and Structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiological Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Waste Classification

List of Waste
&
Determining if Waste is Hazardous or
Non-hazardous

APPLICABLE FROM 5 JULY 2018

Environmental Protection Agency
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Non-Application under Waste Framework Directive 2008

The following are excluded from the scope of this document:

a. gaseous effluents emitted into the atmosphere;

b. land (in situ) including unexcavated contaminated soil and buildings permanently connected with land;

c. uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated;

d. radioactive waste, except where such material is combined with certain waste streams like WEEE;

e. decommissioned explosives;

f. faecal matter, if not covered by paragraph 2(b)[1], straw and other natural non-hazardous agricultural or forestry material used in farming, forestry or for the production of energy from such biomass through processes or methods which do not harm the environment or endanger human health.

1 2(b) animal by-products including processed products covered by Regulation (EC) No 1774/2002, except those which are destined for incineration, landfilling or use in a biogas or composting plant

1. INTRODUCTION

This document replaces the 2015 version to reflect Council Regulation 2017/997 that brings into effect new criteria for Hazardous Property 14 'Ecotoxic' from 5 July 2018.

Correct classification is the foundation for ensuring that the collection, transportation, storage and treatment of waste is carried out in a manner that provides protection for the environment and human health and in compliance with legal requirements.

Waste classification is based on:

1. Commission Decision of 18 December 2014, amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European parliament and of the Council (2014/955/EEC) [referred to hereafter as 'The List of Waste (LoW)']
2. Commission Regulation (EU) No 1357/2014 of 18 December 2014, replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives.
3. Council Regulation (EU) 2017/997 of 8 June 2017 amending Annex 111 to Directive 2008/98//EC of the European parliament and of the Council as regards the hazardous property HP 14 'Ecotoxic'.

This waste classification system applies across the EU and is the basis for all national and international waste reporting obligations. This document consolidates the Decision and Regulations and provides guidance on how to follow them.

The Commission have produced a technical guidance on the classification of waste specifically providing clarification and guidance on the correct interpretation and application of the relevant EU legislation regarding the classification of waste. This technical guidance can be accessed at the following location:

https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2018:124:FULL&from=EN

The overall system is shown in the flow chart in section 1.2 below. There are two main elements, as follows.

1.1 List of Waste (LoW) (Appendix 1)

The LoW provides a harmonised list for coding all waste. The different types of waste in the list are fully defined by the six-digit entry for the waste including the respective two-digit and four-digit chapter headings.

Waste can have one of the following three entry types:

- Non-hazardous
- Hazardous (marked with an asterisk)
- Mirror – either hazardous or non-hazardous.

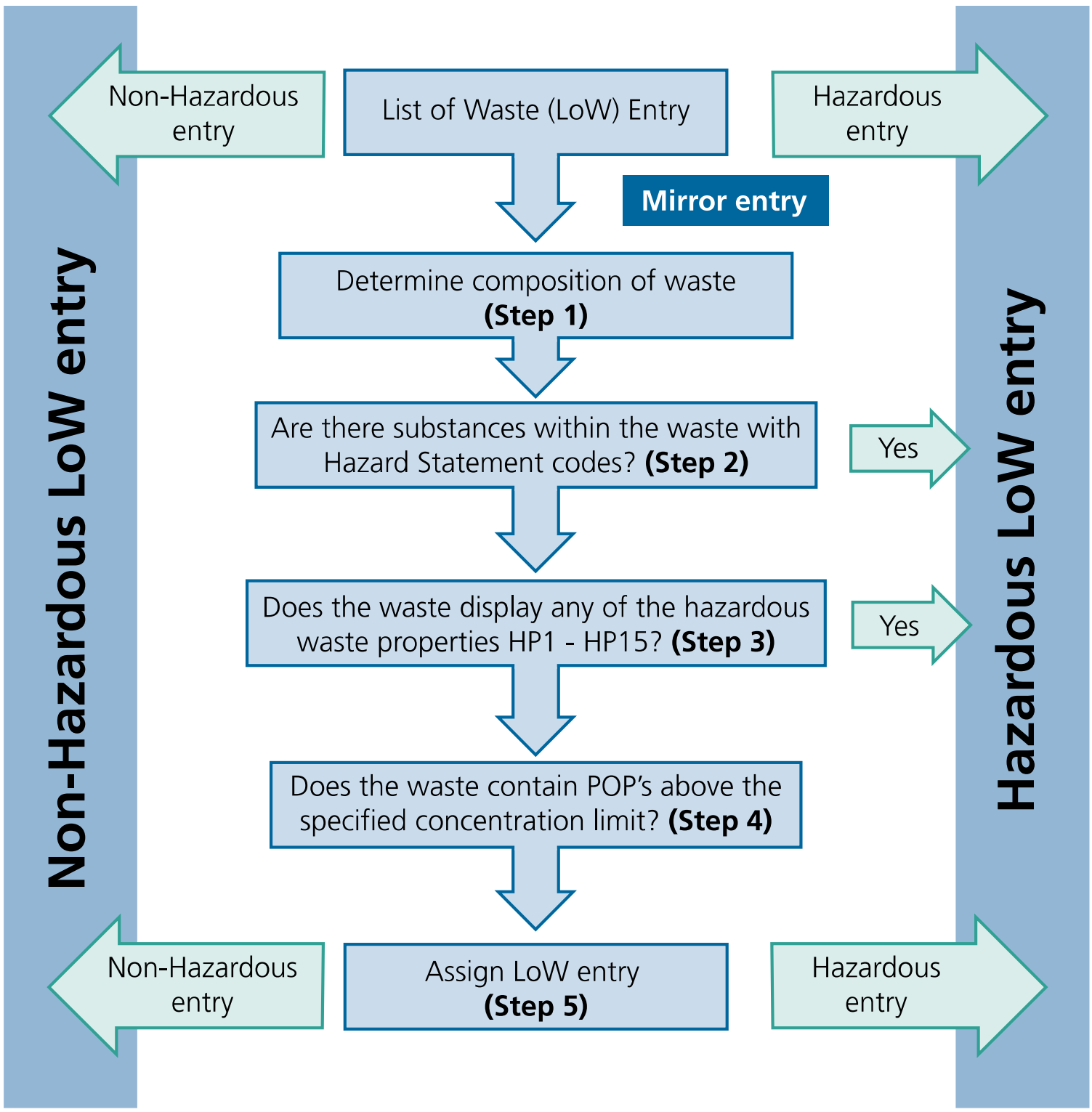
Without prejudice to the provisions of Article 7(3) of Directive 2008/98/EC, if a waste has a non-hazardous entry, it is non-hazardous *without* further assessment. If a waste has a hazardous entry, it is hazardous *without* further assessment. If it has a mirror entry it must be dealt with in accordance with section 1.2.

Where evidence exists to show that specific waste that appears on the LoW as hazardous waste does not display any of the hazardous properties HP1–HP15 (Appendix 2, step 3.1 and step 3.2) and/or Persistent Organic Pollutant's (POPS), it may be considered as non-hazardous waste in accordance with the provisions of Article 7(3) of Directive 2008/98/EC. The Member

State must notify the Commission of any such cases and shall provide the Commission with all the necessary evidence. In light of notifications received, the list shall be reviewed to decide on its adaptation.

1.2 Determining if waste is hazardous or non-hazardous (Appendix 2)

If the waste has a mirror entry, it must be subject to further assessment to determine if it is hazardous or not. The necessary steps are outlined in the following flow chart and in Appendix 2.



Appendix 1 List of Waste

Instruction for Using the List

The different types of waste in the list are fully defined by the six-digit code for the waste and the respective two-digit and four-digit chapter headings. This implies that the following steps should be taken to identify a waste in the list:

- Identify the source generating the waste in Chapters 01 to 12 or 17 to 20 and identify the appropriate six-digit code of the waste (excluding codes ending with 99 in these chapters).

  Note :

  - that a specific production unit may need to classify its activities in several chapters. For instance, a car manufacturer may find its wastes listed in Chapters 12 (wastes from shaping and surface treatment of metals), 11 (inorganic wastes containing metals from metal treatment and the coating of metals) and 08 (waste from the use of coatings), depending on the different process steps.
  - Separately collected packaging waste (including mixtures of different packaging materials) shall be classified in 15 01, not in 20 01.

- If no appropriate waste code can be found in Chapters 01 to 12 or 17 to 20, Chapters 13, 14 and 15 must be examined to identify the type of waste.
- If none of these waste codes apply, the waste must be identified according to Chapter 16.

