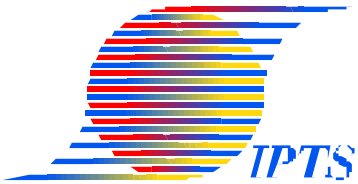

Institute for Prospective Technological Studies

The Legal Definition of Waste and its Impact on Waste Management in Europe

EUR 17716 EN

A Report Prepared by IPTS
for the Committee for Environment, Public Health and Consumer Protection
of the European Parliament

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PREFACE

In 1996, the Chairman of the Committee for Environment, Health and Consumer Protection of the European Parliament requested IPTS to perform a study titled “The Recycling Industry in the European Union: Impediments and Prospects“. This year, following one of the conclusions of this study, he requested a follow up study from IPTS **to understand the consequences of the legal definitions of waste on waste management in Europe** and in particular on the recycling, treatment and disposal of wastes. With this mandate, IPTS contacted a large number of actors concerned and provided a platform for exposing all the main positions relevant for this debate in Europe. IPTS contacted in particular the various services of the European Commission concerned, most industrial actors and NGOs.

The specificity of IPTS is the observation and follow up of technological change, in the broad sense, in order to get a better understanding of its links with economy and society. IPTS carries out this task with scientific rigor in fields such as energy, environment, information technology or food and health. At the same time the Institute carries out research to improve the understanding of the impacts of new technologies and more generally the relationship between technology, economy and society.

The present work fits the mandate of the IPTS in its task of providing lights to the European policy makers about selected topics. It is also particularly timely. At the dawn of the European Monetary Union and of a truly single market, it is necessary to tackle potential legal barriers to trade while ensuring the best possible level of environmental protection to the European citizens. Waste management is a pan-European societal problem, close to the citizen, fully relevant to the quest for sustainability.

While the tonnage of waste produced every year appear to be decreasing in some areas thanks to prevention, increasing recovery of resources from waste are raises the tonnage of waste handled for recovery and recycling and their economic relevance. Simultaneously, the European Commission is involved in a large reflection about waste management (proposed directive of landfills, communication to the Council and Parliament on recycling, proposed directive on end-of-life vehicles) and has adopted the Basel convention. This is introducing a new paradigm in the management of waste.

The European Commission is making serious harmonization efforts, but waste legislation in Europe remains very complex and Industry has voiced serious concerns. Definitions must not become a barrier to an efficient and sustainable European waste management system. Defining a material as waste or secondary raw material bears many consequences on what is allowed or not, what administrative procedures apply to its transport, export or processing, and what costs will be incurred. The aim of this study is to clarify the terrain in order to better identify the areas where progress can be made.

IPTS wishes to warmly thank all the experts that contributed to this study. The active participation of many experts and representatives of all main actors in the waste management debate made this report possible.

Seville, November 6, 1997

Table of Contents

EXECUTIVE SUMMARY

Waste is defined by the framework directive on waste (Directive 75/442/EEC amended by Directive 91/156/EEC) as “any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard”. Annex I contains a list of 16 different categories of waste, the last of which, category Q16, removing any restrictive character to the list. It covers “any materials, substances or products which are not contained in the above categories” of Annex I.

A second definition of waste co-exists with the definition presented above. It is that from the Basel Convention, adopted by the European Union in 1993: “Wastes are substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law.” While the first definition intends to be absolute, this second definition is relative to national law and opens the debate between the meaning of the term “discard” versus “dispose”. The lack of common understanding of the term “discard” is a major issue in the waste definition debate.

As an attempt to reduce uncertainty, a number of lists of wastes were drawn up. Their main aim is to determine which types of wastes are submitted to which type of control for shipment and handling. The most important ones for the European waste management scene are the hazardous wastes list (94/904/EEC), the lists from Regulation 259/93/EEC, the European Waste Catalogue (94/3/EEC) and the lists from the Basel Convention. The categories of wastes defined in these lists carry themselves a certain level of ambiguity and some inconsistencies persist between the various lists. The hazardous wastes lists were set up according to a number of intrinsic properties without reference to risk.

While the waste legislation has shown its general merits for environmental and public health protection, a number of issues remain for the actors involved in waste management, mostly for the industry sectors involved in recovery and recycling. These issues range from limitations on transport to debates on incineration and energy recovery, single market distortions, potential loss of world markets and hampered competitiveness. However, comprehensive data to estimate the size of these problems are lacking.

The two crucial points to be addressed to improve this situation are the distinction between waste and non-waste on the one hand and the distinction between hazardous waste and non-hazardous waste on the other hand.

Because of the ambiguity of the waste legislation, the European Court of Justice has been called upon to resolve a number of disputes and confirmed the very broad reach of the definition of waste. Practical guidance is now needed.

The OECD and various EU Member States are promoting a criteria based approach to distinguish waste from non-waste but no European approach has so far been produced. What appears to be important for improving waste management in Europe today is to always keep in mind the broad policy objectives of environment and public health protection, to make use of risk assessment and to set up a permanent European body, where all the actors are represented, to resolve the emerging issues.

1. Introduction

Waste management has always been part of human society and its study reveals a wealth of details over the way of life it results from. For example, paleontology relies for a large part on the study of wastes (such as bones or broken utensils) to generate the knowledge we have of prehistoric civilizations.

Waste management consists of waste prevention, reuse, material recycling, composting, energy recovery and final disposal. Today, unlike in previous historical periods, this **covers a very wide variety of materials, activities, industrial sectors and actors**. A typical feature of the current reality is too often the lack of involvement and feeling of responsibility of the generator of waste for its fate. For example, in the Western World, too few households are concerned by their "municipal solid waste" beyond the regular and barely noticed visit of the garbage truck. The same holds true for some companies. It is therefore essential, for an efficient waste management, to develop and maintain a sense of responsibility and a good **common understanding** of the materials and operations involved over the whole range of actors concerned, **leaving the door open to the use of common sense**.

As the material wealth of households has increased throughout History, their generation of waste has also steadily increased. When, thousands of years ago, a bone left over from a meal would be often turned into a valuable tool, it is today not even given to the dog, who gets pet food; it gets "thrown away", just as many high added value items. In our societies, "throwing away" is even sometimes the most convenient and cheapest way to get rid of objects that could still be of use somewhere else. It is this "throw-away society" which is indirectly of concern to us in this report.

At the same time **as the intrinsic value (imbedded added value) of waste has increased, its relative value in rich economies has decreased and its environmental impact has grown**. As a consequence, materials which were once of use, began to be dumped. To minimize the increasing costs of disposal, large amounts of wastes were transported from relatively rich countries with expensive waste treatment facilities to poorer countries with cheaper waste treatment facilities operating under lower environmental standards.

In other words, large amounts of municipal and hazardous waste from industrial countries were dumped in developing countries. To put a stop to this practice, the OECD was the first to international organization to take action to control the transfrontier movement of hazardous waste in 1984. At world level, the Basel convention on the Control of Transboundary Movements of Hazardous waste and their Disposal (Basel Convention), was signed in the United Nations in 1989 and entered into force in 1992. In 1995, the Parties to this convention agreed replace the controls by an export ban of hazardous wastes from OECD to non-OECD countries. This ban would immediately apply to exports for disposal and will apply to wastes destined for recycling or recovery after 31/12/1997.

During the same period, the wandering of barrels with contaminated soil originating from Seveso had led to the European directive on supervision and control of

transfrontier shipments of hazardous wastes (84/631/EEC). This directive was replaced by Council Regulation 259/93/EEC on the supervision and control of shipments of waste within, into and out of the European Community, extending control to all wastes and Council Decision 93/98/EEC adopting the Basel Convention.

In spite of the fact that waste recovery techniques and technologies have improved since then, the economic value of resources currently wasted, the cost of pollution caused by waste disposal and the cost of the required improved waste management solutions are tremendous. At the same time, **the transport, re-use, recovery, treatment and disposal of many materials and products that can be called "waste" are driving well established important economic activities**. Additionally, sensible waste prevention and recovery can bring simultaneously economic and environmental benefits. Therefore, a well thought-out waste strategy is essential for strengthening Europe's efforts towards global sustainable development, better environmental protection, more employment and higher industrial competitiveness.

The purpose of this study was to look at the issues raised by the current European legislation on waste, and in particular the legal definition of waste, on waste management practices. Therefore, it was not our purpose here to delve into important areas such as waste prevention nor to analyze the broad environmental benefits of this legislation.

2. What is a waste?

The concept of waste is at first sight easily understood by everybody in age to speak. However, a precise legal definition of what waste really is, is probably impossible to make.

The notion of waste is relative in two main respects. First, something becomes waste when it loses its primary function for the user. A waste is therefore relative to this primary function. However, and this is the second perspective, what is considered waste with regard to this primary function may be useful for a secondary function. In other words, somebody's waste is often somebody else's (secondary) raw material. Nature is an excellent example of this reality since, for example, in many cases, the defecation of mammals is used as food by some insects. This fact is independent of any specific definition one can draw.

This relative nature explains why **certain wastes keep a significant economic value**. While a waste may lose its value for whom generated it, it may maintain a value for its secondary user who will be the one to set this value.

The notion of waste is also relative to the technological state of the art and to the location of its generation. One example can be horse manure. One hundred years ago, it could be considered as a waste in a large city but as a useful fertilizer in rural areas. Today, it has disappeared from towns altogether due to technology change.

These simple notions may help shed some light on the current ongoing debates about European waste (or material) management. In its communication on the review of the European waste management strategy (COM(96)399 final), the European Commission recognizes there is to date no satisfactory definition of when a product becomes waste nor of when a waste becomes a product again. It also recognizes that in spite of the intrinsic difficulty of the task, a serious effort from all actors is necessary to reach an adequate definition.

Table 1: Main European and international legislation on waste

At European level	• Directive 75/442/EEC amended by Directive 91/156/EEC and Decision 94/3/EEC • Directive 91/689/EEC, replacing Directive 78/319/EEC and Council Decision 94/904/EEC • Council Regulation 259/93/EEC revised by Commission Decisions 94/721/EEC, 96/660EEC, and Council Regulation 120/97/EEC, and Decision 93/98/EEC
At OECD level	• Council Decision C(88) 90 final • Council Decision C(92) 39 final
At UN level	• Basel Convention • Decision III/1

In Europe, national waste legislation has appeared to address environmental, public health and, to a lesser extent, resource concerns. For the European Union, the main pieces of waste legislation also respond to environmental concerns (article 130S of the Treaty on European Union). Table 1 lists the main pieces of waste legislation at European and international level.

2.1 Definitions of waste in the legislation of the European Union

2.1.1 Framework Directive on Waste

The first legal definition of "waste" at European level appeared in the first Framework Directive on Waste (75/442/EEC) in 1975. In its Article 1, and "for the purpose of this directive", it defines waste as "any substance or object which the holder disposes or is required to dispose of pursuant to the provisions of national law in force". The directive goes on with a list of "wastes" excluded from its scope, and therefore from this definition (e.g. radioactive waste, wastewater, etc...). The directive also indirectly defined all recyclable materials as waste insofar as recycling was legally considered as a means of disposal, together with landfilling and incineration. This first definition, being relative to the national legislation in force in every Member State, amounted in fact to a different definition in each Member State.

This situation changed with the revised Framework Directive on Waste (91/156/EEC) in 1991. There, the definition of "waste" became "any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard".

In an attempt to reduce the possibilities of interpretation of the definition and to provide a single European interpretation of the concept of waste, there is an additional condition that the substance or object should be listed in the categories of waste presented in Annex I (see Box 1). Annex I contains 16 different categories of waste and is based on the OECD Council Decision (88)90. These 16 categories introduce a wider vocabulary than just waste. They talk about residues, products, elements, substances and materials. Additionally, category Q13 covers "materials, substances or products forbidden by law", without specifying which law. As a result, the Member States apply it in relation to their own law. Finally, category Q16 removes any restrictive character to the list. It covers "any materials, substances or products which are not contained in the above categories" of Annex I, confirming the very broad reach of the literal definition. The Framework Directive on Waste, in its article 1.1.a, also requests the European Commission to draw a list of wastes (the European Waste Catalogue, see section 2.6.1).

It is worth noting that the original European Commission proposal to amend the 1975 Framework Directive on Waste contained a definition in which Annex I was to be used to determine whether or not a substance or object had been discarded[1]. In the current text of the directive, Annex I merely illustrates the materials which the

[1] OJ Nº C295 of November 19, 1988, p. 3, and OJ Nº C326 of December 30, 1989, p. 6

holder discards or intends or is required to discard, which have to be considered waste.

Box 1: ANNEX I of Directive 91/156/EEC

CATEGORIES OF WASTE
Q1 Production or consumption residues not otherwise specified below
Q2 Off-specification products
Q3 Products whose date for appropriate use has expired
Q4 Materials spilled, lost or having undergone other mishap, including any materials, equipment, etc., contaminated as a result of the mishap
Q5 Materials contaminated or soiled as a result of planned actions (e.g. residues from cleaning operations, packing materials, containers, etc.)
Q6 Unusable parts (e.g. reject batteries, exhausted catalysts, etc.)
Q7 Substances which no longer perform satisfactorily (e.g. contaminated acids, contaminated solvents, exhausted tempering salts, etc.)
Q8 Residues of industrial processes (e.g. slags, still bottoms, etc.)
Q9 Residues from pollution abatement processes (e.g. scrubber sludges, baghouse dusts, spent filters, etc.)
Q10 Machining/finishing residues (e.g. lathe turnings, mill scales, etc.)
Q11 Residues from raw materials extraction and processing (e.g. mining residues, oil field slops, etc.)
Q12 Adulterated materials (e.g. oils contaminated with PCBs, etc.)
Q13 Any materials, substances or products whose use has been banned by law
Q14 Products for which the holder has no further use (e.g. agricultural, household, office, commercial and shop discards, etc.)
Q15 Contaminated materials, substances or products resulting from remedial action with respect to land
Q16 Any materials, substances or products which are not contained in the above categories.

This renders the wording of the definition in article 1 critical and **creates a debate on the precise meaning of the crucial term "discard"**. The concept of discard is not defined in the Directive and differs from the definition of waste in the OECD Decision (88)90 (which uses the word "dispose"), causing major problems in the interpretation of the word "discard" at Member State level. The legal notion of "discarding" is considered by many Member States to be broader that the OECD notion of "disposal".

Additionally, and in spite of calls from Industry in this respect against directive 75/442/EEC, directive 91/156/EEC still defines materials as "waste" irrespective of the fact that they may be recyclable. However, this directive introduces a distinction and provides for different permits between disposal operations (Annex II A) and recovery operations (Annex IIB).

This legal situation, leaving such a room for interpretation, has created the favorable conditions for a number of disputes to be resolved at the level of the European Court of Justice.

The resolutions of **these cases all confirmed the very broad interpretation of the term "waste"**, regardless of the eventual sale, re-use or recycling of the end-of-life material or product. According to the European Court of Justice, the fact that a substance is deemed to be "goods" does not alter its character as "waste"[2]. In brief, in the current European legislation, something can be simultaneously a "waste" and a product, good, raw material or substance, irrespective of economic value, collection, processing, etc. The definition of waste is independent of its

[2] Cases C-206 and C-207/88 (Vessoso and Zanetti), ECR I 1461 (1478)

qualitative or commercial value, possible market, geographical purposes or the destination of waste. The Court of Justice did not discuss the notion of “discarding” nor the notion of secondary raw material extracted from waste (see section 5.2).

2.1.2 Other directives and regulations

Apart from the definition present in the European framework directive on waste, other definitions exist. These definitions were developed for the sole purpose of their respective directives. The two main examples are:

- Directive on the disposal of waste oils (75/439/EEC)

“For the purposes of this directive, the term “waste oils” shall be taken to mean any semi-liquid or liquid used product totally or partially consisting of mineral or synthetic oil, including the oily residues from tanks, oil-water mixtures and emulsions.”

- Directive on waste from the titanium dioxide industry (78/176/EEC)

““Waste” means:
- Any residue from the titanium dioxide manufacturing process of which the holder disposes or is obliged to dispose under current national legislation;
- Any residue from a treatment process of a residue referred to in the first indent.”

These definitions do not pose a significant problem with regard to the general definition of the framework directive. The packaging directive (94/62/EEC) and the new draft directives on landfills and on end-of life vehicles adopt the definition of directive 91/156/EEC. The council regulation 259/93/EEC on the shipment of waste refers to the definition of waste “in article 1 (a) of directive 75/442/EEC”. Since this regulation is from 1993, this refers to the definition of directive 91/156/EEC.

2.2 National definitions of waste in the European Union

Many different concepts of waste exist in Europe. They have evolved in every Member States to respond to local geographical, cultural, historical and administrative conditions. As a result, the national concepts of waste vary from country to country and are sometimes difficult to translate. We will not enter this subject in detail here. The European framework directive on waste contributes to harmonize this situation but the European Commission complains that national laws still use definitions and classifications that depart from European terminology. Table 1 gives a synthetic overview of the current European situation in this field.

The term “waste” has a negative image because it qualifies a material from the perspective of the upstream activity that generated it. It is the point of view of the person who cannot use it any more. However, it does not in any way mean that recovery or recycling is excluded. The French legislation introduced the additional notion of “ultimate waste” to describe waste for which no recovery is currently economically practicable. Of course, this concept is also relative to the current technological state-of-the-art.

Table 2: Comparison between the definition of waste in Directive 91/156/EEC and national definitions

Countries	Legislation	Definition
Austria	Austrian Waste Management Act 1990 last revised by BGBI. Nr. 434/1996	Section 2 of the federal act states that "wastes shall be objects: 1) which an owner or holder wishes to dispose of or disposed of, or 2) where their collection and treatment as waste is required by the public interest (paragraph 3 of section 1)". Adding that (paragraph 3 of section 1) "In any event, public interest: shall not require a systematic listing and treatment according to the present federal act as long as an object: 1) is new in keeping with generally accepted user standards, or 2) is used for its intended purpose in keeping with generally accepted user standards, or 3) is used in an admissible form, or recycled, in the immediate vicinity of a household or a place of business, after having been put to its intended purpose. EWC is not mentioned
Belgium	Region Wallonne: Decree 27 June 1996; Flemish region: Decree 2 July 1982, amended 20 April 1994	The regions of Flanders, Brussels and Wallonia define waste as in Directive 91/156/EEC but without mentioning the European Waste Catalogue (EWC).
Denmark	Statutory Order n. 299 of 30 April 1997	Defines waste as the Directive 91/156/EEC including a reference to EWC
Finland	Waste Act 1072/1993	Defines waste as the Directive 91/156/EEC. EWC is transposed into national law through the Decision 867/96
Germany	Waste Management Act (RWMA) 1994	Defines waste as the Directive 91/156/EEC mentioning the EWC and with a distinction between waste for recovery and waste for disposal.
Spain	n/a	Defines waste as the Directive 75/442/EEC not updated to the 91/156 and EWC is not mentioned
Greece	n/a	Defines waste as the Directive 75/442/EEC not updated to the 91/156 and EWC is not mentioned
Portugal	n/a	Defines waste as the Directive 75/442/EEC not updated to the 91/156 and EWC is not mentioned
France	French Act 75-633 1975 revised 13 July 92	Defines waste as: " material originating from a production or transformation process, or use, which the holder discard or intends to discard". Distinction between waste and "ultimate waste" is made. "Ultimate waste" is understood to be any waste product, the treatment of which is neither economically or technically viable at the time, in particular through extraction of the recoverable part or the reduction of its pollutant or hazardous character. EWC is not mentioned.
Ireland	Environmental Protection Act July 1996	Defines waste as the Directive 91/156/EEC, also mentioning the EWC. However there is a presumption that the substance and material or the object considered waste, is waste till is proven the contrary.
Italy	Decree 22/97	Defines waste as the Directive 91/156/EEC, mentioning the EWC in the appendix
Luxembourg	n/a	Defines waste as any substance or object which the holder abandons or is required to discard. Is also considered waste any product or substance sent for recovery until it enters the commercial cycle again.
Netherlands	Wet Milieubeheer 1993	Waste defined as in Directive 91/156/EEC; no mention of the EWC
Sweden	Supreme Court decision (date: n/a)	By the end of 1997 a new legislation will implement the EU framework Directive on waste. So far, Swedish legislation does not define waste. According to an old supreme court decision, waste is something the owner wishes to get rid of, and a residue which has a value cannot be waste.
United Kingdom	Environment Protection Regulations (1991)	Defines waste as Directive 91/156/EEC without mentioning the EWC. Are excluded from wastes materials within the "commercial cycle or chain of utility", material which can be put to immediate use without the need for a waste recovery operation and waste which has been processed to such a state that it can be used as a raw material.

Table 2 provides an overview of the national definitions of waste currently in use. It can be noted that Spain, Greece and Portugal have not yet incorporated the switch from directive 75/442/EEC to directive 91/156/EEC. Austria and Sweden have not yet incorporated directive 91/156/EEC into their legislation.

As Table 2 shows, one of the problems of the European waste legislation is its uneven application and enforcement. The European Commission is of the opinion that all Member States have to take over the definition of waste from the Framework Directive.

2.3 OECD

The OECD created the Waste Management Policy Group (WMPG) in 1974. The OECD's WMPG continues to be actively involved in waste management issues. During the 1980's, the WMPG devoted considerable resources in order to develop appropriate measures to control transfrontier movements of hazardous waste. This resulted in a number of OECD Council acts, and contributed significantly to the development of the Basel Convention. Directives adopted by the now European Union in this field also benefited from the OECD activity.

The definition of "waste" in the context of the OECD Council Act is set out in OECD Council Decision C(88)90(Final) as:

"materials, other than radioactive materials, intended for disposal for reasons specified in Table 1".

This table 1 is titled "Reasons why material are intended for disposal", and contains a list of sixteen categories of waste such as 'Production or consumption residues not otherwise specified below' (Q1), 'residue of industrial processes' (Q8) or 'residue from raw material extraction and processing' (Q11). This table was used as a basis for the 16 categories of wastes defined in Annex I of the European directive 91/156/EEC. The OECD made also attempts to develop a method to determine what is waste (see section 5.4).

The Member Countries of the OECD have unanimously resolved to create (as a result of article 11 of the Basel Convention, see section 2.4), and fully implement an international mechanism to control transfrontier movement of wastes intended for recovery within the OECD area. This led in 1992 to the adoption of the Decision Concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations C(92)39/Final, in which the same definition of waste as that of Council Decision C(88)90 Final is taken.

The formal implementation of the OECD decisions can only be through national legislation promulgated in Member Countries.

2.4 United Nations Environmental Program

The United Nations Basel Convention on the control of transboundary movements of hazardous wastes and their disposal was adopted by the European Union in 1993 and entered into force in 1994. Its aim is to limit the international shipment of hazardous wastes, in particular from OECD countries to non OECD countries, to avoid their improper handling and disposal. This convention is not European legislation but is binding for shipments of hazardous wastes outside of the Union.

In its article 2, the Basel convention gives the following definition of waste:

"Wastes are substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law."

This definition is identical to that of directive 75/442/EEC (not amended). Being relative to the national legislation in force in every Party, it amounts in fact to a different definition in each country and avoids therefore the question of compatibility with the definition of directive 91/156/EEC. An effort is being made to bring the European lists of hazardous wastes into line with those of the Basel Convention.

One of the points of contention of the Basel Convention is the evolution from the control to the ban, as of January 1, 1998 in Europe, of the export of hazardous recyclable wastes from Annex VII countries to non-Annex VII countries (see section 4). Some developing countries and recycling industries claim this will disrupt existing legitimate trade and recovery in certain materials classified as hazardous waste. Table 3 presents the various international definitions of waste.

Table 3: International definitions of waste

Organization	Legislation	Definition
European Union	Directive 75/442/EEC modified by Directive 91/156/EEC	Waste shall mean any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard. Annex I contains a list of 16 "categories of waste". The Commission, acting in accordance with the procedure laid down in Article 18, drew up a list of wastes belonging to the categories listed in Annex I: the European Waste Catalogue. This catalogue will be periodically reviewed and, if necessary, revised by the same procedure.
OECD	OECD Council Decision C(88) 90 Final of 27 May 88	Wastes are materials other than radioactive materials intended for disposal, for reasons specified in Table 1. Table 1 contains a list of 16 "Reasons why materials are intended for disposal", such as 'Production or consumption residues not otherwise specified below' (Q1), 'residue of industrial processes' (Q8) or 'residue from raw material extraction and processing' (Q11).
UNEP	Basel Convention on the control of transboundary movements of hazardous wastes and their disposal. Adopted 22 March 1989	Wastes are substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law.

2.5 Hazardous waste

Among the various types of wastes, the so-called “hazardous wastes” have a particular relevance since most of the legislation was drawn up in the first place to address the adverse environmental and public health impacts of wastes.

In the European Union, “hazardous wastes” are covered by directive 91/689/EEC, replacing directive 78/319/EEC, complemented by Council Decision 94/904/EEC, establishing a list of hazardous wastes. Directive 91/689/EEC defines as “hazardous wastes” the “wastes featuring on a list to be drawn up in accordance with the procedure laid down in article 18 of directive 75/442/EEC on the basis of Annexes I and II to this directive, not later than six months before the date of implementation of this directive. These wastes must have one or more of the properties listed in Annex III. The list shall take into account the origin and composition of the waste and, where necessary, limit values of concentration” (see the annexes to directive 91/689/EEC in Appendix B). Such a list was published in Council Decision 94/904/EEC (see Appendix C). Lately, “hazardous wastes” are at the center of a heated debate because of the Basel Convention.

The scope of the Basel Convention is to control the transboundary shipment of “hazardous” wastes, defined as: “(a) wastes that belong to any category contained in Annex I, unless they do not possess any of the characteristics contained in Annex III; and (b) wastes that are not covered under paragraph (a) but are defined as, or considered to be, hazardous wastes by the domestic legislation of the Party of export, import or transit.” Radioactive wastes are excluded.

As we can see, this definition refers to simple lists of categories of wastes and of hazardous characteristics, each defined more or less precisely (see Appendix D). The Technical Working Group of the Basel Convention has now developed a “List A” of “wastes characterized as hazardous under article 1.1(a) of the Basel Convention” (see Appendix E).

Article 3 of the Convention recognizes that the “Parties” (i.e. signatory countries) may consider as “hazardous” wastes that are not on these lists.

OECD Council Decision (88)90 Final sets out to control the transfrontier movement of hazardous wastes. For the purposes of this decision, hazardous wastes are defined by reference to a core list as specified in its Annex and all other wastes which are considered or legally defined as hazardous by the Member Country from which these wastes are exported, or in the Member Country in which these wastes are imported. Table Y of this Annex, titled “Core list of wastes to be controlled” sets out this core list (see our Appendix F). The “generic types of potentially hazardous wastes” are almost identical to the “categories or generic types” of hazardous wastes presented in the annexes to the European Directive 91/689/EEC. The more important inconsistency is the one between Annex I.A to Directive 91/689/EEC (see our Appendix B) and Annex I to the Basel Convention (see Appendix D). Such an inconsistency may cause the EU not to control all those wastes listed in Annex I to the Basel Convention as hazardous wastes.

OECD Council Decision (92)39 Final does not give a definition hazardous wastes. This decision sets levels of control for the transfrontier shipment of waste depending

on the overall environmental risk of a waste when it is destined for a recovery operation within the OECD. The criteria for inclusion in either the amber or red lists, is given in its Annex II. The inclusion of a waste in any of the lists does not mean that the waste is hazardous.

2.6 The lists

As we have seen, the various definitions of waste in existence in the European legislation and of their hazardous characteristics leave a lot of room for interpretation. The very nature of wastes, always a relative concept, is rendering the design of an unequivocal definition impossible. Setting up wastes lists was therefore an attempt at refining literal definitions and clarifying the legislation on waste shipments. We review here briefly the main lists of wastes relevant in the European context. Some national lists also exist but will not be reviewed here.

2.6.1 The European Waste Catalogue

On the basis of the article 1a of Directive 75/442/EEC, the European Waste Catalogue (94/3/EEC) intends to establish a common terminology for the Union Member States. It is a Decision from the European Commission which contains a register of the waste covered by Annex I, divided into 20 categories coded principally on the basis of origin or composition of the material (see Appendix G). Each category contains two sub levels of information, resulting in a total of about 700 items in the list, several of them being of the type: “waste not specified elsewhere”.

Additionally, the text of the European Waste Catalogue (EWC) states: “The inclusion of a material in the EWC does not mean that the material is a waste in all circumstances. The entry is only relevant when the definition of waste has been satisfied”. Therefore, and while taking a very broad approach to the designation of waste, the EWC does not specify which objects are waste and which are not. Its list is defined as not being exhaustive. Member States may add items to that list through a complex procedure leading to an EC decision on whether or not the item should be added.

As a result, the EWC does not resolve any uncertainty that may arise from the definition of waste from the framework directive. Its main purpose seems to be the use as a reference nomenclature and to provide support to the generation of waste statistics (COM(96)399 final, paragraph 83).

2.6.2 The lists from Regulation 259/93/EEC

As mentioned above, Regulation 259/93/EEC contains in its annexes II, III and IV a green, an amber and a red list of wastes identical to the Green, Amber and Red lists of wastes contained in OECD Council Decision C(92)39 Final (see Appendices H and I). These lists may be updated by the Commission according to the procedure described in Article 18 of Directive 91/156/EEC.

However, EC Regulation 259/93/EEC has a much broader scope than that of OECD Council Decision C(92)39 Final. It controls all movements of wastes within, into and out of the European Union. The Green, Amber and Red lists were developed by the OECD for the specific purpose of intra-OECD movements of wastes destined for recovery operations. Regulation 259/93/EEC applies these same lists in a much broader context than that for which they were originally intended. Red listed wastes shipped for recovery between EU Member States or outside the EU must follow the "prior informed consent procedure". Amber listed wastes must follow the same procedure only for shipment for recovery outside the EU. Shipments for recovery of amber listed wastes within the EU and of green listed wastes only require notification.

Regulation 259/93 was also amended by Regulation 120/97/EEC which adds to it an Annex V composed of its previous annexes III and IV (the Amber and Red lists) and applies to it the Basel Convention's export ban as of January 1, 1998. Regulation 120/97/EEC expressly requests the alignment of the hazardous waste list under Directive 91/689/EEC and the annexes III and IV of Regulation 259/93/EEC. The Committee under Directive 75/442/EEC amended by Directive 91/156/EEC started work on this issue fifteen months ago. As a general rule, Regulation 259/93/EEC must be regularly updated in order to remain in conformity with the OECD Decisions.

However, some contradictions have been identified between the OECD green list of wastes and the green list from Regulation 259/93/EEC on the one hand, and the European hazardous waste list (94/904/EEC) on the other hand. For example, "aluminum skimmings" are in the list from Regulation 94/904/EEC under number 100303 while they are included in the Green list in regulation 259/93/EEC on the shipment of waste and in OECD decision C(92)39 Final (number GB 030). To complicate the matter further, "aluminum skimmings", currently on the List B (not yet officially adopted) of the Basel Convention under number B1100, are being included in list D ("Waste about which particular concerns were expressed", so far with no official status) by the Technical Working Group. The point of contention here is that they are not clearly included in Annex I of the Basel Convention ("Categories of wastes to be controlled").

In the end how does one know under what procedure this waste must be handled? This contradiction illustrates the difference between the risk-based approach to classifying wastes destined for recovery for the purpose of OECD Council Decision C(92)39 Final and the more intrinsic approach to defining wastes as hazardous for the purposes of transboundary movements under the Basel Convention.

2.6.3 The European hazardous wastes list

This list was published in Council Decision 94/904/EEC (see Appendix C). It was set up in accordance to the definition of "hazardous waste" provided by Directive 91/689/EEC and the rules of procedure defined in Article 18 of Directive 91/156/EEC. The criterion used to set up this list is essentially to "have one or more of the properties listed in Annex III" of Directive 91/689/EEC. Additionally, this list must be based on Annexes I ("generic types of hazardous wastes") and II ("constituents which render waste hazardous when they have the properties

described in Annex III") of this same directive. Additionally, "where necessary, limit values of concentration" will be set.

As we can see, drawing up this hazardous wastes lists is based on a rationale, not mentioned, which was used to draw the lists of Annexes I and II of Directive 91/689/EEC. The term "is based" remains vague and as a result, the presence of a waste on this list essentially derives from having at least one of the intrinsic properties listed in Annex III. No attempt is made to introduce any risk assessment. It should be noted that there is no direct link between the hazardous waste list from Decision 94/904/EEC and the "Amber" and "Red" lists of Regulation 259/93/EEC. Various European Member States are working on the expansion of the hazardous waste list.

2.6.4 The OECD lists

These lists refer to movements of wastes for recovery between OECD Member countries. OECD Council Decision C(92)39 Final designates three "tiers" of wastes: the Green, Amber and Red Tiers (see Appendix H). The Decision requires control of transfrontier movements of Amber and Red Tier wastes but requires no controls for Green Tier wastes other than those normally applied to commercial transactions. Formal implementation of the OECD System can only be through national legislation. The lists are revised periodically according to the requests for changes from the OECD Member Countries.