If the waste is not in Chapter 16 either, the 99 code (wastes not otherwise specified) must be used in the section of the list corresponding to the activity identified in the first bullet point above.

Chapters of the list

01	Wastes resulting from exploration, mining, quarrying, physical and chemical treatment of minerals
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
04	Wastes from the leather, fur and textile industries
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
06	Wastes from inorganic chemical processes
07	Wastes from organic chemical processes
08	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
09	Wastes from the photographic industry
10	Wastes from thermal processes
11	Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics
13	Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)
14	Waste organic solvents, refrigerants and propellants (except 07 and 08)
15	Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
16	Wastes not otherwise specified in the list
17	Construction and demolition wastes (including excavated soil from contaminated sites)
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

01	**WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS**
01 01	**wastes from mineral excavation**
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 03	**wastes from physical and chemical processing of metalliferous minerals**
01 03 04*	acid-generating tailings from processing of sulphide ore
01 03 05*	other tailings containing hazardous substances
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 07*	other wastes containing hazardous substances from physical and chemical processing of metalliferous minerals
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 10
01 03 10*	red mud from alumina production containing hazardous substances other than the wastes mentioned in 01 03 07
01 03 99	wastes not otherwise specified
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**
01 04 07*	wastes containing hazardous substances from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 04 99	wastes not otherwise specified
01 05	**drilling muds and other drilling wastes**
01 05 04	freshwater drilling muds and wastes
01 05 05*	oil-containing drilling muds and wastes
01 05 06*	drilling muds and other drilling wastes containing hazardous substances
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 99	wastes not otherwise specified
02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**
02 01	**wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste

02 01 04	waste plastics (except packaging)
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 01 07	wastes from forestry
02 01 08*	agrochemical waste containing hazardous substances
02 01 09	agrochemical waste other than those mentioned in 02 01 08
02 01 10	waste metal
02 01 99	wastes not otherwise specified
02 02	**wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 01	sludges from washing and cleaning
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 02 99	wastes not otherwise specified
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**
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents
02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 03 99	wastes not otherwise specified
02 04	**wastes from sugar processing**
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
02 04 99	wastes not otherwise specified
02 05	**wastes from the dairy products industry**
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 05 99	wastes not otherwise specified
02 06	**wastes from the baking and confectionery industry**
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 06 99	wastes not otherwise specified
02 07	**wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment

02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
02 07 99	wastes not otherwise specified
03	**WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**
03 01	**wastes from wood processing and the production of panels and furniture**
03 01 01	waste bark and cork
03 01 04*	sawdust, shavings, cuttings, wood, particle board and veneer containing hazardous substances
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 01 99	wastes not otherwise specified
03 02	**wastes from wood preservation**
03 02 01*	non-halogenated organic wood preservatives
03 02 02*	organochlorinated wood preservatives
03 02 03*	organometallic wood preservatives
03 02 04*	inorganic wood preservatives
03 02 05*	other wood preservatives containing hazardous substances
03 02 99	wood preservatives not otherwise specified
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 01	waste bark and wood
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	de-inking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
03 03 99	wastes not otherwise specified
04	**WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES**
04 01	**wastes from the leather and fur industry**
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 03*	degreasing wastes containing solvents without a liquid phase
04 01 04	tanning liquor containing chromium
04 01 05	tanning liquor free of chromium
04 01 06	sludges, in particular from on-site effluent treatment containing chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
04 01 99	wastes not otherwise specified
04 02	**wastes from the textile industry**
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)

04 02 14*	wastes from finishing containing organic solvents
04 02 15	wastes from finishing other than those mentioned in 04 02 14
04 02 16*	dyestuffs and pigments containing hazardous substances
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
04 02 19*	sludges from on-site effluent treatment containing hazardous substances
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
04 02 99	wastes not otherwise specified
05	**WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL**
05 01	**wastes from petroleum refining**
05 01 02*	desalter sludges
05 01 03*	tank bottom sludges
05 01 04*	acid alkyl sludges
05 01 05*	oil spills
05 01 06*	oily sludges from maintenance operations of the plant or equipment
05 01 07*	acid tars
05 01 08*	other tars
05 01 09*	sludges from on-site effluent treatment containing hazardous substances
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 11*	wastes from cleaning of fuels with bases
05 01 12*	oil containing acids
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 15*	spent filter clays
05 01 16	sulphur-containing wastes from petroleum desulphurisation
05 01 17	Bitumen
05 01 99	wastes not otherwise specified
05 06	**wastes from the pyrolytic treatment of coal**
05 06 01*	acid tars
05 06 03*	other tars
05 06 04	waste from cooling columns
05 06 99	wastes not otherwise specified
05 07	**wastes from natural gas purification and transportation**
05 07 01*	wastes containing mercury
05 07 02	wastes containing sulphur
05 07 99	wastes not otherwise specified
06	**WASTES FROM INORGANIC CHEMICAL PROCESSES**
06 01	**wastes from the manufacture, formulation, supply and use (MFSU) of acids**
06 01 01*	sulphuric acid and sulphurous acid
06 01 02*	hydrochloric acid
06 01 03*	hydrofluoric acid
06 01 04*	phosphoric and phosphorous acid

06 01 05*	nitric acid and nitrous acid
06 01 06*	other acids
06 01 99	wastes not otherwise specified
06 02	**wastes from the MFSU of bases**
06 02 01*	calcium hydroxide
06 02 03*	ammonium hydroxide
06 02 04*	sodium and potassium hydroxide
06 02 05*	other bases
06 02 99	wastes not otherwise specified
06 03	**wastes from the MFSU of salts and their solutions and metallic oxides**
06 03 11*	solid salts and solutions containing cyanides
06 03 13*	solid salts and solutions containing heavy metals
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 15*	metallic oxides containing heavy metals
06 03 16	metallic oxides other than those mentioned in 06 03 15
06 03 99	wastes not otherwise specified
06 04	**metal-containing wastes other than those mentioned in 06 03**
06 04 03*	wastes containing arsenic
06 04 04*	wastes containing mercury
06 04 05*	wastes containing other heavy metals
06 04 99	wastes not otherwise specified
06 05	**sludges from on-site effluent treatment**
06 05 02*	sludges from on-site effluent treatment containing hazardous substances
06 05 03	sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 06	**wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes**
06 06 02*	wastes containing hazardous sulphides
06 06 03	wastes containing sulphides other than those mentioned in 06 06 02
06 06 99	wastes not otherwise specified
06 07	**wastes from the MFSU of halogens and halogen chemical processes**
06 07 01*	wastes containing asbestos from electrolysis
06 07 02*	activated carbon from chlorine production
06 07 03*	barium sulphate sludge containing mercury
06 07 04*	solutions and acids, for example contact acid
06 07 99	wastes not otherwise specified
06 08	**wastes from the MFSU of silicon and silicon derivatives**
06 08 02*	waste containing hazardous chlorosilanes
06 08 99	wastes not otherwise specified
06 09	**wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes**
06 09 02	phosphorous slag
06 09 03*	calcium-based reaction wastes containing or contaminated with hazardous substances
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
06 09 99	wastes not otherwise specified

06 10	**wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture**
06 10 02*	wastes containing hazardous substances
06 10 99	wastes not otherwise specified
06 11	**wastes from the manufacture of inorganic pigments and opacificiers**
06 11 01	calcium-based reaction wastes from titanium dioxide production
06 11 99	wastes not otherwise specified
06 13	**wastes from inorganic chemical processes not otherwise specified**
06 13 01*	inorganic plant protection products, wood-preserving agents and other biocides.
06 13 02*	spent activated carbon (except 06 07 02)
06 13 03	carbon black
06 13 04*	wastes from asbestos processing
06 13 05*	Soot
06 13 99	wastes not otherwise specified

07	**WASTES FROM ORGANIC CHEMICAL PROCESSES**
07 01	**wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals**
07 01 01*	aqueous washing liquids and mother liquors
07 01 03*	organic halogenated solvents, washing liquids and mother liquors
07 01 04*	other organic solvents, washing liquids and mother liquors
07 01 07*	halogenated still bottoms and reaction residues
07 01 08*	other still bottoms and reaction residues
07 01 09*	halogenated filter cakes and spent absorbents
07 01 10*	other filter cakes and spent absorbents
07 01 11*	sludges from on-site effluent treatment containing hazardous substances
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 01 99	wastes not otherwise specified
07 02	**wastes from the MFSU of plastics, synthetic rubber and man-made fibres**
07 02 01*	aqueous washing liquids and mother liquors
07 02 03*	organic halogenated solvents, washing liquids and mother liquors
07 02 04*	other organic solvents, washing liquids and mother liquors
07 02 07*	halogenated still bottoms and reaction residues
07 02 08*	other still bottoms and reaction residues
07 02 09*	halogenated filter cakes and spent absorbents
07 02 10*	other filter cakes and spent absorbents
07 02 11*	sludges from on-site effluent treatment containing hazardous substances
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13	waste plastic
07 02 14*	wastes from additives containing hazardous substances
07 02 15	wastes from additives other than those mentioned in 07 02 14
07 02 16*	waste containing hazardous silicones
07 02 17	waste containing silicones other than those mentioned in 07 02 16
07 02 99	wastes not otherwise specified