In the case of transfrontier movements of Amber or Red listed waste to recovery facilities, the sender should provide specific information such as the nature of the waste, generator, notifier, waste recipient, fate of the waste, etc. Financial guarantees are also required. The shipments of Amber and Red listed wastes shall be notified to the competent authorities of exporting, importing and transit countries. Those authorities shall give their consent to the shipment before the shipment may commence.

The OECD System formalized with Decision C(92)39 is based on four OECD Council Acts, among which Council Decision C(88)90 where Member Countries agreed to control a certain number of wastes unanimously considered hazardous. A "core list" of hazardous waste to be controlled was thus developed. This Decision preceded the Basel Convention, and its major elements were incorporated into the Convention.

2.6.5 The Basel Convention lists

The basic list from the Basel Convention is its Annex I, "categories of wastes to be controlled" (see Appendix D). The Convention took this list over from the OECD decision (88)90/Final. The categories of wastes described are quite broad, for example, "Y19: wastes having as constituents metal carbonyls" and have started arguments over which materials are really covered.

In response, the Basel Convention's Technical Working Group has made progress towards clarifying which wastes will and will not be covered by a ban on the export

of hazardous recyclable wastes from OECD countries to non-OECD countries that is due to take effect as of January 1, 1998. Four new lists have been proposed:
- List A contains the hazardous wastes that will be covered by the ban,
- List B contains the wastes deemed to be non-hazardous and therefore not covered by the ban,
- List C is a sort of antechamber containing the wastes that have yet to be classified on either list A or list B, and
- List D contains wastes for which “particular concern” has been expressed. So far, this list does not have any official status.

Lists A and B also clarify the scope of article 1.1.a of the Basel Convention (the hazardous wastes to be controlled). The current discussions of content for List B could provide a way for the recycling industries of the importing countries to be exempted from the export ban for non-hazardous materials in which they have special interests.

However, the indicative or binding character of these lists still has to be decided. A final decision could be taken at the next conference of the Parties to the Basel Convention to be held in Malaysia in February 1998. One of the points to be discussed is the so-called “mirror listing” of wastes: some wastes are simultaneously listed in list A and list B, creating confusion. For example “Precious metal ash from incineration of printed circuit boards not included in list B” is presented in list A (A1150) and “Precious metal ash from incineration of printed circuit boards” is presented in list B (B1160). The way to make a distinction is not explained.

2.6.6 The need for harmony and adaptability

Over the last few months, the European Court of Justice, the ultimate European arbiter in the matter, has been building a jurisprudence confirming the wide coverage of the term “waste”, irrespective of economic value or destination.

In the current state, the waste lists, while all being relevant in the European legislation, show some discrepancies. Their wording, as in the case of the literal definition of waste itself, remains often vague. The end result is an enduring confusion around what is waste. In any case, the large number of lists does not contribute to the harmony of the European waste legislation.

One of the issues related to the lists is that some seem to have been derived from others, but the rationale behind them is unclear (see section 2.6.2). A serious harmonization drive is therefore necessary. The European Commission is making efforts in this direction in its attempt to harmonize the lists of the European directives with those of the Basel Convention.

Another limitation of the lists is that they reflect the state-of-the-art of the moment when they were drawn. In spite of the various articles to that effect present in the various European directives, updating them and adapting them to technical progress remains a lengthy process often lacking transparency (closed meetings).

The OECD and the European Commission are conscious of these problems. While the European Commission has been considering the idea of proposing criteria for determining whether a material is a waste, the OECD has been attempting to develop guidance to determine whether or not a transfrontier movement of a particular material between OECD countries falls within the scope of OECD Council Decision C(92)39 Final. Developing a set of criteria for this purpose is one possible approach. Using criteria would have the advantage of removing arguments centered on the lists and their ambiguous wording since any dispute could be referred to the application of the (indicative) criteria. The recycling industry is favorable to international harmonization at world level (UNEP), to avoid discrepancies and promote recycling and sound environmental management worldwide[3].

In accordance with this new line, the Flemish government has developed, but not yet adopted, a novel regulatory approach: that of the decision tree. Instead of setting up a positive list, the Flemish system determines the classification of a waste according on the answer to a number of questions. If scientific and technological progress changes the answer to one of the questions for a given waste, its classification can be immediately changed.

Of course, this mechanism requires a continuous link to a permanent body able to ensure that the responses to the questions of the decision tree correspond to the spirit of the legislation and to the current “best practices”.

3. Waste generation and European waste statistics

The total current generation of wastes by the European Union can be estimated at 2.2 billion tonnes, including 100 million tonnes municipal solid waste, 720 million tonnes industrial wastes and 1.1 billion tonnes agricultural wastes (Ouallet, 1997). Of course, these impressive statistics hide large differences in the problems actually caused by these wastes but they give a sense of the importance of waste management in our European society.

Waste statistics are notoriously unreliable and incomplete (see tables 4 and 5), as was put in evidence in a previous study (Bontoux et al., 1996). Our investigations for this study confirmed this position although new systematic efforts by the OECD, Eurostat and DG XI appear to be under way.

Tables 4 and 5, in spite of their gaps and limitations give an idea of the amounts of material at stake in European waste management. While table 5 presents waste by its origin, table 4 attempts to classify waste by its nature. Comparisons are difficult and there is no need to develop this point further here. Better statistics are needed to improve waste management.

[3] BIR, personal communication to IPTS, November 6, 1997

Table 4: Selected basic European waste and recycling statistics
(Bontoux et al., 1996)

	"WASTE"			RECYCLED	
	Total waste (million tonnes)	Packaging only (million tonnes)	Landfilled waste (million tonnes)	Total post user waste recycled (million tonnes)	Packaging waste recycled (million tonnes)
Non ferrous metals*[1]	n.a.	n.a.	n.a.	4.3	n.a.
Ferrous metals	n.a.	4[4]	n.a.	70	1.5[21]
Paper[5]	55	22	n.a.	29.5	19.4
Plastics[6]	17.5	9.0	13.3	1.1	0.9
Glass[7]	n.a.	15.3	n.a.	7 (container glass)	7
Composites	n.a.	0.85	n.a.	n.a.	n.a.
Textiles	4.2	n.r.	n.a.	n.a.	n.r.
Rubber	1.95	n.r.	n.a.	n.a.	n.r.
Chemicals Chlorinated solvents	0.183	n.r.	n.a.	n.a.	n.r.
Rubble [8]	500	n.r.	n.a.	n.a.	n.r.

* Only the 4 main metals: Al, Cu, Pb and Zn n.a.: not available - n.r.: not relevant

Apart from the physical collection of the data, probably the main difficulty to obtain reliable waste statistics arises from the differences in the definitions of waste categories between Member States. For example, very widespread waste denominations such as "municipal solid waste" do not have the same definition across Member States. In this particular case, definitions may range from what is commonly produced by households to what is collected by municipal waste collection services. The recent "Waste Topic Center" set up by the European Environmental Agency is tackling this problem. Various industry associations, Eurostat and the OECD are also active in this field and publish figures on a regular basis.

[4] Source: Informations-Zentrum Weißblech, Düsseldorf, personal communication to IPTS, 3 July 1996.
[5] Source: CEPI
[6] Source: APME/SOFRES
[7] Source: FEVE
[8] Source: SAGA Ltd, UK, personal communication to IPTS, 27.08.1996

Table 5: Amounts of waste generated in the EU (million tonnes/year)

Country	Year of Ref.	Agriculture	Mining	Industrial	Municipal	Other	Total	Hazardous
Austria	1996	n/a	n/a	36.5[9]	2.5[9]	n/a	39	1[9]
Belgium	1994	n/a	0.4[10]	13.3[10]	4.7[10]	8.0[10]	26.4	0.24[11]
Germany	1993	27.9[12]	67.8[13]	77.7[13]	43.5[13]	6.4[13]	223.30	9.09[14]
Denmark	1995	n/a	n/a	2.6[15]	2.6[15]	6.1[15]	11.3	0.25[15]
Spain	1990/97?	114[16]	70[16]	13.8[12]	14.5[17]	n/a	18-19[17]	1.7[12]
France[18]	1995	43[19]	75[16]	40[19]	20.5[19]	19[19]	197.5	3.95[12]
Finland	1994	22[20]	35.5[20]	15.4[20]	2.1[20]	12.5[20]	87.5	0.5[20]
UK	1990	80[21]	110[21]	70[21]	20[21]	15.4[21]	295.4	2.54[12]
Greece	1990/92	0.09[16]	3.9[16]	4.3[16]	3.2[16]	n/a	11.49	0.45[16]
Italy	1985/95	29.83[16]	n/a	34.3[22]	25.78[23]	n/a	89.91	2.7[22]
Ireland	1984/94	22[12]	1.93[12]	7.12[24]	1.68[24]	0.105[24]	8.905[24]	0.99[24]
Luxembourg	1990/92	n/a	n/a	1.3[12]	0.19[16]	n/a	1.49	0.09[16]
Netherlands	1996	1.64[25]	0.065[25]	19.87[25]	7.29[25]	21[25]	50[25]	0.919[26]
Portugal	1990/93	n/a	0.2[12]	0.66[12]	3.37[27]	0.015[12]	4.245	0.08[16]
Sweden	1990	21[12]	28[12]	13[12]	3.2[12]	3.85[12]	69.05	0.5[12]
Total	-	**362**	**393**	**350**	**174**	**86**	**1134**	**26**

n/a: not available

4. Issues

As stated earlier, the main goals of the existing European legislation on waste are the protection of public health and of the environment. By and large, these goals appear to have been achieved. In that case, why should so many people complain so loud that the materials they collect, transport, use, sell or recycle are considered as waste? For a large part because they claim the administrative and control requirements they have to comply with for handling a “waste” are much heavier and costly than for a “non-waste” product, substance, raw material, etc... And this has wide ranging consequences, both direct and indirect. Most industry actors however,

[9] Umweltbundesamt 97, data 96 (Industrial= Agriculture+Mining+Industrial)
[10] OVAM, communication to IPTS, November 6, 1997, Other = energy production, water treatment and construction
[11] FEAD, Working Group 3, 1994
[12] OECD , Environmental Data Compendium 93
[13] UBA 1993
[14] Statistiches Bundesamt/december 1996, BDE/December 96 - data 93
[15] Waste Statistics 1995, Copenhagen 1997
[16] Eurostat-OECD, Environment Statistics, 1996
[17] Issued by SOLVAY Spain 1997 from Selectives Metropolitanes SA
[18] Data issued by FEAD France from ADEME 1994 differ substantially from data in the table, Industrial waste accounts of 150 Mt/year and Agricultural and food ind. waste accounts of 420 Mt/year
[19] Issued by ERRA data fromADEME 1995
[20] Ministry of Environment, Draft proposal for Finland’s national waste plan until 2005
[21] Cooper & Lybrand, CSERGE - DGXI, 1996
[22] AUSITRAassoambiente 1995, production of waste 94
[23] Federambiente 96, “Production of MSW in Italy” data 95
[24] The economics of solid waste management in Ireland (ESRI) - 1995
[25] National Institute of public health and environmental protection (RIVM) 97, “Milieubalans 97”
[26] Basis document gevaarlijke afval, 1997 (excluding contaminated soil and shipping waste)
[27] DGQA (93)

accept these requirements when they are clearly justified by environmental considerations.

Under European legislation, the requirements and limitations to the handling of wastes come essentially from Directives 91/156/EEC, 91/689/EEC, 94/62/EEC, Regulation 259/93/EEC and Decision 93/98/EEC adopting the Basel Convention.

Directive 91/156/EEC on waste obliges Member States "to take the necessary measures to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment" (Article 4). It aims at enabling waste to be disposed of in "one of the nearest appropriate installations", and requires Member States to "prevent the movements of waste which are not in accordance with their waste management plans" (Article 7). It also calls for records to be kept of all transport and treatment of waste (Article 14).

Directive 91/689/EEC on hazardous wastes essentially establishes administrative requirements (permitting, registration, identification) for the collection, transport, treatment and disposal of hazardous wastes.

Directive 94/62/EEC aims at harmonizing national measures concerning the management of packaging and packaging waste. It promotes prevention, re-use, recycling and recovery. It also sets targets for recovery (between 50% and 65% by weight) and material recycling (between 25% and 45% by weight with a minimum of 15% for each material) of packaging waste in each Member State. A periodical revision (upwards) of the targets is foreseen. The efficient monitoring and revision of the targets relies on a harmonized understanding of "packaging waste" and on a coherent system of data gathering across all European Member States.

Regulation 259/93/EEC applies to "all shipments of wastes within, into and out of the Community" but excludes some wastes covered by other directives (e.g. radioactive wastes) as well as "wastes destined for recovery only and listed in (the green list of wastes)" (Article 1). Beyond the information required for the normal transport of materials, the intended recovery operation must be indicated for the transport of green listed wastes destined for recovery (with the exception of the items falling under the provisions of article 1.3.a). Of course, the recovery facility must also have a valid permit.

For the movement of wastes between its Parties and the non-Parties, the Basel Convention could be summed up by its Article 4, paragraph 5, stating: "a Party shall not permit hazardous wastes or other wastes to be exported to a non-party or to be imported from a non-party". In case such import or export is granted, it requires a tight administrative follow up (e.g. prior informed consent for shipment, pre-notification to competent authorities of states of import, export and transit as well as financial guarantees) and a check from the exporting State that:
- the waste will be properly managed by the importing party,
- the State of export "does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the wastes in question in an environmentally sound and efficient manner", and that
- the "wastes in question are required as a raw material for recycling or recovery industries in the State of import".

The stringency of all the requirements from the waste legislation has increased the pressure on the definition of waste. A number of arguments have been raised by the various actors involved in waste management, material recovery and transport.

4.1 Administrative

The relevant provisions for the supervision and control of transboundary shipments of waste within, into and out of the European Community are given in Regulation 259/93/EEC. As for all the above mentioned regulations, for the definition of waste, the regulation refers to Article 1.a of the Directive on waste.

Some of the issues mentioned, mostly by the recycling industry, are the administrative burdens (internally with paperwork, externally with delays in response and variations in interpretation) created by the European legislation on waste. Part of these relate to the need for an extensive book-keeping and part to problems when crossing borders. Directive 91/156/EEC requires Member States to designate competent authorities to implement it. According to the industry, the designated officials are often experienced in waste disposal and environmental matters but few of them have industrial experience. Given the lack of precision of the definition of waste in the Directive, each Member State takes a different interpretation of the definition of waste with regard to specific materials, resulting in trade barriers. Under the denomination of waste, recoverable material is seen more as a potential pollutant than as a potential raw material.

The outright prohibition of transport of hazardous wastes from one country to another as allowed by the Basel Convention starting on January 1, 1998 is another serious concern. According to Industry, it puts in question entire existing logistics where recovery and recycling facilities have been sited according to areas of collection not necessarily respecting national borders but designed to minimize transport costs and take advantage of economies of scale.

The need to notify of the passage of a shipment of waste labeled as hazardous through every country crossed is also a concern because it increases the necessary paperwork.

So far, the significance of these problems is difficult to quantify. The Italian glass federation estimates that the extra administrative costs (compliance costs) due to the waste legislation amount to a minimum of 150 million Lire per year for an average facility. The ferrous metals, non-ferrous metals and paper industries in Italy are estimating that the strict application of the packaging, waste and hazardous waste directives costs them between 0.5% and 1% of turn-over (see Table 6). The cost of the inconsistent implementation of the European legislation remains to be estimated.

Table 6: Estimated compliance costs for the ferrous and non-ferrous metal industry in Italy. (ECU[28]/Year)

Costs*	Small firm	Medium firm	Large firm
Extra person for administrative procedures	n/a	20,776	25,970
Specific Software	649	519	1,039
Account books, forms (keeping, fill-in, checking, etc.)	4,000	2,960	4,414
External Consultant	n/a	779	4,155
Other	4,648	623	2,337
TOTAL	**9,297**	**25,657**	**37,915**
Cost as % of turn-over	**0,5 to 1%**		

* The data available are not strictly uniform between enterprises; moreover the firms surveyed stressed that other non directly quantifiable costs may increase significantly the above picture. These cost estimations were made in the case of a strict application of the national Decree 22/97[29]
Source: ASSOFERMET (97)

The textile industry considers that classifying secondary textiles as waste "is adding significantly to costs and administrative overheads, and generally discouraging the companies that produce or use these "residual materials" with no discernible benefit on the environment". Additionally, it fears that "the legislation will lead to an increase of the amount of these "secondary" or "residual" fibres being finally disposed of, and a decrease in the amount used to make products"[30].

4.2 Incineration and energy recovery (standards)

Many actors involved in waste management view as unfair that a same waste may not be incinerated according to the same standards whether it is sent to a cement kiln or to a waste incinerator. The same holds true for a material (e.g. process residue) sometimes burnt on-site (e.g. in a paper plant) as fuel. If the same material is leaving the plant to be incinerated elsewhere, it is considered as waste and must be incinerated according to waste incineration standards. In some Member States (e.g. Finland), the material is considered as waste even inside the plant.

The reason why various incineration standards exist does not originate from the material being incinerated but from the incineration technology. Various incineration processes have been developed to fulfill different needs. For example, a cement kiln obeys to different technical requirements than a solid waste incinerator. As a result, it is the "Best Available Technique" for each process which determines the emission standards for a process and not just what fuel is used. This explains why "waste" may happen to be burned according to different standards. For environmental protection, the best achievable standards for each process should be used regardless of the type of fuel burnt, and emissions should be globally minimized, as required by the IPPC Directive. In some cases, technology may be adapted to meet pre-set standards.

In the specific case of dedicated waste incineration, standards are set by directives 89/369/EEC, 89/429/EEC and 94/67/EEC. This last directive requires that emissions

[28] Exchange rate July 97, DG XIX (1 ECU= 1927,26)
[29] Implementing the Directives 91/156/EEC, 91/698/EEC and 94/62/EEC.
[30] EURATEX, personal communication to IPTS, October 29, 1997

from cement kilns and hazardous waste incinerators be identical in the case when the cement kiln uses more than 40% hazardous waste in its fuel. In the case when the cement kiln uses less than 40% hazardous waste in its fuel, a formula is applied (Annex II of the directive) according to which the emissions from the hazardous waste fraction of the fuel must be the same as in the case of a dedicated hazardous waste incinerator. This arrangement did not settle the debate between the cement kiln operators and operators from waste incinerators[31]. For the general incineration of wastes, a number of European cement kilns already operate under the same standards as those of the (non-hazardous) waste incinerators[32].

Here, another potential conflict raised by the definition of waste is that between biomass used as fuel, and waste. The use of biomass as fuel is promoted by European programmes approved by the European Commission, the Council and the European Parliament such as FAIR, ALTENER or JOULE-THERMIE. However, traditional fuels such as straw, green tree cuttings, bark, olive residues, etc, are covered by the European Waste Catalogue and may be defined as wastes. One must make sure that such a classification does not prevent the use of the best energy recovery technology for such materials.

“Refuse-derived fuel” is a material proceeding from waste specially prepared so that it can be burnt as fuel. It has been processed and brought to known specifications, even though it does not fulfill the stringent criteria of fuels. However, the European Commission has always considered it as waste and as such it obeys the same legal requirements for incineration as other types of wastes.

4.3 Single market issues

The Basel Convention gives every Party the power to control its own hazardous waste market by closing its borders selectively or completely. In Regulation 259/93/EEC, article 4.3.a i) states that “Member States may take measures [...] to prohibit generally or partially or to object systematically to the shipment of waste”. Articles 1.3.d and 7.4.a also allow Member States to exceptionally restrict the import or export of any waste. However, “in the case of hazardous waste (...) produced in a Member State of dispatch in such a small quantity [...] that the provision of new specialized disposal installations within that State would be uneconomic”, article 4.3.a.i) does not apply. Such escape clause does not exist for non hazardous wastes, leaving a small risk to deprive small countries from using foreign facilities where economies of scale can be better achieved. The Packaging Directive also carries some degree of contradiction between the free transport of unsorted packaging waste for recycling or recovery and the obligation for each Member State to achieve minimum recycling and recovery targets.

In the European legislation, the principles of “proximity” and “self-sufficiency” only apply to wastes to be disposed of and not to wastes to be recovered. However, practice shows that some competent authorities have applied them to all wastes. This creates problems for some industrial sectors. The ferrous and non-ferrous metal, paper, textile and oil recycling industries, for example, that trade wastes that

[31] FEAD, November 3, 1997, and Ciments d’Obourg, November 7, 1997, personal communications to IPTS
[32] FEAD, personal communication to IPTS, November 3, 1997

they consider as secondary raw materials all over the world, consider the improper application of these principles highly inappropriate to an industry that is providing vital raw materials for other industries. The transfrontier shipment of these materials for recycling is ultimately beneficial to the environment and should not be hindered without good reasons. These problems originate for a large part from implementation problems of the European waste legislation.

Most European countries put VAT on wastes, some don't (see Table 7). In any case, there is no harmony among the rates applied. This creates unnecessary market distortions. According to the recycling industry, wastes should not carry VAT, but products or secondary raw materials should and clear rules about how to draw the line between wastes and products or secondary raw materials should be developed. The huge differences in administrative charges from country to country have been an active deterrent to trading with a particular country. VAT rates in the European Union should be harmonized within a few years.

Table 7: VAT on waste in some European countries

Country	Rate	Coverage	Part. cases
Austria	20 %	All recyclable products	10% in case of negative prices or landfilled materials
Belgium	0 %	All recyclable products	21% in case of negative prices
France	20.6[33] %	All recyclable products except non-ferrous metals	
Germany	15 %	All recyclable products	
Italy	suspension	All recyclables and from 01/01/97 extension to melted products (from foundries etc.)	
Netherlands	0 %	All recyclable products	
Scandinavia	25 %	All recyclable products	
Spain	12 %	All recyclable products. It belongs to the buyer to declare and pay VAT	
UK	17.5 %	All recyclable products	

Trading recyclable material across borders needs, in some cases, to be concluded very quickly due to the perishable nature of some materials (e.g. amber listed aluminum drosses [AA050] from Kenya, lead drosses [AA030] from Ghana[34]), fluctuating world prices, exchange rates or freight charges and availability of material. Notification procedures required under the Article 9 of the framework directive on waste and by Regulation 259/93/EEC are sometimes a source of enormous delay and are causing serious problems both for exporters and importers (up to 12 months delay in some cases[35]). The large numbers of possible variations

[33] Option over 500.000-FF of turnover and below 6 millions FF)
[34] Source: EUROMETREC, February 1997
[35] CEFIC, personal communication to IPTS, 3 September 1997

in the information required for notification documents and the possibility for request for further information by competent authorities have caused contracts failures and have deterred some industries to continue to trade with certain countries.

4.4 World trade

The Parties to the Basel Convention have decided to ban the export of materials classified as hazardous waste from the OECD to non-OECD countries on the basis of a request from various non-OECD countries. These materials are the object of commercial trade between enterprises in EU Member States and non-OECD countries as a supply of raw materials and products. If these exports are banned, the non-OECD partners will look for other supplies. Table 8 gives an idea of the potential material fluxes at stake in the OECD. More complete statistics on tonnages and commercial fluxes involved do not appear to be available (see section 3).

TABLE 8: Number of known hazardous waste export schemes from OECD to non-OECD countries from 1989 to 1993
(adapted from OECD COM/ENV/TD(97)41/REV1)

Status of shipments	Number	%
Successful trade for disposal or recycling	278	41.7%
Rejected by importing state	135	20.2%
Stopped by exporting state or returned	75	11.2%
Planned shipments not carried out	35	5.2%
Shipments abandoned or with unknown results	144	21.6%
Total	667	100%

The likely response can be along two lines:
- for basic raw materials (e.g. non-ferrous metals on list A), they may turn to their own natural resources and start mining, with the subsequent environmental impact. This is unlikely because most countries lack these resources; or
- because virtually all other suppliers are OECD countries, they risk having to shut down their smelters[36].

The impact over the recycling industry is clear. Under the definition of waste, recoverable material is seen more as a potential pollutant than as a potential raw material. As such, their movement between EU and non-OECD States falls under the restrictive conditions of Council Regulation 259/93/EEC, and of the Basel Convention if they are “hazardous” or deemed to be so by the country of export, import or transit. The severity of the potential impact on recycling industries varies according to the level of international trade, to the importing countries concerned and to the type of material. No comprehensive statistics from Industry are available to accurately measure these impacts. In the case of ferrous scrap, intra and extra-EU trade amounts to almost 100 million tonnes per year (1995) of which more than 20 million tonnes are imported and 25 million tonnes exported in and out of the EU[37].

[36] A. Nijkerk, personal communication to IPTS, October 30, 1997
[37] Source: European Coal and Steel Community, Doc. 2302/2/97 EN, October 10, 1997

Another element has to be mentioned in the light of the above paragraph. In 1993, in response to the requirements of article 17 of Regulation 259/93/EEC, the European Commission sent a letter to all non OECD countries asking them whether they wished to import "wastes" from the EU. About 70 countries sent a detailed reply, 46 countries replied they did not want to import wastes from the EU and 54 countries did not reply. However, and in spite of the information documents sent by the European Commission with the letter, there is a question at this point around the definition of waste. For example, in its negative response, is what Nigeria calls "waste" in its response to the European Commission the same as what the European Commission called "waste" in its letter to them? A misunderstanding at this level could have serious world trade consequences. Reportedly[38], some countries who sent a negative reply to waste imports are now realizing they may no longer be able to import some materials of interest to their industries (e.g. metal scrap, second hand clothing for recycling,...) from the EU. For the countries that did not answer, the European Commission proposes to apply the "prior informed consent procedure".

This is creating a debate between the European Commission and the European Parliament both on what should be done about the countries that did not reply and on what should be done about the countries that sent a negative response and are only now becoming aware of the full consequences of their response. While the Commission is taking a pragmatic stance, the European Parliament is proposing to prohibit all exports of green listed wastes to both categories of countries.

Another potential impact of the disappearance of some kinds of European non-ferrous metal scrap from the world trade is the rise of secondary raw material prices because of a shrinking supply. As expressed in a document from the International Chamber of Commerce[39], this could be a problem for the developing countries. Several countries who have replied "no" to waste imports have complained in media reports about the European Union keeping valuable scrap for itself.

There is also a small potential issue linked to the import of products into the EU. There is increasing pressure to raise the recycled content of products but the EU could decrease the world supply of secondary raw materials with which recycled contents could be increased. Notwithstanding the outcome of Fourth Conference of Parties of the Basel Convention, the EU has already banned exports of wastes considered hazardous as of January 1, 1998 (Regulation 120/97/EEC). One should remember however, that the export of hazardous wastes for recycling purposes is allowed if required as raw materials (article 4.9.b of the Basel Convention).

From a trade policy point of view, the possibility exists that a State could find itself unable simultaneously to meet its obligations under the Basel Convention and the GATT/WTO agreements. For example, if the Basel Convention ban is applied, and arguing that precious metal ash from incineration of printed circuit boards, for example, is not waste, certain non-Basel parties could go to the WTO against the EU for raising barriers to the trade of raw materials.

[38] DG I, personal communication to IPTS, September 1997

[39] 32nd ICC Conference, Singapore, April 1997

The ban on the exports of Amber and Red listed wastes for recycling or recovery could promote illegal trade. The level of illegal trade is by its nature very difficult to estimate. However, as the legal obligations for trade in hazardous waste between OECD and non OECD countries due to the proposed amendment of the Basel Convention become tighter, the incentives for illegal trade increase. This issue will be discussed at the forthcoming Fourth Meeting of the Conference of the Parties to the Basel Convention now scheduled for February 23-27 1998 in Malaysia.

In addition, Article 16.3b of Regulation 259/93/EEC gives EU Member States competent authorities the possibility to prohibit export if they "...have reason to believe that the waste will not be managed in accordance with environmentally sound methods". This discretional power leaves the door open to possible market distortions given the number of different competent authorities judging what may be "environmentally sound" and the large number of non-OECD countries to which materials are exported for recycling. As of January 1, 1998, this will only apply to intra-OECD shipments. Some non-OECD countries consider this article a sign of a condescending attitude of the EU towards them. Article 4.2.(e) of the Basel Convention falls under the same criticism.

The magnitude of these trade problems should be limited by the fact that, according to the current draft lists drawn up by the Technical Working Group of the Basel Convention, most major trade flows of recyclable wastes (which are mirror listed in lists A and B[40]) are expected to be excluded from the scope of the export ban after the above mentioned meeting. The ban (Amendment III/1) will only be effective when 65 Basel Parties have ratified the amendment. To date, less than 10 (mostly European, including the EU) have done so.

4.5 Environmental protection

Environmental protection is at the basis of waste management legislation. The waste regulations are generally considered to have had so far a positive effect on the environment. However, care should be taken that it remains so and that the increasing complexity of the legislation does not decrease the level of environmental protection. A mechanism should be set up to solve punctual problems.

For example, a ban on the export of "hazardous wastes" as defined by the Basel Convention could end up having adverse environmental impacts in some cases. The metals recycling industry cited the case of a copper and arsenic mixture produced in Europe for which there is only one commercial plant in the world able to recycle it. It so happens that this plant is located near a mine in a non-OECD country. Currently, this material is exported there from Europe for treatment. Under the export ban, this would no longer be possible and the same material would end up in a European landfill for lack of a proper European facility.

There appears to be an emerging recognition within some Member States that waste collected for recycling purposes should be defined as a secondary raw

[40] For political reasons according to the recycling industry, BIR, personal communication to IPTS, November 6, 1997

material (a non-waste) so that it can compete with virgin raw materials on a cost effective basis. This could have positive economic and environmental effects.

4.6 Humanitarian

The legislation on shipments of waste discussed here was for a large part designed to solve environmental and public health problems caused by the improper disposal of wastes in poor countries. This legislation largely achieved its goal. However, some people argue it could have insidious effects for these same countries.

Arguably, under the very broad current European definition of waste, EU stockpiles of food (e.g. butter, milk powder or grain past their “sell-by” date and therefore “off specifications”) could be considered as waste because of the notion of discarding. According to such an argument, their export as food aid to the non OECD countries that did not reply positively to the letter the Commission sent as mandated by Council Regulation 259/93/EEC might be forbidden. DG XI of the European Commission considers this argument as unrealistic.

In the case of used clothes, the situation is different. Sorted clothes for direct re-use as clothes are not waste, and as such fall under ordinary commercial operations. The other types of used clothes fall under the waste legislation and charities, which are the main suppliers to the textile recycling industry, risk losing income from their sale to recycling operations located in countries that did not wish to import wastes from the EU (Regulation 259/93/EEC).

4.7 Competitiveness and image

Most industry sectors deeply involved in resource recovery and recycling, such as for example the paper, metal and glass industries, refuse to be considered as waste management industries. The main rationale behind their stance is four-fold:

- they have been involved in recovery activities for much longer than people have talked about waste management,
- they divert their recyclable materials from other “wastes” and transform them into secondary raw materials (i.e. material prepared and processed according to commercial specifications to meet technical requirements),
- the whole material chain is a tightly integrated industrial chain, relying on material specifications and a high level of professional qualifications all along the chain.
- they need secondary raw materials for a large part of their processes.

Additionally, they feel that their classification as “waste management industries” tarnishes their public image and could cause them to lose markets (e.g. food packaging in recycled paper). This point relies entirely on the negative perception of the concept of “waste” by the public. Consumer information is an important means to fight this.

Beyond these points, classifying these sectors within waste management puts an additional administrative and financial burdens on them with a direct negative impact on their competitiveness.

Article 11 of Directive 91/156/EEC offers the possibility, under certain conditions, to simplify the administrative requirements. According to the recycling industry this article is not uniformly applied throughout the Community. It is up to local administrations to facilitate the application of this provision. This is one more example of the difficulty to implement the European waste legislation.

4.8 Other issues

In the case of wastes, there is often a decoupling between supply and demand. In the system, either there is the supply of a waste management service, for which a price has to be set, or the "waste" has a value, in which case a price must also be set. Also, a general characteristic of "waste" is that its production is independent of market demand. Therefore, prices can fluctuate strongly in response to demand. This introduces an economic vulnerability for recycling activities.

Article 10 of the Council Regulation 259/93/EEC states that if a material is not included on the Amber or Green lists it has to be treated as if it was included in the Red list. This article is considered by industry as an obstacle to the development of new technologies to facilitate recycling of, for example, heavy non-ferrous fraction and the waste for disposal from car shredding operations. While the industry can apply for the listing of new waste categories, they have to apply the red list procedures in the mean time. The re-listing of modified existing waste categories from amber to green can be granted if justified by new technology.

The recycling industry is also concerned by a recent opinion delivered by Advocate General Jacobs according to which a shipment of mixed green wastes should be amber listed[41] if it has not been "properly" sorted. According to this opinion, the decisive factor for the classification of the waste is to know whether it has been properly sorted, not to know whether most of its components are green listed. According to Advocate General Jacobs, if the intention of the legislator is to stop wastes of one category of the green list from being mixed with those of another category of the green list, then the legislation needs to be amended to clarify this point.

5. Towards a distinction between waste and non-waste

5.1 The question to answer

All the issues presented above show how crucial the distinction between waste and non-waste can be for all the actors. On the one hand, a legitimate concern from the legislator exists to ensure the proper handling of wastes, avoiding negative impacts on the environment and on public health (i.e. reducing risk). On the other hand, the

[41] Opinion delivered on October 23, 1997, European Court case C-192/96

legislation must promote the recovery of resources, preserve the Single Market and obey international obligations (World Trade Organization and Basel Convention).