07 03	**wastes from the MFSU of organic dyes and pigments (except 06 11)**
07 03 01*	aqueous washing liquids and mother liquors
07 03 03*	organic halogenated solvents, washing liquids and mother liquors
07 03 04*	other organic solvents, washing liquids and mother liquors
07 03 07*	halogenated still bottoms and reaction residues
07 03 08*	other still bottoms and reaction residues
07 03 09*	halogenated filter cakes and spent absorbents
07 03 10*	other filter cakes and spent absorbents
07 03 11*	sludges from on-site effluent treatment containing hazardous substances
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 03 99	wastes not otherwise specified
07 04	**wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides**
07 04 01*	aqueous washing liquids and mother liquors
07 04 03*	organic halogenated solvents, washing liquids and mother liquors
07 04 04*	other organic solvents, washing liquids and mother liquors
07 04 07*	halogenated still bottoms and reaction residues
07 04 08*	other still bottoms and reaction residues
07 04 09*	halogenated filter cakes and spent absorbents
07 04 10*	other filter cakes and spent absorbents
07 04 11*	sludges from on-site effluent treatment containing hazardous substances
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 04 13*	solid wastes containing hazardous substances
07 04 99	wastes not otherwise specified
07 05	**wastes from the MFSU of pharmaceuticals**
07 05 01*	aqueous washing liquids and mother liquors
07 05 03*	organic halogenated solvents, washing liquids and mother liquors
07 05 04*	other organic solvents, washing liquids and mother liquors
07 05 07*	halogenated still bottoms and reaction residues
07 05 08*	other still bottoms and reaction residues
07 05 09*	halogenated filter cakes and spent absorbents
07 05 10*	other filter cakes and spent absorbents
07 05 11*	sludges from on-site effluent treatment containing hazardous substances
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 13*	solid wastes containing hazardous substances
07 05 14	solid wastes other than those mentioned in 07 05 13
07 05 99	wastes not otherwise specified
07 06	**wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics**
07 06 01*	aqueous washing liquids and mother liquors
07 06 03*	organic halogenated solvents, washing liquids and mother liquors
07 06 04*	other organic solvents, washing liquids and mother liquors
07 06 07*	halogenated still bottoms and reaction residues
07 06 08*	other still bottoms and reaction residues

07 06 09*	halogenated filter cakes and spent absorbents
07 06 10*	other filter cakes and spent absorbents
07 06 11*	sludges from on-site effluent treatment containing hazardous substances
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 06 99	wastes not otherwise specified
07 07	**wastes from the MFSU of fine chemicals and chemical products not otherwise specified**
07 07 01*	aqueous washing liquids and mother liquors
07 07 03*	organic halogenated solvents, washing liquids and mother liquors
07 07 04*	other organic solvents, washing liquids and mother liquors
07 07 07*	halogenated still bottoms and reaction residues
07 07 08*	other still bottoms and reaction residues
07 07 09*	halogenated filter cakes and spent absorbents
07 07 10*	other filter cakes and spent absorbents
07 07 11*	sludges from on-site effluent treatment containing hazardous substances
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
07 07 99	wastes not otherwise specified
08	**WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS**
08 01	**wastes from MFSU and removal of paint and varnish**
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
08 01 12	waste paint and varnish other than those mentioned in 08 01 11
08 01 13*	sludges from paint or varnish containing organic solvents or other hazardous substances
08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13
08 01 15*	aqueous sludges containing paint or varnish containing organic solvents or other hazardous substances
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 17*	wastes from paint or varnish removal containing organic solvents or other hazardous substances
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
08 01 19*	aqueous suspensions containing paint or varnish containing organic solvents or other hazardous substances
08 01 20	aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19
08 01 21*	waste paint or varnish remover
08 01 99	wastes not otherwise specified
08 02	**wastes from MFSU of other coatings (including ceramic materials)**
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 02 03	aqueous suspensions containing ceramic materials
08 02 99	wastes not otherwise specified

08 03	**wastes from MFSU of printing inks**
08 03 07	aqueous sludges containing ink
08 03 08	aqueous liquid waste containing ink
08 03 12*	waste ink containing hazardous substances
08 03 13	waste ink other than those mentioned in 08 03 12
08 03 14*	ink sludges containing hazardous substances
08 03 15	ink sludges other than those mentioned in 08 03 14
08 03 16*	waste etching solutions
08 03 17*	waste printing toner containing hazardous substances
08 03 18	waste printing toner other than those mentioned in 08 03 17
08 03 19*	disperse oil
08 03 99	wastes not otherwise specified
08 04	**wastes from MFSU of adhesives and sealants (including waterproofing products)**
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 11*	adhesive and sealant sludges containing organic solvents or other hazardous substances
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
08 04 13*	aqueous sludges containing adhesives or sealants containing organic solvents or other hazardous substances
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
08 04 15*	aqueous liquid waste containing adhesives or sealants containing organic solvents or other hazardous substances
08 04 16	aqueous liquid waste containing adhesives or sealants other than those mentioned in 08 04 15
08 04 17*	rosin oil
08 04 99	wastes not otherwise specified
08 05	**wastes not otherwise specified in 08**
08 05 01*	waste isocyanates
09	**WASTES FROM THE PHOTOGRAPHIC INDUSTRY**
09 01	**wastes from the photographic industry**
09 01 01*	water-based developer and activator solutions
09 01 02*	water-based offset plate developer solutions
09 01 03*	solvent-based developer solutions
09 01 04*	fixer solutions
09 01 05*	bleach solutions and bleach fixer solutions
09 01 06*	wastes containing silver from on-site treatment of photographic wastes
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 11*	single-use cameras containing batteries included in 16 06 01, 16 06 02 or 16 06 03
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11

09 01 13*	aqueous liquid waste from on-site reclamation of silver other than those mentioned in 09 01 06
09 01 99	wastes not otherwise specified
10	**WASTES FROM THERMAL PROCESSES**
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 04*	oil fly ash and boiler dust
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge form
10 01 09*	sulphuric acid
10 01 13*	fly ash from emulsified hydrocarbons used as fuel
10 01 14*	bottom ash, slag and boiler dust from co-incineration containing hazardous substances
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 16*	fly ash from co-incineration containing hazardous substances
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 18*	wastes from gas cleaning containing hazardous substances
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 20*	sludges from on-site effluent treatment containing hazardous substances
10 01 21	sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 22*	aqueous sludges from boiler cleansing containing hazardous substances
10 01 23	aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24	sands from fluidised beds
10 01 25	wastes from fuel storage and preparation of coal-fired power plants
10 01 26	wastes from cooling-water treatment
10 01 99	wastes not otherwise specified
10 02	**wastes from the iron and steel industry**
10 02 01	wastes from the processing of slag
10 02 02	unprocessed slag
10 02 07*	solid wastes from gas treatment containing hazardous substances
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 11*	wastes from cooling-water treatment containing oil
10 02 12	wastes from cooling-water treatment other than those mentioned in 10 02 11
10 02 13*	sludges and filter cakes from gas treatment containing hazardous substances
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	other sludges and filter cakes
10 02 99	wastes not otherwise specified

10 03	wastes from aluminium thermal metallurgy
10 03 02	anode scraps
10 03 04*	primary production slags
10 03 05	waste alumina
10 03 08*	salt slags from secondary production
10 03 09*	black drosses from secondary production
10 03 15*	skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 17*	tar-containing wastes from anode manufacture
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 19*	flue-gas dust containing hazardous substances
10 03 20	flue-gas dust other than those mentioned in 10 03 19
10 03 21*	other particulates and dust (including ball-mill dust) containing hazardous substances
10 03 22	other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 23*	solid wastes from gas treatment containing hazardous substances
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 25*	sludges and filter cakes from gas treatment containing hazardous substances
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 27*	wastes from cooling-water treatment containing oil
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 29*	wastes from treatment of salt slags and black drosses containing hazardous substances
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
10 03 99	wastes not otherwise specified
10 04	**wastes from lead thermal metallurgy**
10 04 01*	slags from primary and secondary production
10 04 02*	dross and skimmings from primary and secondary production
10 04 03*	calcium arsenate
10 04 04*	flue-gas dust
10 04 05*	other particulates and dust
10 04 06*	solid wastes from gas treatment
10 04 07*	sludges and filter cakes from gas treatment
10 04 09*	wastes from cooling-water treatment containing oil
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 04 99	wastes not otherwise specified
10 05	**wastes from zinc thermal metallurgy**
10 05 01	slags from primary and secondary production
10 05 03*	flue-gas dust
10 05 04	other particulates and dust
10 05 05*	solid waste from gas treatment

10 05 06*	sludges and filter cakes from gas treatment
10 05 08*	wastes from cooling-water treatment containing oil
10 05 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 05 99	wastes not otherwise specified
10 06	**wastes from copper thermal metallurgy**
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 06 03*	flue-gas dust
10 06 04	other particulates and dust
10 06 06*	solid wastes from gas treatment
10 06 07*	sludges and filter cakes from gas treatment
10 06 09*	wastes from cooling-water treatment containing oil
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
10 06 99	wastes not otherwise specified
10 07	**wastes from silver, gold and platinum thermal metallurgy**
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust
10 07 05	sludges and filter cakes from gas treatment
10 07 07*	wastes from cooling-water treatment containing oil
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
10 07 99	wastes not otherwise specified
10 08	**wastes from other non-ferrous thermal metallurgy**
10 08 04	particulates and dust
10 08 08*	salt slag from primary and secondary production
10 08 09	other slags
10 08 10*	dross and skimmings that are flammable or emit, upon contact with water, flammable gases in hazardous quantities
10 08 11	dross and skimmings other than those mentioned in 10 08 10
10 08 12*	tar-containing wastes from anode manufacture
10 08 13	carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
10 08 14	anode scrap
10 08 15*	flue-gas dust containing hazardous substances
10 08 16	flue-gas dust other than those mentioned in 10 08 15
10 08 17*	sludges and filter cakes from flue-gas treatment containing hazardous substances
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 19*	wastes from cooling-water treatment containing oil
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
10 08 99	wastes not otherwise specified

10 09	**wastes from casting of ferrous pieces**
10 09 03	furnace slag
10 09 05*	casting cores and moulds which have not undergone pouring containing hazardous substances
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 07*	casting cores and moulds which have undergone pouring containing hazardous substances
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 09*	flue-gas dust containing hazardous substances
10 09 10	flue-gas dust other than those mentioned in 10 09 09
10 09 11*	other particulates containing hazardous substances
10 09 12	other particulates other than those mentioned in 10 09 11
10 09 13*	waste binders containing hazardous substances
10 09 14	waste binders other than those mentioned in 10 09 13
10 09 15*	waste crack-indicating agent containing hazardous substances
10 09 16	waste crack-indicating agent other than those mentioned in 10 09 15
10 09 99	wastes not otherwise specified
10 10	**wastes from casting of non-ferrous pieces**
10 10 03	furnace slag
10 10 05*	casting cores and moulds which have not undergone pouring, containing hazardous substances
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05
10 10 07*	casting cores and moulds which have undergone pouring, containing hazardous substances
10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
10 10 09*	flue-gas dust containing hazardous substances
10 10 10	flue-gas dust other than those mentioned in 10 10 09
10 10 11*	other particulates containing hazardous substances
10 10 12	other particulates other than those mentioned in 10 10 11
10 10 13*	waste binders containing hazardous substances
10 10 14	waste binders other than those mentioned in 10 10 13
10 10 15*	waste crack-indicating agent containing hazardous substances
10 10 16	waste crack-indicating agent other than those mentioned in 10 10 15
10 10 99	wastes not otherwise specified
10 11	**wastes from manufacture of glass and glass products**
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 09*	waste preparation mixture before thermal processing, containing hazardous substances
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
10 11 11*	waste glass in small particles and glass powder containing heavy metals (for example from cathode ray tubes)

10 11 12	waste glass other than those mentioned in 10 11 11
10 11 13*	glass-polishing and -grinding sludge containing hazardous substances
10 11 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 15*	solid wastes from flue-gas treatment containing hazardous substances
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 17*	sludges and filter cakes from flue-gas treatment containing hazardous substances
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 19*	solid wastes from on-site effluent treatment containing hazardous substances
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
10 11 99	wastes not otherwise specified
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**
10 12 01	waste preparation mixture before thermal processing
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 09*	solid wastes from gas treatment containing hazardous substances
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 11*	wastes from glazing containing heavy metals
10 12 12	wastes from glazing other than those mentioned in 10 12 11
10 12 13	sludge from on-site effluent treatment
10 12 99	wastes not otherwise specified
10 13	**wastes from manufacture of cement, lime and plaster and articles and products made from them**
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 07	sludges and filter cakes from gas treatment
10 13 09*	wastes from asbestos-cement manufacture containing asbestos
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 12*	solid wastes from gas treatment containing hazardous substances
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
10 13 99	wastes not otherwise specified
10 14	**waste from crematoria**
10 14 01*	waste from gas cleaning containing mercury

11	**WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY**
11 01	**wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)**
11 01 05*	pickling acids
11 01 06*	acids not otherwise specified
11 01 07*	pickling bases
11 01 08*	phosphatising sludges
11 01 09*	sludges and filter cakes containing hazardous substances
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 11*	aqueous rinsing liquids containing hazardous substances
11 01 12	aqueous rinsing liquids other than those mentioned in 11 01 11
11 01 13*	degreasing wastes containing hazardous substances
11 01 14	degreasing wastes other than those mentioned in 11 01 13
11 01 15*	eluate and sludges from membrane systems or ion exchange systems containing hazardous substances
11 01 16*	saturated or spent ion exchange resins
11 01 98*	other wastes containing hazardous substances
11 01 99	wastes not otherwise specified
11 02	**wastes from non-ferrous hydrometallurgical processes**
11 02 02*	sludges from zinc hydrometallurgy (including jarosite, goethite)
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 05*	wastes from copper hydrometallurgical processes containing hazardous substances
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 02 07*	other wastes containing hazardous substances
11 02 99	wastes not otherwise specified
11 03	**sludges and solids from tempering processes**
11 03 01*	wastes containing cyanide
11 03 02*	other wastes
11 05	**wastes from hot galvanising processes**
11 05 01	hard zinc
11 05 02	zinc ash
11 05 03*	solid wastes from gas treatment
11 05 04*	spent flux
11 05 99	wastes not otherwise specified
12	**WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS**
12 01	**wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
12 01 05	plastics shavings and turnings

12 01 06*	mineral-based machining oils containing halogens (except emulsions and solutions)
12 01 07*	mineral-based machining oils free of halogens (except emulsions and solutions)
12 01 08*	machining emulsions and solutions containing halogens
12 01 09*	machining emulsions and solutions free of halogens
12 01 10*	synthetic machining oils
12 01 12*	spent waxes and fats
12 01 13	welding wastes
12 01 14*	machining sludges containing hazardous substances
12 01 15	machining sludges other than those mentioned in 12 01 14
12 01 16*	waste blasting material containing hazardous substances
12 01 17	waste blasting material other than those mentioned in 12 01 16
12 01 18*	metal sludge (grinding, honing and lapping sludge) containing oil
12 01 19*	readily biodegradable machining oil
12 01 20*	spent grinding bodies and grinding materials containing hazardous substances
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20
12 01 99	wastes not otherwise specified
12 03	**wastes from water and steam degreasing processes (except 11)**
12 03 01*	aqueous washing liquids
12 03 02*	steam degreasing wastes
13	**OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)**
13 01	**waste hydraulic oils**
13 01 01*	hydraulic oils, containing PCBs
13 01 04*	chlorinated emulsions
13 01 05*	non-chlorinated emulsions
13 01 09*	mineral-based chlorinated hydraulic oils
13 01 10*	mineral based non-chlorinated hydraulic oils
13 01 11*	synthetic hydraulic oils
13 01 12*	readily biodegradable hydraulic oils
13 01 13*	other hydraulic oils
13 02	**waste engine, gear and lubricating oils**
13 02 04*	mineral-based chlorinated engine, gear and lubricating oils
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils
13 02 06*	synthetic engine, gear and lubricating oils
13 02 07*	readily biodegradable engine, gear and lubricating oils
13 02 08*	other engine, gear and lubricating oils
13 03	**waste insulating and heat transmission oils**
13 03 01*	insulating or heat transmission oils containing PCBs
13 03 06*	mineral-based chlorinated insulating and heat transmission oils other than those mentioned in 13 03 01
13 03 07*	mineral-based non-chlorinated insulating and heat transmission oils
13 03 08*	synthetic insulating and heat transmission oils
13 03 09*	readily biodegradable insulating and heat transmission oils
13 03 10*	other insulating and heat transmission oils