In view of the brief discussion presented in section 2, a double question arises, linked to the relative nature of wastes. Where should one draw the line between product and waste on one side, and between waste and raw material (or product) on the other side? This distinction cannot easily be drawn (One man's waste can be another man's treasure).

5.2 Contribution from the European Court of Justice

Being able to provide an answer to this question is crucial for most industry sectors. However, the current legislation leaves so much room for interpretation by competent authorities that many arguments end up being referred to the European Court of Justice. Several cases have provided the basis for building a jurisprudence in this area.

So far, the judgments from the Court of Justice have confirmed an interpretation of the definition of waste covering an extremely wide range of products and materials, irrespective of market value or destination. According to the Court of Justice[42], waste "is not to be understood as excluding substances and objects which are capable of economic reutilization, even if the materials in question may be subject of a transaction or quoted on public or private commercial lists".

According to the Opinion of Advocate General Jacobs, a by-product or residual product does not constitute waste if it is destined for direct re-use in a further process in its existing form and if the use of a residue as substitute or ingredient is as environmentally sound as the material it is replacing. This often occurs as an integral part of production processes. In the cases where the material cannot be directly used in the production process (i.e. needs to be further processed[43]), it should be considered waste.

Thus, according to the Opinion of Advocate General Jacobs, any material, regardless of whether it is a residue, a by-product, a secondary raw material or any other material resulting from an industrial process, must be regarded as waste and be subject to special regulation under the directive. On the contrary if a material is wholly interchangeable with another product and does not fall under additional regulation, it is unnecessary for it to be classified as waste[44].

5.3 National approaches

Faced with the need to resolve practical cases and in application of the subsidiarity principle, European Members States have developed different approaches and sets

[42] Judgment of the Court (Sixth Chamber), Joined cases C-304/94, C-330/94, C-342/94 and C-224/95, 25 June 1997

[43] However, some processing such as baling or fragmentisation of metal scrap is not essential and does not change the nature of the material. It is only used to increase ease of handling. It should have therefore no bearing on the decision to classify a material as waste.

[44] Opinion of Advocate General Jacobs delivered on 24 April 97, Case C-129/96, Court of Justice of the European Communities, Luxembourg. The French Federation of Waste Activities (FNADE) fully supports this interpretation.

of criteria to distinguish waste from non-waste with particular reference to material produced or used in industrial processes. Care should be taken that these different approaches do not create unnecessary barriers to trade.

In Austria, public interest shall not require a systematic listing and treatment as waste as long as an object meets the following conditions:

- it is new or used for its intended purpose and meets generally accepted user standards,
- it is used in an admissible way,
- it is recycled, in the immediate vicinity of a household or a place of business, after having been put to its intended purpose.

In Belgium, a substance integrated into an industrial production process constitutes waste only if it is used in a way which is not in conformity with the nature or function assigned to it under a natural process or assigned to it intentionally under a production or other process. In the case of Flanders, a decision tree approach is being prepared (see section 2.6.6) in order to make the definition more precise. However, it is not based on the OECD criteria.

Germany, considers each case on its merits in the light of the view generally held in trade. In general, the German government is supporting the criteria approach developed by the OECD (see below). Some degree of divergence appears at the level of the Länder.

The Netherlands have developed a few specific criteria to distinguish waste from non-waste. The material must:

- be used 100% in a production process;
- not be subject to any process comparable to a current means of waste disposal or recovery;
- be transported directly from the producer to the person who will make further use of it.

The United Kingdom considers that production residues, secondary raw materials and by-products used in industrial processes do not constitute waste if they are not subjected to an operation associated with the recovery of waste. The UK Department of the Environment, for example, does not consider recyclable material as “waste” if it is:

- material which is within the “commercial cycle or chain of utility”,
- material which can be put into immediate use without going through a specialized waste recovery operation,
- waste which has been processed to such state that it can be used as a raw material.

France has also developed its own guidance document to distinguish waste from non-waste. Again, the approach relies on a set of exclusion criteria[45]. A “non-waste” should:

[45] The French Federation of Waste Activities (FNADE) disagrees with this approach, communication to IPTS, November 3, 1997

- have a use value,
- have recognized characteristics and meet specifications defined by the user
- have identifiable and stable users in the medium term
- be traceable from production through to its ultimate state
- benefit from a non-discard guarantee throughout the recovery cycle
- be consistent with a high level of environmental protection
- have clear contractual relations between its producer and user.

Finland and Denmark follow the approach of the European directives. Sweden is only now transposing the European legislation and did not have a definition of waste previously.

Most national approaches amount to the application of criteria more or less well defined. As we can see, all these approaches are different. In view of this situation, contrary to the desire for harmonization of legislation in the European Union, the European Commission is considering whether to issue a European guidance document on the distinction between waste and non-waste.

5.4 The criteria approach

The OECD, now long involved in the waste debate, has also recognized the need to develop a system of indicators to provide practical guidance in the distinction between waste and non-waste. As a result, a list of questions to be organized in a

Box 2 - List of criteria

1. Is the material produced intentionally?
2. Is the production of the material subject to quality control?
3. Does the material meet well developed nationally and internationally recognised specifications/standards?
4. Do these standards include environmental considerations, in addition to technical or economic consideration?
5. Is the material made in response to market demand?
6. Is the overall economic value of the material negative?
7. Is further processing required before the material can be directly used in a manufacturing/commercial application?
8. Is this processing limited to minor repairs?
9. Is this material still suitable for its originally intended purpose?
10. Can the material be used for another purpose as substitute material?
11. Is the use of the material as environmentally sound as that of a primary product?
12. Will the material actually be used in production process?
13. Does the material have an identified use?
14. Does the use of the material in a production process cause any increased risks to human health or the environment greater than the use of the corresponding raw material?
15. Is the material no longer part of the normal commercial cycle or chain of utility?
16. Can the material be used in its present form or in the same way as a raw material without being subjected to recovery operation (Table 2B)?
17. Can be the material be used only after it has been subjected to a recovery operation (Table 2B)?

Source: OECD ENV/EPOC/WMP(96) 1

flow chart has been proposed by draft OECD guidance documents (WMP(96)1, revised by the draft document WMP(97)2, etc.) (see box 2).

The list of questions (or criteria) proposed covers four main areas of analysis:
a) Economic considerations (questions 6, 5, 13, 1, 15, 7)
b) Destination of the material (questions 8, 9, 10, 12, 16, 17)
c) Environmental impact (questions 11, 4, 14)
d) Characteristics and specifications (questions 2 and 3)

This list of criteria does not pretend to be exhaustive. Several criteria listed are interdependent and/or linked to each other. They are not mutually exclusive and do not follow a hierarchy. Their main purpose is to identify the main issues commonly considered when distinguishing waste from non-waste.

In order to try and shape a decision tree, or to be able to develop a step-by-step approach, we need to have a hierarchy of questions weighted in conformity to the

Box 3 - Criteria flow chart (destination of the material)

C01. Is the material destined for an operation which does not lead to the possibility of resource recovery, recycling, direct re-use or alternative use?

If YES the material is a waste. If the material is not destined for such an operation, process to C02

C02. Is the material destined for an operation which may lead to resource recovery, recycling, reclamation, direct re-use or alternative use?

If YES, the material is a waste. If the material is not destined for any of the above operations, proceed to C03

C03. Can the material only be used, as an input material in a process, after it has been subjected to a recovery operation? (i.e. further processing required?)

If Yes, then the material is a waste.

However, if the material can be used without being subjected to recovery operation, there is a need to ensure that it is actually used. Therefore the following steps are proposed:

C04. Can the material be used in a process, other than a recovery operation, as an input material?

If YES proceed to C05, ... etc.

Source: OECD ENV/EPOC/WMP(97) 2

main objectives of the framework laws under consideration. The first objectives are environmental and public health protection. Other considerations (e.g. economic ones) come second.

The inclusion in the guidance grid of economic considerations raise most of the problems. The fact that a material may have a positive economic value does not mean that the material is unlikely to be a waste but it would enable materials with a positive economic value to proceed to the next step in the flow chart.

Finally, the destination of the material issue will ensure that if a material cannot be recovered, recycled, reclaimed, directly re-used or given an alternative use, the material should be considered waste. On the contrary if the material can be recovered, etc..., a guidance grid should be developed to identify clearly its nature.

Alongside this last consideration, the OECD draft guidance ENV/EPOC/WMP(97)2 has tried to address the issue by developing a practical example (See Box 3).

The OECD flow chart has to be taken as an example of a possible step-by-step approach. Detailed analysis and content of the flow chart is beyond the scope of this study. Attempts to develop a decision tree as a means of providing guidance in the context of the OECD's definition of waste has been unsuccessful but the principle of developing a decision tree was generally well supported. However, it was not possible to incorporate several interdependent factors into a simple linear flow chart. As a result, the OECD decided to abandon this approach for the moment[46]. Numerous efforts are still being done at national level to find a practical solution to the problem.

6. Hazardous, or non-hazardous waste?

Beyond the distinction between waste and non-waste, the distinction between hazardous and non-hazardous waste is also very important. Often, this is even the most crucial test for industry because this distinction conditions the level of control and the administrative burden to which the material is submitted. In particular, authorizations for handling, storing and transporting waste are difficult to obtain if a material is classified as "hazardous waste".

The objective of the waste legislation is to protect public health and the environment from any adverse effects originating from the improper handling of wastes. In other words, the objective of the legislation is to minimize the risks to public health and the environment. At this point, it is important to make a clear distinction between the notions of "hazard" and of "risk". In the context of interest here, a hazard is a possible source of danger while a risk is the probability of this danger to cause harm. Therefore, a hazard is an intrinsic property while risk contains two elements: the hazard and a probability. A same level of risk may therefore result from either a combination of a high hazard with a low probability or of a low hazard with a high probability.

In the case of "hazardous wastes", while the hazards may remain constant, the risks involved in handling them vary a lot whether one is looking at transport, re-use, processing, treatment or disposal. In practice, a maximum level of safety is required at all stages. Therefore, one aims at minimizing risk and performs a risk assessment to estimate the risk involved. However, the end point considered relevant for the risk assessment are different according to the situation one is looking at. For example, what will be relevant for transport may not be relevant for processing. In the case of lead, this could mean that the risk of emissions of lead to air and water from the transport of a lead bar may be negligible, while they are very relevant to smelting operations.

[46] OECD, personal communication to IPTS, November 5, 1997

In the current legislation, no account is taken of risk assessment nor of the level of hazard and the classification as “hazardous” is based on intrinsic properties. In the same token, the restrictions on transport, export, and handling are based the same intrinsic properties, regardless of risk. However, the efficient protection of the public and of the environment relies on the affordable minimization of risk at all stages, including disposal.

The general definitions of hazardous wastes essentially refer to lists of wastes and properties. For example, directive 91/689/EEC defines hazardous wastes as ”wastes figuring on a list [...]. These wastes must have one or more properties listed in Annex [...]. This list shall take into account the origin and composition of the waste and, where necessary, limit values of concentration”. As a follow up, Decision 94/904/EEC provides a list of hazardous wastes such as “wastes containing arsenic” in the category of metal-containing wastes, or “wastes not otherwise specified” in the category of alkaline solutions (see Appendix C). The Basel Convention follows the same lines but allows to define as hazardous material that are regarded as non-hazardous by other Parties, potentially causing disharmony.

As one can see, these definitions are very vague and provide no indication of a level of hazard. For example, in the “wastes containing arsenic” they do not provide a minimum level of arsenic below which the waste would no longer be considered as hazardous. Does this mean any trace of arsenic is sufficient to render a waste “hazardous”?

Along the same line, the denomination “wastes not otherwise specified” does not provide a guideline on how to attribute a hazardous character to alkaline solutions. Are all alkaline solutions hazardous? What is the human risk involved in case of direct contact and what is the environmental risk involved in case of spill?

The answer to these questions lies in principle in the Annex III of directive 91/689/EEC that lists the “properties of wastes which render them hazardous”. This should provide sufficient guidance but again, the description of the properties remains vague (e.g. “ecotoxic: substances and preparations which present or may present immediate or delayed risks for one or more sectors of the environment”). The validity of these definitions, as indicated in a note of the same Annex III relies on standard tests to be performed according to the conditions given in the relevant European standard method references.

The scientific complexity of all this is daunting. Standard test methods have limitations and evolve according to scientific progress. Additionally, the adequate measures that have to be taken are specific to every category of hazard (handling explosive material does not require the same conditions as handling ecotoxic material) and to the type of operation involved (e.g. collection, transport or processing).

This explains the interest of performing proper risk assessments before taking decisions about how to handle hazardous waste. A lot of experience is already available in the handling of hazardous “substances”, in particular in the chemical industry, and “wastes” are no different in that respect. Pragmatic risk assessment procedures can be developed for application to waste transport, storage and

handling. They could easily result in standard precautions to be taken for each operation. This issue, not limited to waste management, can be discussed in depth but this does not fall within the remit of this study. A French working group (POLDEN) studied these issues, and in particular those of ecotoxicity testing, in detail. The UK local competent authorities already practice risk assessment on a routine basis in the handling, shipment and processing of waste[47].

The OECD Red, Amber and Green lists were developed on the basis of the overall environmental risk posed by a waste when it is destined for a recovery operation within the OECD area.

7. General discussion and recommendations

According to the framework directive on waste (91/156/EEC), the "essential objective of all provisions relating to waste disposal must be the protection of human health and the environment against harmful effects caused by the collection, transporting, treatment, storage and tipping of waste". This is the ultimate objective that has to be always kept in mind at all levels in the debates around waste.

In order to enable an optimum cooperation between all the actors involved, **a good common understanding is essential. Clear definitions would be a plus** because they would allow everybody to understand the various aspects of waste management. However, **the waste definition from the Framework Directive on Waste is both broad and imprecise**. The inherent difficulty in designing unequivocal definitions leaves the door open to differences of interpretation according to the interests of the various parties involved. In the case of "waste", its relative character renders the issue of definition highly dependent on the context in which the word is used. **What becomes important then is to avoid definitions from becoming a barrier to environmental protection, economic development and the optimum management of waste**.

The current European definition of waste, in spite of the progressive implementation of the European directives, is so broad that it currently leaves a lot of room for interpretation by the Member States. The relatively large number of disputes referred to the European Court of Justice on this matter are witness to this fact. This is a source of problems for European waste management today, not only because of the terminology itself, but also because of the potentially very strict requirements and limitations imposed on the handling of waste. Today, in spite of the increasing reality of the Single Market, this situation is sometimes creating barriers to trade and may lead to suboptimal environmental protection.

The crucial issue then becomes the distinction between waste and non-waste (section 5): when does a material become "waste" and when does a "waste" ceases to be waste and becomes a material (product, secondary raw material,...) again? The answer to the first question depends on the understanding of the notion of "discard". Product standards, material specifications and test methods with international recognition can help provide answers to the second question.

[47] New Forest District Council, UK, personal communication to IPTS, November 10, 1997

As we have seen above, the second main issue is the distinction between "hazardous" and "non-hazardous" waste (section 6), as revealed by the heated arguments taking place around the Basel Convention.

In the light of the elements developed above, a number of recommendations could be proposed:

- To keep the eyes on the broad European waste management policy objectives (i.e. environmental and public health protection) and use common sense when making the distinction between waste and non-waste and during the elaboration of all the new pieces of legislation.

- To apply a risk assessment approach to the broad issue of shipment and handling of waste. However, this is closely linked to the processes used, and as such related to the technical state-of-the-art. Certification of facilities, processes and operators could be a way to promote and ensure the development of "best waste management practices".

- To make sure the classification of a material as waste should not hamper any recovery, treatment of disposal option susceptible of providing the best possible solution on an economic and environmental point of view. In that respect, the economic and environmental signals given to the economic actors need to be coherent.

- To issue European guidelines for the implementation of the European waste management policy to reduce the problems due to differences of interpretation. If everybody follows the same philosophy, problems will decrease. A clear rationale behind the whole waste management policy including links to industrial, economic and R&D policy would help all actors comply with the legislation. Harmonized statistics are important.

- To design a European legal framework for waste management which allows easy adaptation in time to scientific and technological progress and in space to local conditions. In particular, the building of a decision tree for the determination of the classification of a waste would be an important achievement.

- To reduce the legal and administrative burden, simplify legislation and increase control (towards a waste police?). The European waste management legislation must be manageable to ensure optimal environment and public health protection.

- Clarify the distinction between waste and secondary raw material. In its Article 3, Directive 91/156/EEC opens the door to such an approach: "Member States shall take appropriate measures to encourage [...] the recovery of waste by means of recycling, re-use or reclamation or any other process with a view to extracting secondary raw materials". While not removing certain categories of waste from the scope of the definitions, case-by-case conditional exemptions following strict rules could be granted.

- To set up a permanent official European discussion platform, analogous to the "Information Exchange Forum" set up for the IPPC Directive. This platform would produce recommendations for interpreting the definition, updating the lists, and ensuring an objective interpretation of the criteria for the classification of waste. It could also support the committees performing the adaptation to technical progress. Such a platform could also contribute to develop best practices for the management and control of waste and in the recovery of secondary raw materials. It would be composed of representatives from the European Commission, the national competent authorities, the industry sectors concerned, environmental NGOs and consumer organizations.

8. Conclusions

The waste issue is now creating a lot of turmoil in Europe within many industry sectors, in particular those involved in recovery and recycling. A large part of this turmoil comes from the fact that the current definition of waste from the European framework directive on waste (75/442/EEC amended by 91/156/EEC) is very broad and includes materials that were long considered by some actors as not being wastes.

The complexity of the matter is striking, as well as the number of misunderstandings occurring in the communication between the many actors involved (policy-makers, industry, competent authorities, Member States,...). However, the bottom-line of the issue appears to reside in the breadth of the European definition of “waste”, the different interpretations that Member States (or other countries) give to it and the uneven application of European legislation. These differences interfere with long established practices in waste management and recycling. The consequences are felt at environmental, economic and even world trade level. Some developing countries appear to begin to complain about the possible restrictions on some materials of interest to their industries. It should be noted at this point that certain European Member States (e.g. The Netherlands) did not have a definition of waste before the adoption of the European legislation and did not appear to have an under-performing waste management system.

As a result, there is a strong need to take a fresh look at the issue of waste management, always keeping the ultimate objectives of European policy in mind, i.e. sustainable development, conservation of natural resources, environment and public health protection, employment and economic growth. The integration of policies is here a key word. A broad consensus on the acceptability of recycling and recovery methods would significantly contribute to the solution of the waste definition problem. The discussion would then focus on “material streams” handled using “generally accepted” and “environmentally safe” practices (Best Available Techniques and Best Management Practices) for recovery, recycling, treatment and disposal. Waste prevention must also be part of the discussion.

The ban on hazardous waste exports from the Union to countries not applying the OECD Council Decision comes into force on January 1, 1998 (Decision 120/97/EEC). This gives urgency to the resolution of many standing disputes and uncertainties around the Basel Convention.

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Appendix B: Annexes I to III of Directive 91/689/EEC

ANNEX I
CATEGORIES OR GENERIC TYPES OF HAZARDOUS WASTE LISTED ACCORDING TO THEIR NATURE OR THE ACTIVITY WHICH GENERATED THEM (*) (WASTE MAY BE LIQUID, SLUDGE OR SOLID IN FORM)

ANNEX I.A.
Wastes displaying any of the properties listed in Annex III and which consist of:
1. anatomical substances; hospital and other clinical wastes;
2. pharmaceuticals, medicines and veterinary compounds;
3. wood preservatives;
4. biocides and phyto-pharmaceutical substances;
5. residue from substances employed as solvents;
6. halogenated organic substances not employed as solvents excluding inert polymerized materials;
7. tempering salts containing cyanides;
8. mineral oils and oily substances (e.g. cutting sludges, etc.);
9. oil/water, hydrocarbon/water mixtures, emulsions;
10. substances containing PCBs and/or PCTs (e.g. dielectrics etc.);
11. tarry materials arising from refining, distillation and any pyrolytic treatment (e.g. still bottoms, etc.);
12. inks, dyes, pigments, paints, lacquers, varnishes;
13. resins, latex, plasticizers, glues/adhesives;
14. chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known (e.g. laboratory residues, etc.);
15. pyrotechnics and other explosive materials;
16. photographic chemicals and processing materials;
17. any material contaminated with any congener of polychlorinated dibenzo-furan;
18. any material contaminated with any congener of polychlorinated dibenzo-p-dioxin.

ANNEX I.B.
Wastes which contain any of the constituents listed in Annex II and having any of the properties listed in Annex III and consisting of:
19. animal or vegetable soaps, fats, waxes;
20. non-halogenated organic substances not employed as solvents;
21. inorganic substances without metals or metal compounds;
22. ashes and/or cinders;
23. soil, sand, clay including dredging spoils;
24. non-cyanidic tempering salts;
25. metallic dust, powder;
26. spent catalyst materials;
27. liquids or sludges containing metals or metal compounds;
28. residue from pollution control operations (e.g. baghouse dusts, etc.) except (29), (30) and (33);
29. scrubber sludges;
30. sludges from water purification plants;
31. decarbonization residue;
32. ion-exchange column residue;
33. sewage sludges, untreated or unsuitable for use in agriculture;
34. residue from cleaning of tanks and/or equipment;
35. contaminated equipment;
36. contaminated containers (e.g. packaging, gas cylinders, etc.) whose contents included one or more of the constituents listed in Annex II;
37. batteries and other electrical cells;
38. vegetable oils;
39. materials resulting from selective waste collections from households and which exhibit any of the characteristics listed in Annex III;
40. any other wastes which contain any of the constituents listed in Annex II and any of the properties listed in Annex III.

(*) Certain duplications of entries found in Annex II are intentional.

ANNEX II

CONSTITUENTS OF THE WASTES IN ANNEX I.B. WHICH RENDER THEM HAZARDOUS WHEN THEY HAVE THE PROPERTIES DESCRIBED IN ANNEX III (*)

Wastes having as constituents:

C1 beryllium; beryllium compounds;
C2 vanadium compounds;
C3 chromium (VI) compounds;
C4 cobalt compounds;
C5 nickel compounds;
C6 copper compounds;
C7 zinc compounds;
C8 arsenic; arsenic compounds;
C9 selenium; selenium compounds;
C10 silver compounds;
C11 cadmium; cadmium compounds;
C12 tin compounds;
C13 antimony; antimony compounds;
C14 tellurium; tellurium compounds;
C15 barium compounds; excluding barium sulfate;
C16 mercury; mercury compounds;
C17 thallium; thallium compounds;
C18 lead; lead compounds;
C19 inorganic sulphides;
C20 inorganic fluorine compounds, excluding calcium fluoride;
C21 inorganic cyanides;
C22 the following alkaline or alkaline earth metals: lithium, sodium, potassium, calcium, magnesium in uncombined form;
C23 acidic solutions or acids in solid form;
C24 basic solutions or bases in solid form;
C25 asbestos (dust and fibres);
C26 phosphorus: phosphorus compounds, excluding mineral phosphates;
C27 metal carbonyls;
C28 peroxides;
C29 chlorates;
C30 perchlorates;
C31 azides;
C32 PCBs and/or PCTs;
C33 pharmaceutical or veterinary coumpounds;
C34 biocides and phyto-pharmaceutical substances (e.g. pesticides, etc.);
C35 infectious substances;
C36 creosotes;
C37 isocyanates; thiocyanates;
C38 organic cyanides (e.g. nitriles, etc.);
C39 phenols; phenol compounds;
C40 halogenated solvents;
C41 organic solvents, excluding halogenated solvents;
C42 organohalogen compounds, excluding inert polymerized materials and other substances referred to in this Annex;
C43 aromatic compounds; polycyclic and heterocyclic organic compounds;
C44 aliphatic amines;
C45 aromatic amines C46 ethers;
C47 substances of an explosive character, excluding those listed elsewhere in this Annex;
C48 sulphur organic compounds;
C49 any congener of polychlorinated dibenzo-furan;
C50 any congener of polychlorinated dibenzo-p-dioxin;
C51 hydrocarbons and their oxygen; nitrogen and/or sulphur compounds not otherwise taken into account in this Annex.

(*)Certain duplications of generic types of hazardous wastes listed in Annex I are intentional.

Annex III PROPERTIES OF WASTES WHICH RENDER THEM HAZARDOUS

H1 'Explosive`: substances and preparations which may explode under the effect of flame or which are more sensitive to shocks or friction than dinitrobenzene.

H2 'Oxidizing`: substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances.

H3-A 'Highly flammable`: - liquid substances and preparations having a flash point below 21 0C (including extremely flammable liquids), or - substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or - solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition, or - gaseous substances and preparations which are flammable in air at normal pressure, or - substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities.

H3-B 'Flammable`: liquid substances and preparations having a flash point equal to or greater than 21 0C and less than or equal to 55 0C.

H4 'Irritant`: non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation.

H5 'harmful`: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may involve limited health risks.

H6 'Toxic`: substances and preparations (including very toxic substances and preparations) which, if they are inhaled or ingested or if they penetrate the skin, may involve serious, acute or chronic health risks and even death.

H7 'Carcinogenic`: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence.

H8 'Corrosive`: substances and preparations which may destroy living tissue on contacts.

H9 'Infectious`: substances containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms.

H10 'Teratogenic`: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce non-hereditary congenital malformations or increase their incidence.

H11 'Mutagenic`: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce hereditary genetic defects or increase their incidence.

H12 Substances and preparations which release toxic or very toxic gases in contact with water, air or an acid.

H13 Substances and preparations capable by any means, after disposal, of yielding another substance, e.g. a leachate, which possesses any of the characteristics listed above.

H14 'Ecotoxic`: substances and preparations which present or may present immediate or delayed risks for one or more sectors of the environment.

Notes
1. Attribution of the hazard properties 'toxic` (and 'very toxic`), 'harmful`, 'corrosive` and 'irritant` is made on the basis of the criteria laid down by Annex VI, part I A and part Ⅱ B, of Council Directive 67/548/EEC of 27 June 1967 of the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (1), in the version as amended by Council Directive 79/831/EEC (2).

2. With regard to attribution of the properties 'carcinogenic`, 'teratogenic` and 'mutagenic`, and reflecting the most recent findings, additional criteria are contained in the Guide to the classification and labelling of dangerous substances and preparations of Annex VI (part Ⅱ D) to Directive 67/548/EEC in the version as amended by Commission Directive 83/467/EEC (1).

Test methods The test methods serve to give specific meaning to the definitions given in Annex III.

The methods to be used are those described in Annex V to Directive 67/548/EEC, in the version as amended by Commission Directive 84/449/EEC (2), or by subsequent Commission Directives adapting Directive 67/548/EEC to technical progress. These methods are themselves based on the work and recommendations of the competent international bodies, in particular the OECD.

Appendix C: Hazardous Waste List (Council Decision 94/904/EEC)

EWC-Code	Description
02	WASTE FROM AGRICULTURAL, HORTICULTURAL, HUNTING, FISHING AND AQUACULTURE PRIMARY PRODUCTION, FOOD PREPARATION AND PROCESSING
0201	PRIMARY PRODUCTION WASTE
020105	agrochemical wastes
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PAPER, CARDBOARD, PULP, PANELS AND FURNITURE
0302	WOOD PRESERVATION WASTE
030201	non-halogenated organic wood preservatives
030202	organochlorinated wood preservatives
030203	organometallic wood preservatives
030204	inorganic wood preservatives
04	WASTES FROM THE LEATHER AND TEXTILE INDUSTRIES
0401	WASTES FROM THE LEATHER INDUSTRY
040103	degreasing wastes containing solvents without a liquid phase
0402	WASTES FROM TEXTILE INDUSTRY
040211	halogenated wastes from dressing and finishing
05	WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL
0501	OILY SLUDGES AND SOLID WASTES
050103	tank bottom sludges
050104	acid alkyl sludges
050105	oil spills
050107	acid tars
050108	other tars
0504	SPENT FILTER CLAYS
050401	spent filter clays
0506	WASTE FROM THE PYROLYTIC TREATMENT OF COAL
050601	acid tars
050603	other tars
0507	WASTE FROM NATURAL GAS PURIFICATION
050701	sludges containing mercury
0508	WASTES FROM OIL REGENERATION
050801	spent filter clays
050802	acid tars
050803	other tars
050804	aqueous liquid waste from oil regeneration
06	WASTES FROM INORGANIC CHEMICAL PROCESSES
0601	WASTE ACIDIC SOLUTIONS
060101	sulphuric acid and sulphurous acid
060102	hydrochloric acid
060103	hydrofluoric acid
060104	phosphoric and phosphorous acid
060105	nitric acid and nitrous acid
060199	waste not otherwise specified
0602	ALKALINE SOLUTIONS

060201	calcium hydroxide
060202	soda
060203	ammonia
060299	wastes not otherwise specified
0603	WASTE SALTS AND THEIR SOLUTIONS
060311	salts and solutions containing cyanides
0604	METAL-CONTAINING WASTES
060402	metallic salts (except 060300)
060403	wastes containing arsenic
060404	wastes containing mercury
060405	wastes containing heavy metals
0607	WASTES FROM HALOGEN CHEMICAL PROCESSES
060701	wastes containing asbestos from electrolysis
060702	activated carbon from chlorine production
0613	WASTES FROM OTHER INORGANIC CHEMICAL PROCESSES
061301	inorganic pesticides, biocides and wood preserving agents
0613012	spent activated carbon (except 060702)
07	WASTES FROM ORGANIC CHEMICAL PROCESSES
0701	WASTE FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF BASIC ORGANIC CHEMICALS
070101	aqueous washing liquids and mother liquors
070103	organic halogenated solvents, washing liquids and mother liquors
070104	other organic solvents, washing liquids and mother liquors
070107	halogenated still bottoms and reaction residues
070108	other still bottoms and reaction residues
070109	halogenated filter cakes, spent absorbents
070110	other filter cakes, spent absorbents
0702	WASTE FROM THE MFSU OF PLASTICS, SYNTHETIC RUBBER AND MAN-MADE FIBRES
070201	aqueous washing liquids and mother liquors
070203	organic halogenated solvents, washing liquids and mother liquors
070204	other organic solvents, washing liquids and mother liquors
070207	halogenated still bottoms and reaction residues
070208	other still bottoms and reaction residues
070209	halogenated filter cakes, spent absorbents
070210	other filter cakes, spent absorbents
0703	WASTE FROM THE MFSU OF ORGANIC DYES AND PIGMENTS (EXCLUDING 061100)
070301	aqueous washing liquids and mother liquors
070303	organic halogenated solvents, washing liquids and mother liquors 070304 other organic solvents, washing liquids and mother liquors
070307	halogenated still bottoms and reaction residues
070308	other still bottoms and reaction residues
070309	halogenated filter cakes, spent absorbents
070310	other filter cakes, spent absorbents
0704	WASTE FROM THE MFSU OF ORGANIC PESTICIDES (EXCEPT 020105)
070401	aqueous washing liquids and mother liquors
070403	organic halogenated solvents, washing liquids and mother liquors 070404 other organic solvents, washing liquids and mother liquors
070407	halogenated still bottoms and reaction residues
070408	other still bottoms and reaction residues
070409	halogenated filter cakes, spent absorbents
070410	other filter cakes, spent absorbents
0705	WASTE FROM THE MFSU OF PHARMACEUTICALS
070501	aqueous washing liquids and mother liquors
070503	organic halogenated solvents, washing liquids and mother liquors 070504 other organic solvents, washing liquids and mother liquors

070507	halogenated still bottoms and reaction residues
070508	other still bottoms and reaction residues
070509	halogenated filter cakes, spent absorbents
070510	other filter cakes, spent absorbents
0706	WASTE FROM THE MFSU OF FATS, GREASE, SOAPS, DETERGENTS, DISINFECTANTS AND COSMETICS
070601	aqueous washing liquids and mother liquors
070603	organic halogenated solvents, washing liquids and mother liquors 070604 other organic solvents, washing liquids and mother liquors
070607	halogenated still bottoms and reaction residues
070608	other still bottoms and reaction residues
070609	halogenated filter cakes, spent absorbents
070610	other filter cakes, spent absorbents
0707	WASTE FROM THE MFSU OF FINE CHEMICALS AND CHEMICAL PRODUCTS NOT OTHERWISE SPECIFIED
070701	aqueous washing liquids and mother liquors
070703	organic halogenated solvents, washing liquids and mother liquors 070704 other organic solvents, washing liquids and mother liquors
070707	halogenated still bottoms and reaction residues
070708	other still bottoms and reaction residues
070709	halogenated filter cakes, spent absorbents
070710	other filter cakes, spent absorbents
08	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVE, SEALANTS AND PRINTING INKS
0801	WASTES FROM MFSU OF PAINT AND VARNISH
080101	waste paints and varnish containing halogenated solvents
080102	waste paints and varnish free of halogenated solvents
080106	sludges from paint or varnish removal containing halogenated solvents
080107	sludges from paint or varnish removal free of halogenated solvents 0803 WASTES FROM MFSU OF PRINTING INKS
080301	waste ink containing halogenated solvents
080302	waste ink free of halogenated solvents
080305	ink sludges containing halogenated solvents
080306	ink sludges free of halogenated solvents
0804	WASTES FROM MFSU OF ADHESIVE AND SEALANTS (INCLUDING WATERPROOFING PRODUCTS)
080401	waste adhesives and sealants containing halogenated solvents
080402	waste adhesives and sealants free of halogenated solvents
080405	adhesives and sealants sludges containing halogenated solvents 080406 adhesives and sealants sludges free of halogenated solvents
09	WASTES FROM THE PHOTOGRAPHIC INDUSTRY
0901	WASTES FROM PHOTOGRAPHIC INDUSTRY
090101	water based developer and activator solutions
090102	water based offset plate developer solutions
090103	solvent based developer solutions
090104	fixer solutions
090105	bleach solutions and bleach fixer solutions
090106	waste containing silver from on-site treatment of photographic waste
10	INORGANIC WASTES FROM THERMAL PROCESSES
1001	WASTES FROM POWER STATION AND OTHER COMBUSTION PLANTS (EXCEPT 190000)
100104	oil fly ash
100109	sulphuric acid
1003	WASTES FROM ALUMINIUM THERMAL METALLURGY
100301	tars and other carbon-containing wastes from anode manufacture