13 04	**bilge oils**
13 04 01*	bilge oils from inland navigation
13 04 02*	bilge oils from jetty sewers
13 04 03*	bilge oils from other navigation
13 05	**oil/water separator contents**
13 05 01*	solids from grit chambers and oil/water separators
13 05 02*	sludges from oil/water separators
13 05 03*	interceptor sludges
13 05 06*	oil from oil/water separators
13 05 07*	oily water from oil/water separators
13 05 08*	mixtures of wastes from grit chambers and oil/water separators
13 07	**wastes of liquid fuels**
13 07 01*	fuel oil and diesel
13 07 02*	petrol
13 07 03*	other fuels (including mixtures)
13 08	**oil wastes not otherwise specified**
13 08 01*	desalter sludges or emulsions
13 08 02*	other emulsions
13 08 99*	wastes not otherwise specified
14	**WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08)**
14 06	**waste organic solvents, refrigerants and foam/aerosol propellants**
14 06 01*	chlorofluorocarbons, HCFC, HFC
14 06 02*	other halogenated solvents and solvent mixtures
14 06 03*	other solvents and solvent mixtures
14 06 04*	sludges or solid wastes containing halogenated solvents
14 06 05*	sludges or solid wastes containing other solvents
15	**WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 01 10*	packaging containing residues of or contaminated by hazardous substances
15 01 11*	metallic packaging containing a hazardous solid porous matrix (for example asbestos), including empty pressure containers

15 02	**absorbents, filter materials, wiping cloths and protective clothing**
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	**WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
16 01	**end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 03	end-of-life tyres
16 01 04*	end-of-life vehicles
16 01 06	end-of-life vehicles, containing neither liquids nor other hazardous components
16 01 07*	oil filters
16 01 08*	components containing mercury
16 01 09*	components containing PCBs
16 01 10*	explosive components (for example air bags)
16 01 11*	brake pads containing asbestos
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 13*	brake fluids
16 01 14*	antifreeze fluids containing hazardous substances
16 01 15	antifreeze fluids other than those mentioned in 16 01 14
16 01 16	tanks for liquefied gas
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	Plastic
16 01 20	Glass
16 01 21*	hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14
16 01 22	components not otherwise specified
16 01 99	wastes not otherwise specified
16 02	**wastes from electrical and electronic equipment**
16 02 09*	transformers and capacitors containing PCBs
16 02 10*	discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09
16 02 11*	discarded equipment containing chlorofluorocarbons, HCFC, HFC
16 02 12*	discarded equipment containing free asbestos
16 02 13*	discarded equipment containing hazardous components[1] other than those mentioned in 16 02 09 to 16 02 12
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 15*	hazardous components removed from discarded equipment
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15

1 hazardous components from electrical and electronic equipment may include accumulators and batteries mentioned in 16 06 marked as hazardous: mercury switches, glass from cathode ray rubes and other activated glass etc

16 03	**off-specification batches and unused products**
16 03 03*	inorganic wastes containing hazardous substances
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 05*	organic wastes containing hazardous substances
16 03 06	organic wastes other than those mentioned in 16 03 05
16 03 07*	metallic mercury
16 04	**waste explosives**
16 04 01*	waste ammunition
16 04 02*	fireworks wastes
16 04 03*	other waste explosives
16 05	**gases in pressure containers and discarded chemicals**
16 05 04*	gases in pressure containers (including halons) containing hazardous substances
16 05 05	gases in pressure containers other than those mentioned in 16 05 04
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals
16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances
16 05 08*	discarded organic chemicals consisting of or containing hazardous substances
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
16 06	**batteries and accumulators**
16 06 01*	lead batteries
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
16 06 06*	separately collected electrolyte from batteries and accumulators
16 07	**wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)**
16 07 08*	wastes containing oil
16 07 09*	wastes containing other hazardous substances
16 07 99	wastes not otherwise specified
16 08	**spent catalysts**
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 02*	spent catalysts containing hazardous transition metals or hazardous transition metal compounds
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 08 04	spent fluid catalytic cracking catalysts (except 16 08 07)
16 08 05*	spent catalysts containing phosphoric acid
16 08 06*	spent liquids used as catalysts
16 08 07*	spent catalysts contaminated with hazardous substances

16 09	**oxidising substances**
16 09 01*	permanganates, for example potassium permanganate
16 09 02*	chromates, for example potassium chromate, potassium or sodium dichromate
16 09 03*	peroxides, for example hydrogen peroxide
16 09 04*	oxidising substances, not otherwise specified
16 10	**aqueous liquid wastes destined for off-site treatment**
16 10 01*	aqueous liquid wastes containing hazardous substances
16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01
16 10 03*	aqueous concentrates containing hazardous substances
16 10 04	aqueous concentrates other than those mentioned in 16 10 03
16 11	**waste linings and refractories**
16 11 01*	carbon-based linings and refractories from metallurgical processes containing hazardous substances
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 03*	other linings and refractories from metallurgical processes containing hazardous substances
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 05*	linings and refractories from non-metallurgical processes containing hazardous substances
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	**wood, glass and plastic**
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 02 04*	glass, plastic and wood containing or contaminated with hazardous substances
17 03	**bituminous mixtures, coal tar and tarred products**
17 03 01*	bituminous mixtures containing coal tar
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 03 03*	coal tar and tarred products

17 04	**metals (including their alloys)**
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 09*	metal waste contaminated with hazardous substances
17 04 10*	cables containing oil, coal tar and other hazardous substances
17 04 11	cables other than those mentioned in 17 04 10
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 03*	soil and stones containing hazardous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 05*	dredging spoil containing hazardous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07*	track ballast containing hazardous substances
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	**insulation materials and asbestos-containing construction materials**
17 06 01*	insulation materials containing asbestos
17 06 03*	other insulation materials consisting of or containing hazardous substances
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05*	construction materials containing asbestos
17 08	**gypsum-based construction material**
17 08 01*	gypsum-based construction materials contaminated with hazardous substances
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09	**other construction and demolition wastes**
17 09 01*	construction and demolition wastes containing mercury
17 09 02*	construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB-containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors)
17 09 03*	other construction and demolition wastes (including mixed wastes) containing hazardous substances
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03

18	**WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)**
18 01	**wastes from natal care, diagnosis, treatment or prevention of disease in humans**
18 01 01	sharps (except 18 01 03)
18 01 02	body parts and organs including blood bags and blood preserves (except 18 01 03)
18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
18 01 06*	chemicals consisting of or containing hazardous substances
18 01 07	chemicals other than those mentioned in 18 01 06
18 01 08*	cytotoxic and cytostatic medicines
18 01 09	medicines other than those mentioned in 18 01 08
18 01 10*	amalgam waste from dental care
18 02	**wastes from research, diagnosis, treatment or prevention of disease involving animals**
18 02 01	sharps (except 18 02 02)
18 02 02*	wastes whose collection and disposal is subject to special requirements in order to prevent infection
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
18 02 05*	chemicals consisting of or containing hazardous substances
18 02 06	chemicals other than those mentioned in 18 02 05
18 02 07*	cytotoxic and cytostatic medicines
18 02 08	medicines other than those mentioned in 18 02 07
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE**
19 01	**wastes from incineration or pyrolysis of waste**
19 01 02	ferrous materials removed from bottom ash
19 01 05*	filter cake from gas treatment
19 01 06*	aqueous liquid wastes from gas treatment and other aqueous liquid wastes
19 01 07*	solid wastes from gas treatment
19 01 10*	spent activated carbon from flue-gas treatment
19 01 11*	bottom ash and slag containing hazardous substances
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 13*	fly ash containing hazardous substances

19 01 14	fly ash other than those mentioned in 19 01 13
19 01 15*	boiler dust containing hazardous substances
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 17*	pyrolysis wastes containing hazardous substances
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 01 99	wastes not otherwise specified
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 04*	premixed wastes composed of at least one hazardous waste
19 02 05*	sludges from physico/chemical treatment containing hazardous substances
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 07*	oil and concentrates from separation
19 02 08*	liquid combustible wastes containing hazardous substances
19 02 09*	solid combustible wastes containing hazardous substances
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 02 11*	other wastes containing hazardous substances
19 02 99	wastes not otherwise specified
19 03	**stabilised/solidified wastes**
19 03 04*	wastes marked as hazardous, partly stabilised other than 19 03 08
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 06*	wastes marked as hazardous, solidified
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 03 08*	partly stabilised mercury
19 04	**vitrified waste and wastes from vitrification**
19 04 01	vitrified waste
19 04 02*	fly ash and other flue-gas treatment wastes
19 04 03*	non-vitrified solid phase
19 04 04	aqueous liquid wastes from vitrified waste tempering
19 05	**wastes from aerobic treatment of solid wastes**
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
19 05 99	wastes not otherwise specified

19 06	**wastes from anaerobic treatment of waste**
19 06 03	liquor from anaerobic treatment of municipal waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 05	liquor from anaerobic treatment of animal and vegetable waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
19 06 99	wastes not otherwise specified
19 07	**landfill leachate**
19 07 02*	landfill leachate containing hazardous substances
19 07 03	landfill leachate other than those mentioned in 19 07 02
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 01	screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water
19 08 06*	saturated or spent ion exchange resins
19 08 07*	solutions and sludges from regeneration of ion exchangers
19 08 08*	membrane system waste containing heavy metals
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats
19 08 10*	grease and oil mixture from oil/water separation other than those mentioned in 19 08 09
19 08 11*	sludges containing hazardous substances from biological treatment of industrial waste water
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 13*	sludges containing hazardous substances from other treatment of industrial waste water
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 08 99	wastes not otherwise specified
19 09	**wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
19 09 99	wastes not otherwise specified
19 10	**wastes from shredding of metal-containing wastes**
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 03*	fluff-light fraction and dust containing hazardous substances

19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 05*	other fractions containing hazardous substances
19 10 06	other fractions other than those mentioned in 19 10 05
19 11	**wastes from oil regeneration**
19 11 01*	spent filter clays
19 11 02*	acid tars
19 11 03*	aqueous liquid wastes
19 11 04*	wastes from cleaning of fuel with bases
19 11 05*	sludges from on-site effluent treatment containing hazardous substances
19 11 06	sludges from on-site effluent treatment other than those mentioned in 19 11 05
19 11 07*	wastes from flue-gas cleaning
19 11 99	wastes not otherwise specified
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 06*	wood containing hazardous substances
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	**wastes from soil and groundwater remediation**
19 13 01*	solid wastes from soil remediation containing hazardous substances
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 03*	sludges from soil remediation containing hazardous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 05*	sludges from groundwater remediation containing hazardous substances
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
19 13 07*	aqueous liquid wastes and aqueous concentrates from groundwater remediation containing hazardous substances
19 13 08	aqueous liquid wastes and aqueous concentrates from groundwater remediation other than those mentioned in 19 13 07

20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	**separately collected fractions (except 15 01)**
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 13*	solvents
20 01 14*	acids
20 01 15*	alkalines
20 01 17*	photochemicals
20 01 19*	pesticides
20 01 21*	fluorescent tubes and other mercury-containing waste
20 01 23*	discarded equipment containing chlorofluorocarbons
20 01 25	edible oil and fat
20 01 26*	oil and fat other than those mentioned in 20 01 25
20 01 27*	paint, inks, adhesives and resins containing hazardous substances
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 29*	detergents containing hazardous substances
20 01 30	detergents other than those mentioned in 20 01 29
20 01 31*	cytotoxic and cytostatic medicines
20 01 32	medicines other than those mentioned in 20 01 31
20 01 33*	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components[2]
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 37*	wood containing hazardous substances
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 01 99	other fractions not otherwise specified

2 hazardous components from electrical and electronic equipment may include accumulators and batteries mentioned in 16 06 marked as hazardous: mercury switches, glass from cathode ray rubes and other activated glass etc

20 02	**garden and park wastes (including cemetery waste)**
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
20 03	**other municipal wastes**
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste
20 03 99	municipal wastes not otherwise specified

Appendix 2 Determining if waste is hazardous or non-hazardous

Step-Wise Assessment

A full assessment should be conducted using the method and template below. This method is broken down in to the five sequential steps summarised below. All steps should be populated in full. Where a step does not apply this should be stated along with the justification.

	Company details and listing possible waste codes
Step 1	Waste composition details
Step 2	Assign Hazard statements and associated Hazardous Properties
Step 3	Does the waste display the any of the Hazardous Properties HP1 to HP15?
Step 3.1	Assessment of Hazardous Properties *with* Concentration Limits
Step 3.2	Assessment of Hazardous Properties *without* Concentration Limits
Step 4	Assessment of Persistent Organic Pollutants
Step 5	List of Waste Entry

Background

Note down the possible List of Waste entries for the waste in question. This is based on any existing knowledge of the waste in conjunction with reviewing the LoW chapters.

Step 1 – Waste Composition Details

Assessment is based on the concentration of the substances contained in the waste. Classifications based on knowledge of the partial composition of the waste are permitted only when all of the substances that could render the waste hazardous are identified and quantified. Such evidence must be included in the classification report. For example, in relation to contaminated soil, there may be knowledge from site history/events that the contamination is limited to certain substances and the classification could be based on the quantities of those substances in the soil.

In relation to metals, chemical analysis does not always identify the specific substance but rather the individual anions and cations that it contains. The precise form of the metal that is present needs to be identified (i.e. for example with zinc, whether it is Zinc chloride, Zinc oxide or Zinc chromate). The producer must determine the actual substance that is present and what, if any hazardous property is present, and the associated hazard statement. This is done either by further analysis or by applying knowledge from the site history, process, activity, etc. that generated the waste.

Where this cannot be done, the worst-case compound should be applied for each of the identified hazardous substances. Where this approach results in a hazardous classification but the waste may still be considered non-hazardous, property testing targeted at the hazardous properties which resulted in the hazardous classification could be used to assess the waste further. Otherwise the waste is classified as hazardous. Such evidence must be included in the classification report.

The notes included in Annex VI to Regulation (EC) No 1272/2008[2] are listed in Appendix 3. These are only relevant to the hazardous waste assessment where they alter the classification of the waste/preparation to which they relate. If necessary, ensure that these are considered during the classification of the waste. They are:

- S.1.1.3.1 'Notes relating to the identification, classification and labelling of substances' – Notes B, D, F, J, L, M, P, Q, R, and U.
- S.1.1.3.2 'Notes relating to the classification and labelling of mixtures' – Notes 1, 2, 3 and 5.

Sampling and testing should be conducted in accordance with finalised **European Committee for Standardisation** (CEN) standards and where these are not available, national standards or procedures or draft CEN standards which have reached the prEN stage – refer to:

- European Committee for Standardisation CEN website *http://www.cen.eu/cen/pages/default.aspx*
- National Standards Authority of Ireland (NSAI) website *http://www.nsai.ie/>*

See Appendix 4 for a list of the waste sampling and testing framework standards.

Laboratory reports should be included in classification reports. You should clearly indicate the test methods used in column 4 of the Step 1 & 2 spreadsheet.

2 Regulation [EC] No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation [EC] No 1907/2006. [Referred to as the Classification, Labelling and Packaging of Substances Regulation; Note there are a significant number of amendments to this regulation [Adaptations to Technical Progress] as per the Eurolex website.]

Step 2 – Assign Hazard Statements[3] and Associated Hazardous Properties

Hazard Statement Codes are linked to a hazard class that relates back Hazardous Properties as laid out in Commission Regulation (EU) No 1357/2014,[4] e.g. HP1 is linked to H200, H201, via the hazard class Unst. Expl. and Expl. 1.1 etc.

Once hazard statements have been identified in Step 2, this allows identification of the hazardous properties they are linked to, for consideration in all subsequent steps.

The CLP database maintained by the European Chemical Agency (ECHA) contains data relating to:

- Harmonised substances from Table 3.1 of the CLP[5] (as amended by Adaptations to Technical Progress) and
- Classifications of other substances notified to the European Chemical Agency.

This is available at:

http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database

If the substance is not contained in the above database, the holder must determine what hazard classes or categories, if any, it could fall into. Additional sources of information include REACH compliant Safety Data Sheets (SDSs).

SDSs must be European, REACH/CLP compliant and with no significant or relevant gaps in the data, particularly hazardous properties that have not been addressed which could possibly affect the waste classification, i.e. missing data "Not fully tested" under the relevant hazardous property, i.e. HP14 or HP3.