100303	skimmings
100304	primary smelting slags/white drosses
100307	spent pot lining
100308	salt slags from secondary smelting
100309	black drosses from secondary smelting
100310	waste from treatment of salt slags and black drosses treatment
1004	WASTES FROM LEAD THERMAL METALLURGY
100401	slags (1st and 2nd smelting)
100402	dross and skimmings (1st and 2nd smelting)
100403	calcium arsenate
100404	flue gas dust
100405	other particulates and dust
100406	solid waste from gas treatment
100407	sludges from gas treatment
1005	WASTES FROM ZINC THERMAL METALLURGY
100501	slags (1st and 2nd smelting)
100502	dross and skimmings (1st and 2nd smelting)
100503	flue gas dust
100505	solid waste from gas treatment
100506	sludges from gas treatment
1006	WASTES FROM COPPER THERMAL METALLURGY
100603	flue gas dust
100605	waste from electrolytic refining
100606	solid waste from gas treatment
100607	sludges from gas treatment
11	INORGANIC WASTE WITH METALS FROM METAL TREATMENT AND THE COATING OF METALS; NON-FERROUS HYDRO-METALLURGY
1101	LIQUID WASTES AND SLUDGES FROM METAL TREATMENT AND COATING OF METALS (e.g. GALVANIC PROCESSES, ZINC COATING PROCESSES, PICKLING PROCESSES, ETCHING, PHOSPHATIZING, ALKALINE DEGREASING)
110101	cyanidic (alkaline) wastes containing heavy metals other than chromium
110102	cyanidic (alkaline) wastes which do not contain heavy metals
110103	cyanide-free wastes containing chromium
110105	acidic pickling solutions
110106	acids not otherwise specified
110107	alkalis not otherwise specified
110108	phosphatizing sludges
1102	WASTES AND SLUDGES FROM NON-FERROUS HYDROMETALLURGICAL PROCESSES
110202	sludges from zinc hydrometallurgy (including jarosite, goethite)
1103	SLUDGES AND SOLIDS FROM TEMPERING PROCESSES
110301	wastes containing cyanide
110302	other wastes
12	WASTES FROM SHAPING AND SURFACE TREATMENT OF METALS AND PLASTICS
1201	WASTES FROM SHAPING (INCLUDING FORGING, WELDING, PRESSING, DRAWING, TURNING, CUTTING AND FILING)
120106	waste machining oils containing halogens (not emulsioned)
120107	waste machining oils free of halogens (not emulsioned)
120108	waste machining emulsions containing halogens
120109	waste machining emulsions free of halogens
120110	synthetic machining oils
120111	machining sludges
120112	spent waxes and fats

1203	WASTES FROM WATER AND STEAM DEGREASING PROCESSES (EXCEPT 110000)
120301	aqueous washing liquids
120302	steam degreasing wastes
13	OIL WASTES (EXCEPT EDIBLE OILS, 050000 AND 120000)
1301	WASTE HYDRAULIC OILS AND BRAKE FLUIDS
130101	hydraulic oils, containing PCBs or PCTs
130102	other chlorinated hydraulic oils (not emulsions)
130103	non chlorinated hydraulic oils (not emulsions)
130104	chlorinated emulsions
130105	non-chlorinated emulsions
130106	hydraulic oils containing only mineral oil
130107	other hydraulic oils
130108	brake fluids
1302	WASTE ENGINE, GEAR AND LUBRICATING OILS
130201	chlorinated engine, gear and lubricating oils
130202	non-chlorinated engine, gear and lubricating oils
130203	other machine, gear and lubrication oils
1303	WASTE INSULATING AND HEAT TRANSMISSION OILS AND OTHER LIQUIDS
130301	insulating or heat transmission oils and other liquids containing PCBs or PCTs 130302 other chlorinated insulating and heat transmission oils and other liquids
130303	non-chlorinated insulating and heat transmission oils and other liquids
130304	synthetic insulating and heat transmission oils and other liquids
130305	mineral insulating and heat transmission oils
1304	BILGE OILS
130401	bilge oils from inland navigation
130402	bilge oils from jetty sewers
130403	bilge oils from other navigation
1305	OIL/WATER SEPARATOR CONTENTS
130501	oil/water separator solids
130502	oil/water separator sludges
130503	interceptor sludges
130504	desalter sludges or emulsions
130505	other emulsions
1306	OIL WASTE NOT OTHERWISE SPECIFIED
130601	oil waste not otherwise specified
14	WASTES FROM ORGANIC SUBSTANCES EMPLOYED AS SOLVENTS (EXCEPT 070000 AND 080000)
1401	WASTES FROM METAL DEGREASING AND MACHINERY MAINTENANCE
140101	chlorofluorocarbons
140102	other halogenated solvents and solvent mixes
140103	other solvents and solvent mixes
140104	aqueous solvent mixes containing halogens
140105	aqueous solvent mixes free of halogens
140106	sludges or solid wastes containing halogenated solvents
140107	sludges or solid wastes free of halogenated solvents
1402	WASTES FROM TEXTILE CLEANING AND DEGREASING OF NATURAL PRODUCTS
140201	halogenated solvents and solvent mixes
140202	solvent mixes or organic liquids free of halogenated solvents
140203	sludges or solid wastes containing halogenated solvents
140204	sludges or solid wastes containing other solvents
1403	WASTES FROM THE ELECTRONIC INDUSTRY
140301	chlorofluorocarbons

140302	other halogenated solvents
140303	solvents and solvent mixes free of halogenated solvents
140304	sludges or solid wastes containing halogenated solvents
140305	sludges or solid wastes containing other solvents
1404	WASTES FROM COOLANTS, FOAM/AEROSOL PROPELLENTS 140401 chlorofluorocarbons
140402	other halogenated solvents and solvent mixes
140403	other solvents and solvent mixes
140404	sludges or solid wastes containing halogenated solvents
140405	sludges or solid wastes containing other solvents
1405	WASTES FROM SOLVENT AND COOLANT RECOVERY (STILL BOTTOMS)
140501	chlorofluorocarbons
140502	halogenated solvents and solvent mixes
140503	other solvents and solvent mixes
140504	sludges containing halogenated solvents
140505	sludges containing other solvents
16	WASTES NOT OTHERWISE SPECIFIED IN THE CATALOGUE
1602	DISCARDED EQUIPMENT AND SHREDDER RESIDUES
160201	transformers and capacitors containing PCBs or PCTs
1604	WASTE EXPLOSIVES
160401	waste ammunition
160402	fireworks waste
160403	other waste explosives
1606	BATTERIES AND ACCUMULATORS
160601	lead batteries
160602	Ni-Cd batteries
160603	mercury dry cells
160606	electrolyte from batteries and accumulators
1607	WASTE FROM TRANSPORT AND STORAGE TANK CLEANING (EXCEPT 050000 AND 120000)
160701	waste from marine transport tank cleaning, containing chemicals 160702 waste from marine transport tank cleaning, containing oil
160703	waste from railway and road transport tank cleaning containing oil 160704 waste from railway and road transport tank cleaning containing chemicals
160705	waste from storage tank cleaning, containing chemicals
160706	waste from storage tank cleaning, containing oil
17	CONSTRUCTION AND DEMOLITION WASTE (INCLUDING ROAD CONSTRUCTION)
1706	INSULATION MATERIALS
170601	insulation materials containing asbestos
18	WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCLUDING KITCHEN AND RESTAURANT WASTES WHICH DO NOT ARISE FROM IMMEDIATE HEALTH CARE)
1801	WASTE FROM NATAL CARE, DIAGNOSIS, TREATMENT OR PREVENTION OF DISEASE IN HUMANS
180103	other wastes whose collection and disposal is subject to special requirements in view of the prevention of infection
1802	WASTE FROM RESEARCH, DIAGNOSIS, TREATMENT OR PREVENTION OF DISEASE INVOLVING ANIMALS
180202	other wastes whose collection and disposal is subject to special requirements in view of the prevention of infection
180204	discarded chemicals
19	WASTES FROM WASTE TREATMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE WATER INDUSTRY

1901	WASTES FROM INCINERATION OR PYROLYSIS OF MUNICIPAL AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES
190103	fly ash
190104	boiler dust
190105	filter cake from gas treatment
190106	aqueous liquid waste from gas treatment and other aqueous liquid wastes
190107	solid waste from gas treatment
190110	spent activated carbon from flue gas treatment
1902	WASTES FROM SPECIFIC PHYSICO/CHEMICAL TREATMENTS OF INDUSTRIAL WASTES (e.g. DECHROMATATION, DECYANIDATION, NEUTRALIZATION)
190201	metal hydroxide sludges and other sludges from metal insolubilization treatment
1904	VITRIFIED WASTES AND WASTES FROM VITRIFICATION
190402	fly ash and other flue gas treatment wastes
190403	non-vitrified solid phase
1908	WASTES FROM WASTE WATER TREATMENT PLANTS NOT OTHERWISE SPECIFIED
190803	grease and oil mixture from oil/waste water separation
190806	saturated or spent ion exchange resins
190807	solutions and sludges from regeneration of ion exchangers
20	MUNICIPAL WASTES AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES INCLUDING SEPARATELY COLLECTED FRACTIONS
2001	SEPARATELY COLLECTED FRACTIONS
200112	paint, inks, adhesives and resins
200113	solvents
200117	photo chemicals
200119	pesticides
200121	fluorescent tubes and other mercury containing waste

Appendix D: Annexes I to V of the Basel Convention

ANNEX I

CATEGORIES OF WASTES TO BE CONTROLLED

Waste streams
Y1 Clinical wastes from medical care in hospitals, medical centres and clinics.
Y2 Wastes from the production and preparation of pharmaceutical products.
Y3 Waste pharmaceuticals, drugs and medicines.
Y4 Wastes from the production, formulation and use of biocides and phytopharmaceuticals.
Y5 Wastes from the manufacture, formulation and use of wood preserving chemicals.
Y6 Wastes from the production, formulation and use of organic solvents.
Y7 Wastes from heat treatment and tempering operations containing cyanides.
Y8 Waste mineral oils unfit for their originally intended use.
Y9 Waste oils/water, hydrocarbons/water mixtures, emulsions.
Y10 Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCBs) and/or polychlorinated terphenyls (PCTs) and/or polybrominated biphenyls (PBBs).
Y11 Waste tarry residues arising from refining, distillation and any pyrolytic treatment.
Y12 Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish.
Y13 Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives.
Y14 Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known.
Y15 Waste of an explosive nature not subject to other legislation.
Y16 Wastes from production, formulation and use of photographic chemicals and processing materials.
Y17 Wastes resulting from surface treatment of metals and plastics.
Y18 Residues arising from industrial waste disposal operations. Wastes having as constituents:
Y19 Metal carbonyls.
Y20 Beryllium; beryllium compounds.
Y21 Hexavalent chromium compounds.
Y22 Copper compounds.
Y23 Zinc compounds.
Y24 Arsenic; arsenic compounds.
Y25 Selenium; selenium compounds.
Y26 Cadmium; cadmium compounds.
Y27 Antimony; antimony compounds.
Y28 Tellurium; tellurium compounds.
Y29 Mercury; mercury compounds.
Y30 Thallium; thallium compounds.
Y31 Lead; lead compounds.
Y32 Inorganic fluorine compounds excluding calcium fluoride.
Y33 Inorganic cyanides.
Y34 Acidic solutions or acids in solid form.
Y35 Basic solutions or bases in solid form.
Y36 Asbestos (dust and fibres).
Y37 Organic phosphorous compounds.
Y38 Organic cyanides.
Y39 Phenols; phenol compounds including chlorphenols.
Y40 Ethers.
Y41 Halogenated organic solvents.
Y42 Organic solvents excluding halogenated solvents.
Y43 Any congenor of polychlorinated dibenzo-furan.
Y44 Any congenor of polychlorinated dibenzo-p-dioxin.
Y45 Organohalogen compounds other than substances referred to in this Annex (eg. Y39, Y41, Y42, Y43, Y44).

ANNEX II

CATEGORIES OF WASTES REQUIRING SPECIAL CONSIDERATION

Y46 Wastes collected from households.
Y47 Residues arising from the incineration of household wastes.

ANNEX III

LIST OF HAZARDOUS CHARACTERISTICS

UN class (1) Code Characteristics

1 H1 Explosive An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.

3 H3 Flammable liquids The word 'flammable' has the same meaning as 'inflammable'. Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60,5 oC, closed-cup test, or not more than 65,6 oC, open-cup test. (Since the results of open-cup tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such differences would be within the spirit of this definition.)

4.1 H4.1 Flammable solids Solids, or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.

4.2 H4.2 Substances or wastes liable to spontaneous combustion Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.

4.3 H4.3 Substances or wastes which, in contact with water emit flammable gases Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

5.1 H5.1 Oxidizing Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion of other materials.

5.2 H5.2 Organic peroxides Organic substances or wastes which contain the bivalent -O-O-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition.

6.1 H6.1 Poisonous (acute) Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.

6.2 H6.2 Infectious substances Substances or wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.

8 H8 Corrosives Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards.

UN class (2) Code Characteristics

9 H10 Liberation of toxic gases in contact with air or water Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.

9 H11 Toxic (delayed or chronic) Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity.

9 H12 Ecotoxic Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and/or toxic effects upon biotic systems.

9 H13 Capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.

(3) Corresponds to the hazard classification system included in the United Nations recommendations on the transport of dangerous goods (ST/SG/AC. 10/1/Rev. 5, United Nations, New York, 1988).

Tests

The potential hazards posed by certain types of wastes are not yet fully documented; tests to define quantitatively these hazards do not exist. Further research is necessary in order to develop means to characterize potential hazards posed to man and/or the environment by these wastes. Standardized tests have been derived with respect to pure substances and materials. Many countries have developed national tests which can be applied to materials listed in Annex I, in order to decide if these materials exhibit any of the characteristics listed in this Annex.

ANNEX IV

DISPOSAL OPERATIONS

A. Operations which do not lead to the possibility of resource recovery, recycling, reclamation, direct reuse or alternative uses. Section A encompasses all such disposal operations which occur in practice.

D1 Deposit into or onto land, (e.g., landfill, etc.).
D2 Land treatment, (e.g., biodegradation of liquid or sludgy discards in soils, etc.).
D3 Deep injection, (e.g., injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.).
D4 Surface impoundment, (e.g., placement of liquid or sludge discards into pits, ponds or lagoons, etc.).
D5 Specially engineered landfill, (e.g., placement into lined discrete cells which are capped and isolated from one another and the environment, etc.).
D6 Release into a water body except seas/oceans.
D7 Release into seas/oceans including sea-bed insertion.
D8 Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations in Section A.
D9 Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations in Section A, (e.g., evaporation, drying, calcination, neutralization, precipitation, etc.).
D10 Incineration on land.
D11 Incineration at sea.
D12 Permanent storage (e.g., emplacement of containers in a mine, etc.). D13 Blending or mixing prior to submission to any of the operations in Section A.
D14 Repackaging prior to submission to any of the operations in Section A.
D15 Storage pending any of the operations in Section A. B. Operations which may lead to resource recovery, recycling, reclamation, direct reuse or alternative uses

Section B encompasses all such operations with respect to materials legally defined as or considered to be hazardous wastes and which otherwise would have been destined for operations included in Section A.

R1 Use as a fuel (other than in direct incineration) or other means to generate energy.
R2 Solvent reclamation/regeneration.
R3 Recycling/reclamation of organic substances which are not used as solvents.