Step 3 – Does the waste display HP1–HP15?

3.1 Assessment of Hazardous Properties *with* Concentration Limits

Concentration limits have been assigned for the hazardous properties HP4, HP5, HP6, HP7, HP8, HP10, HP11, HP13 and HP14. The waste is hazardous if the concentration limits are equalled or exceeded. All other entries in the harmonised LoW are considered non-hazardous.

In some situations, the assessment is based on the sum concentration of all relevant substances[6], i.e. the assessment is additive (e.g. for HP4, HP5, HP6 and HP8). In other cases, assessment is based on comparison of the concentration of each relevant substance individually against the concentration limit (i.e. for HP 7, HP 10 and HP 11).

If Step 3.1 provides a cut-off value, the substances present below the cut-off value specified are not included in the sum of the concentrations for the hazard statement code that the cut-off value applies to.

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3 Hazard statements are assigned to a hazard class and category that describes the nature of a hazardous substance or mixture, including, where appropriate, the degree of hazard. This supersedes the risk phrases (R Phrases) that were used in the previous waste classification system except currently for the hazardous property HP14.

4 Of 18 December 2014, replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives.

5 Regulation [EC] No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation [EC] No 1907/2006. [Referred to as the Classification, Labelling and Packaging of Substances Regulation. Note that there are a significant number of amendments to this regulation [Adaptations to Technical Progress] as per the Eurolex website.]

6 Relevant substances means substances with the hazardous property under consideration.

3.2 Assessment of Hazardous Properties *without* Concentration Limits

Concentration limits have not been assigned for hazardous properties, HP1, HP2, HP3, HP9, HP12 and HP15. If your waste has a substance with any of these hazardous properties, the waste is classified as hazardous, unless property testing is done and demonstrates that the waste is non-hazardous. Evidence in this regard should be included in the classification report. Without such testing, however, the waste remains hazardous[7].

Step 4 – Does the waste contain POPs as outlined in Regulation (EC) NO 850/2004 (as amended) above the specified concentration?

Wastes containing persistent organic pollutants (POPs) consisting of polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF), DDT (1,1,1-trichloro-2,2- bis (4-chlorophenyl) ethane), chlordane, hexachlorocyclohexanes (including lindane), dieldrin, endrin, heptachlor, hexachlorobenzene, chlordecone, aldrine, pentachlorobenzene, mirex, toxaphene hexabromobiphenyl and/or PCB exceeding the concentration limits indicated in Annex IV to Regulation (EC) No 850/2004 of the European Parliament and of the Council shall be classified as hazardous.

Wastes containing other POPs (for example endosulfan, hexachlorobutadiene, polychlorinated naphthalenes, SCCPs, PFOS, the POP-BDEs and HCBD) shall be assessed against the POPs Regulation and the hazardous properties in accordance with the procedures described in Step 3.

Step 5 – List of Waste Entry

After completion of Steps 1 to 4 , an appropriate hazardous or non-hazardous entry from the List of Wastes shall be assigned to the waste and the entered into the table in Step 5.

7 Commission Decision of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council [2014/955/EU].

Assessment Template

	Company details
Company Name	
Company Address	
Date	
IED, IPC or Waste Licence Number (if applicable)	
Contact Person	
Contact Number	
Assessment Date	
Assessment based on partial composition, (Yes/No) (if Yes, provide the necessary evidence)	

List of Waste Entries		
List of Waste Entry	**Asterisk**	
	Yes	No

Steps 1 & 2 Waste Composition Details & Assigning Hazard Statement Code

Substance	Test Results		Test method	Test Method CEN approved (Yes / No)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Flashpoint (°C) (HP3)	Source of data for assigning codes	Hazardous property
	mg/kg	% (w/w)						

Step 3.1 Assessment of Hazardous Properties *with* Concentration Limits

Hazardous property	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Cut off value (% w/w)	Concentration limits (% w/w)	Sum of the concentrations of all substances above the cut-off value (% w/w)	Maximum individual substance concentration above the cut-off value (% w/w)	Greater or equal to the concentration limits (yes/no)
HP4 Irritant – Skin and eye damage	Skin corr.1A	H314	1	≥ 1 < 5			
	Eye dam. 1	H318	1	≥ 10			
	Skin irrit. 2 Eye irrit. 2	H315 H319	1	≥ 20			
HP 5 Specific target organ toxicity (STOT) / aspiration toxicity	STOT SE 1 STOT RE 1	H370 H372	N/A	≥ 1			
	STOT SE 2 STOT RE 2	H371 H373	N/A	≥10			
	STOT SE 3	H335	N/A	≥ 20			
	Asp. Tox.	H304	N/A	≥ 10			If yes = hazardous only where the overall kinetic viscosity (at 40oC) does not exceed 20.5 mm2/s

Hazardous property	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Cut off value (% w/w)	Concentration limits (% w/w)	Sum of the concentrations of all substances above the cut-off value (% w/w)	Maximum individual substance concentration above the cut-off value (% w/w)	Greater or equal to the concentration limits (yes/no)
HP6 Acute toxicity	Acute Tox.1 (oral)	H300	0.1	≥ 0.1			
	Acute Tox. 2 (oral)	H300	0.1	≥ 0.25			
	Acute Tox. 3 (oral)	H301	0.1	≥ 5			
	Acute Tox. 4 (oral)	H302	1	≥ 25			
	Acute Tox. 1 (dermal)	H310	0.1	≥ 0.25			
	Acute Tox. 2 (dermal)	H310	0.1	≥ 2.5			
	Acute Tox. 3 (dermal)	H311	0.1	≥ 15			
	Acute Tox. 4 (dermal)	H312	1	≥ 55			
	Acute Tox. 1 (Inhal.)	H330	0.1	≥ 0.1			
	Acute Tox. 2 (Inhal.)	H330	0.1	≥ 0.5			
	Acute Tox. 3 (Inhal.)	H331	0.1	≥ 3.5			
	Acute Tox. 4 (Inhal.)	H332	1	≥ 22.5			

Hazardous property	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Cut off value (% w/w)	Concentration limits (% w/w)	Sum of the concentrations of all substances above the cut-off value (% w/w)	Maximum individual substance concentration above the cut-off value (% w/w)	Greater or equal to the concentration limits (yes/no)
HP 7 Carcinogenic	Carc. 1A Carc. 1 B	H350	N/A	≥ 0.1			
	Carc.2	H351	N/A	≥ 1.0			
HP8 Corrosive	Skin Corr. 1A, 1B or 1C	H314	1	≥ 5			
HP10 Toxic for reproduction	Repr. 1A Repr. 1B	H360	N/A	≥ 0.3			
	Repr. 2	H361	N/A	≥ 3			
HP 11 Mutagenic	Muta.1A Muta. 1B	H340	N/A	≥ 0.1			
	Muta. 2	H341	N/A	≥ 1.0			
HP13 Sensitising		H317 H334	N/A	≥ 10			

Hazardous property	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Cut off value (% w/w)	Concentration limits (% w/w)	Sum of the concentrations of all substances above the cut-off value (% w/w)	Maximum individual substance concentration above the cut-off value (% w/w)	Greater or equal to the concentration limits (yes/no)
HP 14 Ecotoxic	Ozone depleting	H420	N/A	≥0.10			
	Aquatic acute	H400	0.1	≥25			
	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Cut off value (% w/w)	Concentration limits (% w/w)	100 x Sum of H410 + 10 x Sum of H411 + Sum of H412 (% w/w)	Sum of H410 + Sum of H411 + Sum of H412 + Sum of H413 (% w/w)	Greater or equal to the concentration limits (yes/no)
	Aquatic chronic 1,2 3 or 4	H410 H411 H412 H413	0.1 1.0 1.0 1.0	≥25			

Step 3.2 Assessment of Hazardous Properties *without* Concentration Limits

Hazardous property	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Concentration (% w/w)	Property test result	If present and no property testing = hazardous
HP 1 Explosive	Unst. Expl	H 200			
	Expl. 1.1	H 201			
	Expl. 1.2	H 202			
	Expl. 1.3	H 203			
	Expl. 1.4	H 204			
	Self–react. A	H 240			
	Org. perox. A*				
	Self–react. B	H 241			
	Org. perox. A*				
HP2 Oxidising	Ox. Gas 1	H270			
	Ox. Liq. 1	H271			
	Ox. Sol. 1				
	Òx. Liq. 2, Ox. Liq. 3	H272			
	Òx. Sol. 2, Ox. Sol. 3				

Hazardous property	Hazard Class and Category Code(s)	Hazard Statement Code(s)/ Supplemental Hazard Code(s)	Concentration (% w/w)	Property test result	If present and no property testing = hazardous
HP3 Flammable	Flam. Gas 1	H220			
	Flam. Gas 2	H221			
	Aerosol 1	H222			
	Aerosol 2	H223			
	Flam. Liq. 1	H224			
	Flam. Liq. 2	H225			
	Flam. Liq. 3	H226			
	Flam. Sol. 1 / Flam. Sol. 2	H228			
	Self–React. CD/ Self-React. EF/ Org. Perox. CD/ Org. Perox. EF	H242			
	Pyr. Liq. 1 / Pyr. Sol. 1	H250			
	Self-heat. 1	H251			
	Self-heat.2	H252			
	Water-react. 1	H260			
	Water-react. 2 Water-react. 3	H261			
HP9 Infectious					
HP 12 Release of acute toxic gas		EUH029 EUH031 EUH032			
HP15 Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste		H205 EUH001 EUH019 EUH044			

Step 4 – Assessment of Persistent Organic Pollutants Regulation (EC) NO 850/2004 (as amended)

Note: Wastes containing other POPs (for example endosulfan, hexachlorobutadiene, polychlorinated naphthalenes, SCCPs, PFOS, the POP-BDEs and HBCD) shall be assessed against the POPs Regulation and the hazardous properties in accordance with the procedures described in Step 3.

	Concentration Limit	Result and Units	Greater or equal to the concentration limits (Yes/No)
Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)	15 µg/kg		
DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane)	50 mg/kg		
Chlordane	50 mg/kg		
Hexachlorocyclohexanes, including lindane	50 mg/kg		
Dieldrin	50 mg/kg		
Endrin	50 mg/kg		
Heptachlor	50 mg/kg		
Hexachlorobenzene	50 mg/kg		
Chlordecone	50 mg/kg		
Aldrin	50 mg/kg		
Pentachlorobenzene	50 mg/kg		
Polychlorinated biphenyls (PCBs)	50 mg/kg		
Mirex	50 mg/kg		
Toxaphene	50 mg/kg		
Hexabromobiphenyl	50 mg/kg		

Step 5 List of Waste Entry

LoW entry	Hazardous (Y/N)	Description

Appendix 3 Notes included in Annex VI to Regulation (EC) No 1272/2008 as amended

S.1.1.3.1. Notes relating to the identification, classification and labelling of substances: Notes B, D, F, J, L, M, P, Q, R, and U.

Note B:

Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid … %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Note D:

Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

Note F:

This substance may contain a stabiliser. If the stabiliser changes the hazardous properties of the substance, as indicated by the classification in Part 3, classification and labelling should be provided in accordance with the rules for classification and labelling of hazardous mixtures.

Note J:

The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0.1 % w/w benzene (EINECS No 200-753-7). This note applies only to certain complex coal- and oil-derived substances in Part 3.

Note L:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3.

Note M:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0,005% w/w benzo[a]-pyrene (EINECS No 200-028-5). This note applies only to certain complex coal-derived substances in Part 3.

Note P:

The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0.1% w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-) P260-P262-P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply.

This note applies only to certain complex oil-derived substances in Part 3.

Note Q:

The classification as a carcinogen need not apply if it can be shown that the substance fulfils one of the following conditions:

a short term biopersistence test by inhalation has shown that the fibres longer than 20 µm have a weighted half-life less than 10 days; or

a short term biopersistence test by intratracheal instillation has shown that the fibres longer than 20 µm have a weighted half-life less than 40 days; or

an appropriate intra-peritoneal test has shown no evidence of excess carcinogenicity;
or
absence of relevant pathogenicity or neoplastic changes in a suitable long term inhalation test.

Note R:

The classification as a carcinogen need not apply to fibres with a length weighted geometric mean diameter less two standard geometric errors greater than 6 µm.

Note U:

When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

S.1.1.3.2. Notes relating to the classification and labelling of mixtures: Notes 1, 2, 3 and 5.

Note 1:

The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture.

Note 2:

The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

Note 3:

The concentration stated is the percentage by weight of chromate ions dissolved in water calculated with reference to the total weight of the mixture.

Note 5:

The concentration limits for gaseous mixtures are expressed as volume per volume percentage.

Appendix 4[8]Sampling and Testing Standards

Sampling and Testing Standards	
Testing Programme Framework	I.S. EN 16457:2014 Characterisation of Waste – Framework for the Preparation and Application of a Testing Programme – Objectives, Planning and Report
Sampling Plan Framework	I.S. EN 14899:2006 Characterisation of Waste – Sampling of Waste Materials – Framework for the Preparation and Application of a Sampling Plan
Sampling Plan, Statistical approaches	I.S. CEN/TR 15310-1:2006 Characterisation of Waste – Sampling of Waste Materials – Part 1: Guidance on Selection and Application of Criteria for Sampling Under Various Conditions I.S. CEN/TR 15310-5:2006 Characterisation of Waste – Sampling of Waste Materials – Part 5: Guidance on the Process of Defining the Sampling Plan
Taking and delivering a sample	I.S. CEN/TR 15310-2:2006 Characterisation of Waste – Sampling of Waste Materials – Part 2: Guidance on Sampling Techniques I.S. CEN/TR 15310-3:2006 Characterisation of Waste – Sampling of Waste Materials – Part 3: Guidance on Procedures for Sub-Sampling in the Field I.S. CEN/TR 15310-4:2006 Characterisation of Waste – Sampling of Waste Materials – Part 4: Guidance on Procedures for Sample Packaging, Storage, Preservation, Transport and Delivery

8 This lists standards issued up to time of print; refer to CEN.eu, nsai.ie and similar sources for standards issued post-publication.

AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an Ghníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ó éifeachtaí díobhálacha na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialú: *Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun díriú orthu siúd nach gcloíonn leis na córais sin.*

Eolas: *Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírithe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.*

Tacaíocht: Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaol atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaol inbhuanaithe.

Ár bhFreagrachtaí

Ceadúnú

- Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:
- saoráidí dramhaíola (*m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola*);
- gníomhaíochtaí tionsclaíocha ar scála mór (*m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta*);
- an diantalmhaíocht (*m.sh. muca, éanlaith*);
- úsáid shrianta agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (*OGM*);
- foinsí radaíochta ianúcháin (*m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha*);
- áiseanna móra stórála peitril;
- scardadh dramhuisce;
- gníomhaíochtaí dumpála ar farraige.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdaráis áitiúla agus le gníomhaireachtaí eile chun dul i ngleic le coireanna comhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, trí dhíriú ar chiontóirí, agus trí mhaoirsiú a dhéanamh ar leasúchán.
- Cur i bhfeidhm rialachán ar nós na Rialachán um Dhramhthrealamh Leictreach agus Leictreonach (DTLL), um Shrian ar Shubstaintí Guaiseacha agus na Rialachán um rialú ar shubstaintí a ídíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Uisce

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchriosacha agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

Monatóireacht, Anailís agus Tuairisciú ar an gComhshaol

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus na n-údarás áitiúil (*m.sh. tuairisciú tréimhsiúil ar staid Chomhshaol na hÉireann agus Tuarascálacha ar Tháscairí*).

Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn

- Fardail agus réamh-mheastacháin na hÉireann maidir le gáis cheaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn

Taighde agus Forbairt Comhshaoil

- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

Measúnacht Straitéiseach Timpeallachta

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn (*m.sh. mórphleananna forbartha*).

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta, measúnacht a dhéanamh ar nochtadh mhuintir na hÉireann don radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Faisnéis Inrochtana agus Oideachas

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Faisnéis thráthúil ar an gcomhshaol ar a bhfuil fáil éasca a chur ar fáil chun rannpháirtíocht an phobail a spreagadh sa chinnteoireacht i ndáil leis an gcomhshaol (*m.sh. Timpeall an Tí, léarscáileanna radóin*).
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

Múscailt Feasachta agus Athrú Iompraíochta

- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

Bainistíocht agus struchtúr na Gníomhaireachta um Chaomhnú Comhshaoil

Tá an ghníomhaíocht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inmharthanacht Comhshaoil
- An Oifig Forfheidhmithe i leith cúrsaí Comhshaoil
- An Oifig um Fianaise is Measúnú
- Oifig um Chosaint Radaíochta agus Monatóireachta Comhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

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An Ghníomhaireacht um Chaomhnú Comhshaoil

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