R4 Recycling/reclamation of metals and metal compounds. R5 Recycling/reclamation of other inorganic materials.
R6 Regeneration of acids or bases.
R7 Recovery of components used for pollution abatement.
R8 Recovery of components from catalysts.
R9 Used oil re-refining or other reuses of previously used oil.
R10 Land treatment resulting in benefit to agriculture or ecological improvement.
R11 Uses of residual materials obtained from any of the operations numbered R1 to R10.
R12 Exchange of wastes for submission to any of the operations numbered R1 to R11.
R13 Accumulation of material intended for any operation in Section B.

ANNEX V.A

INFORMATION TO BE PROVIDED ON NOTIFICATION

1. Reason for waste export.
2. Exporter of the waste (1).
3. Generator(s) of the waste and site of generation (2).
4. Disposer of the waste and actual site of disposal (3).
5. Intended carrier(s) of the waste or their agents, if known (4).
6. Country of export of the waste Competent authority (5).
7. Expected countries of transit Competent authority (6).
8. Country of import of the waste Competent authority (7).
9. General or single notification.
10. Projected date(s) of shipment(s) and period of time over which waste is to be exported and proposed itinerary (including point of entry and exit) (8).
11. Means of transport envisaged (road, rail, sea, air, inland waters).
12. Information relating to insurance (9).
13. Designation and physical description of the waste including Y number and UN number and its composition (10) and information on any special handling requirements including emergency provisions in case of accidents.
14. Type of packaging envisaged (e.g. bulk, drummed, tanker).
15. Estimated quantity in weight/volume (11).
16. Process by which the waste is generated (12).
17. For wastes listed in Annex I, classifications from Annex III: hazardous characteristics, H number, and UN class.
18. Method of disposal as per Annex IV.
19. Declaration by the generator and exporter that the information is correct.
20. Information transmitted (including technical description of the plant) to the exporter or generator from the disposer of the waste upon which the latter has based his assessment that there was no reason to believe that the wastes will not be managed in an environmentally sound manner in accordance with the laws and regulations of the country of import.
21. Information concerning the contract between the exporter and disposer. Notes (13) Full name and address, telephone, telex or telefax number and the name, address, telephone, telex or telefax number of the person to be contacted. (14) Full name and address, telephone, telex or telefax number. (15) In the case of a general notification covering several shipments, either the expected dates of each shipment or, if this is not known, the expected frequency of the shipments will be required. (16) Information to be provided on relevant insurance requirements and how they are met by exporter, carrier and disposer. (17) The nature and the concentration of the most hazardous components, in terms of toxicity and other dangers presented by the waste both in handling and in relation to the proposed disposal method. (18) In the case of a general notification covering several shipments, both the estimated total quantity and the estimated quantities for each individual shipment will be required. (19) In so far as this is necessary to assess the hazard and determine the appropriateness of the proposed disposal operation.

ANNEX V.B

INFORMATION TO BE PROVIDED ON THE MOVEMENT DOCUMENT

1. Exporter of the waste(1).
2. Generator(s) of the waste and site of generation (2).
3. Disposer of the waste and actual site of disposal (3).
4. Carrier(s) of the waste (4) or his agent(s).
5. Subject of general or single notification.
6. The date the transboundary movement started and date(s) and signature on receipt by each person who takes charge of the waste.
7. Means of transport (road, rail, inland waterway, sea, air) including countries of export, transit and import, also point of entry and exit where these have been designated.
8. General description of the waste (physical state, proper UN shipping name and class, UN number, Y number and H number as applicable).
9. Information on special handling requirements including emergency provision in case of accidents.
10. Type and number of packages.
11. Quantity in weight/volume.
12. Declaration by the generator or exporter that the information is correct.
13. Declaration by the generator or exporter indicating no objection from the competent authorities of all States concerned which are Parties.
14. Certification by disposer of receipt at designated disposal facility and indication of method of disposal and of the approximate date of disposal. Notes The information required on the movement document shall where possible be integrated in one document with that required under transport rules. Where this is not possible the information should complement rather than duplicate that required under the transport rules. The movement document shall carry instructions as to who is to provide information and fill out any form. (5) Full name and address, telephone, telex or telefax number and the name, address, telephone, telex or telefax number of the person to be contacted in case of emergency.

Appendix E: Lists A, B and C of the Basel Convention

Note: These lists are so far only proposals by the Technical Working Group. They will probably be approved at the next Conference of Parties of the Basel Convention in 1998.

CONSOLIDATED LISTS OF WASTES

LIST A

WASTES CHARACTERIZED AS HAZARDOUS UNDER
ARTICLE 1, PARAGRAPH 1 (a), OF THE BASEL CONVENTION

[Designation of a waste on list A does not preclude the use of Annex Ⅲ (hazard characteristics) to demonstrate that a waste is not hazardous.]

[A1] Metal and metal-bearing wastes

[A1010]	Metal wastes and waste consisting of alloys of any of the following: - Antimony - Arsenic - Beryllium - Cadmium - Lead - Mercury - Selenium - Tellurium - Thallium but excluding such wastes specifically listed on list B.
[A1020]	Waste having as constituents or contaminants, excluding metal waste in massive form, any of the following: - Antimony; antimony compounds - Beryllium; beryllium compounds - Cadmium; cadmium compounds - Lead; lead compounds - Selenium; selenium compounds - Tellurium; tellurium compounds
[A1030]	Wastes having as constituents or contaminants any of the following: - Arsenic; arsenic compounds - Mercury; mercury compounds. - Thallium; thallium compounds
[A1040]	Wastes having as constituents any of the following: - Metal carbonyls - Hexavalent chromium compounds
[A1050]	Galvanic sludges
[A1060]	Waste liquors from the pickling of metals
[A1070]	Leaching residues from zinc processing, dust and sludges such as jarosite, hematite, etc.
[A1080]	Waste zinc residues not included on list B, containing lead and cadmium in concentrations sufficient to exhibit Annex III characteristics

[A1090] Ashes from the incineration of insulated copper wire

[A1100] Dusts and residues from gas cleaning systems of copper smelters

[A1110] Spent electrolytic solutions from copper electrorefining and electrowinning operations

[A1120] Waste sludges, excluding anode slimes, from electrolyte purification systems in copper electrorefining and electrowinning operations

[A1130] Spent etching solutions containing dissolved copper

[A1140] Waste cupric chloride and copper cyanide catalysts

[A1150] Precious metal ash from incineration of printed circuit boards not included on list B

[A1160] Waste lead-acid batteries, whole or crushed

[A1170] Unsorted waste batteries excluding mixtures of only list B batteries. Waste batteries not specified on list B containing Annex I constituents to an extent to render them hazardous.

[A1180] Waste electrical and electronic assemblies or scrap containing components such as accumulators and other batteries included on list A, mercury-switches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or contaminated with Annex I constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they possess any of the characteristics contained in Annex III (Note the related entry on list B [B1110])

[A2] Wastes containing principally inorganic constituents, which may contain metals and organic materials

[A2010] Glass waste from cathode-ray tubes and other activated glasses

[A2020] Waste inorganic fluorine compounds in the form of liquids or sludges but excluding such wastes specified on list B

[A2030] Waste catalysts but excluding such wastes specified on list B

[A2040] Waste gypsum arising from chemical industry processes, when containing Annex I constituents to the extent that it exhibits an Annex III hazardous characteristic (Note the related entry on list B [B2080])

[A2050] Waste asbestos (dusts and fibres)

[A2060] Coal-fired power plant fly-ash containing Annex I substances in concentrations sufficient to exhibit Annex III characteristics (Note the related entry on list B [B2050])

[A3] Wastes containing principally organic constituents, which may contain metals and inorganic materials

[A3010] Waste from the production or processing of petroleum coke and bitumen

[A3020] Waste mineral oils unfit for their originally intended use

[A3030] Wastes that contain, consist of or are contaminated with leaded anti-knock compound sludges

[A3040] Waste thermal (heat transfer) fluids

[A3050] Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives excluding such wastes specified on list B (Note the related entry on list B [B4020])

[A3060] Waste nitrocellulose

[A3070] Waste phenols, phenol compounds including chlorophenol in the form of liquids or sludges

[A3080] Waste ethers not including those specified on list B

[A3090] Waste leather dust, ash, sludges and flours when containing hexavalent chromium compounds or biocides (Note the related entry on list B [B3100])

[A3100] Waste paring and other waste of leather or of composition leather not suitable for the manufacture of leather articles containing hexavalent chromium compounds or biocides (Note the related entry on list B [B3090])

[A3110] Fellmongery wastes containing hexavalent chromium compounds or biocides or infectious substances (Note the related entry on list B [B3110])

[A3120] Fluff - light fraction from shredding

[A3130] Waste organic phosphorous compounds

[A3140] Waste non-halogenated organic solvents but excluding such wastes specified on list B

[A3150] Waste halogenated organic solvents

[A3160] Waste halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery operations

[A3170] Wastes arising from the production of aliphatic halogenated hydrocarbons (such as chloromethane, dichloro-ethane, vinyl chloride, vinylidene chloride, allyl chloride and epichlorhydrin)

[A3180] Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB), polychlorinated terphenyl (PCT), polychlorinated naphthalene (PCN) or polybrominated biphenyl (PBB), or any other polybrominated analogues of these compounds, at a concentration level of 50 mg/kg or more

[A3190] Waste tarry residues (excluding asphalt cements) arising from refining, distillation and any pyrolitic treatment of organic materials

[A4] Wastes which may contain either inorganic or organic constituents

[A4010] Wastes from the production, preparation and use of pharmaceutical products but excluding such wastes specified on list B

[A4020] Clinical and related wastes; that is wastes arising from medical, nursing, dental, veterinary, or similar practices, and wastes generated in hospitals or other facilities during the investigation or treatment of patients, or research projects

[A4030]	Wastes from the production, formulation and use of biocides and phytopharmaceuticals, including waste pesticides and herbicides which are off-specification, out-dated, or unfit for their originally intended use
[A4040]	Wastes from the manufacture, formulation and use of wood-preserving chemicals
[A4050]	Wastes that contain, consist of or are contaminated with any of the following: - Inorganic cyanides, excepting precious-metal-bearing residues in solid form containing traces of inorganic cyanides - Organic cyanides
[A4060]	Waste oils/water, hydrocarbons/water mixtures, emulsions
[A4070]	Wastes from the production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish excluding any such waste specified on list B (Note the related entry on list B [B4010])
[A4080]	Wastes of an explosive nature (but excluding such wastes specified on list B)
[A4090]	Waste acidic or basic solutions, other than those specified in the corresponding entry on list B (Note the related entry on list B [B2120])
[A4100]	Wastes from industrial pollution control devices for cleaning of industrial off-gases but excluding such wastes specified on list B
[A4110]	Wastes that contain, consist of or are contaminated with any of the following: - Any congenor of polychlorinated dibenzo-furan - Any congenor of polychlorinated dibenzo-dioxin
[A4120]	Wastes that contain, consist of or are contaminated with peroxides
[A4130]	Waste packages and containers containing Annex I substances in concentrations sufficient to exhibit Annex III hazard characteristics
[A4140]	Waste consisting of or containing off specification or out–dated chemicals corresponding to Annex I categories and exhibiting Annex III hazard characteristics
[A4150]	Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on human health and/or the environment are not known
[A4160]	Spent activated carbon not included on list B (Note the related entry on list B [B2060])

LIST B

WASTES WHICH WILL NOT BE COVERED BY ARTICLE 1, PARAGRAPH 1 (a), OF THE BASEL CONVENTION UNLESS THEY CONTAIN ANNEX I MATERIALS TO AN EXTENT CAUSING THEM TO EXHIBIT AN ANNEX III CHARACTERISTIC

[B1] Metal and metal-bearing wastes

[B1010]	Metal and metal-alloy wastes in metallic, non-dispersible form: - Precious metals (gold, silver, the platinum group, but not mercury) - Iron and steel scrap - Copper scrap - Nickel scrap - Aluminium scrap - Zinc scrap - Tin scrap - Tungsten scrap - Molybdenum scrap - Tantalum scrap - Magnesium scrap - Cobalt scrap - Bismuth scrap - Titanium scrap - Zirconium scrap - Manganese scrap - Germanium scrap - Vanadium scrap - Scrap of Hafnium, Indium, Niobium, Rhenium and Gallium - Thorium scrap - Rare earths scrap
[B1020]	Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, etc), of: - Antimony scrap - Beryllium scrap - Cadmium scrap - Lead scrap (but excluding lead-acid batteries) - Selenium scrap - Tellurium scrap
[B1030]	Refractory metals containing residues
[B1040]	Scrap assemblies from electrical power generation not contaminated with lubricating oil, PCB or PCT to an extent to render them hazardous
[B1050]	Mixed non-ferrous metal, heavy fraction scrap, not containing Annex I materials in concentrations sufficient to exhibit Annex III characteristics
[B1060]	Waste Selenium and Tellurium in metallic elemental form including powder
[B1070]	Waste of copper and copper alloys in dispersible form, unless they contain Annex I constituents to an extent that they exhibit Annex III characteristics
[B1080]	Zinc ash and residues including zinc alloys residues in dispersible form unless containing Annex I constituents in concentration such as to exhibit Annex III characteristics or exhibiting hazard characteristic H4.3

[B1090] Waste batteries conforming to a specification, excluding those made with lead, cadmium or mercury

[B1100] Metal-bearing wastes arising from melting, smelting and refining of metals:
- Hard zinc spelter
- Zinc-containing drosses:
    - Galvanizing slab zinc top dross (>90% Zn)
    - Galvanizing slab zinc bottom dross (>92% Zn)
    - Zinc die casting dross (>85% Zn)
    - Hot dip galvanizers slab zinc dross (batch)(>92% Zn)
    - Zinc skimmings
- Aluminium skimmings (or skims) excluding salt slag
- Slags from copper processing for further processing or refining not containing arsenic, lead or cadmium to an extend that they exhibit Annex III hazard characteristics
- Wastes of refractory linings, including crucibles, originating from copper smelting
- Slags from precious metals processing for further refining
- Tantalum bearing tin slags with less than 0.5% tin

[B1110] Electrical and electronic assemblies:
- Electronic assemblies consisting only of metals or alloys
- Waste electrical and electronic assemblies or scrap (including printed circuit boards) not containing components such as accumulators and other batteries included on list A, mercury-witches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or not contaminated with Annex I constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) or from which these have been removed, to an extent that they do not possess any of the characteristics contained in Annex III (Note the related entry on list A [A1180])
- Electrical and electronic assemblies (including printed circuit boards, electronic components and wires) destined for direct re–use, and not for recycling or final disposal

[B1120] Spent catalysts excluding liquids used as catalysts, containing any of:

Transition Metals, excluding waste catalysts (spent catalysts, liquid used catalysts or other catalysts) on list A:	Scandium	Titanium
	Vanadium	Chromium
	Manganese	Iron
	Cobalt	Nickel
	Copper	Zinc
	Yttrium	Zirconium
	Niobium	Molybdenum
	Hafnium	Tantalum
	Tungsten	Rhenium
Lanthanides (rare earth metals):	Lanthanum	Cerium
	Praseodymium	Neody
	Samarium	Europium
	Gadolinium	Terbium
	Dysprosium	Holmium
	Erbium	Thulium
	Ytterbium	Lutetium

[B1130] Cleaned spent precious-metal-bearing catalysts

[B1140] Precious-metal-bearing residues in solid form which contain traces of inorganic cyanides

[B1150] Precious metals and alloy wastes (gold, silver, the platinum group, but not mercury) in a dispersible, non-liquid form with appropriate packaging and labeling

[B1160] Precious-metal ash from the incineration of printed circuit boards (Note the related entry on list A [A1150])

[B1170] Precious-metal ash from the incineration of photographic film

[B1180] Waste photographic film containing silver halides and metallic silver

[B1190] Waste photographic paper containing silver halides and metallic silver

[B1200] Granulated slag arising from the manufacture of iron and steel

[B1210] Slag arising from the manufacture of iron and steel including slags as a source of TiO2 and Vanadium

[B1220] Slag from zinc production, chemically stabilized, having a high iron content (above 20%) and processed according to industrial specifications (e.g.: DIN 4301) mainly for construction

[B1230] Mill scaling arising from the manufacture of iron and steel

[B1240] Copper oxide mill-scale

[B2] Wastes containing principally inorganic constituents, which may contain metals and organic materials

[B2010] Wastes from mining operations in non-dispersible form:
- Natural graphite waste
- Slate waste, whether or not roughly trimmed or merely cut, by sawing or otherwise
- Mica waste
- Leucite, nepheline and nepheline syenite waste
- Feldspar waste
- Fluorspar waste
- Silica wastes in solid form excluding those used in foundry operations

[B2020] Glass waste in non-dispersible form:
- Cullet and other waste and scrap of glass except for glass from cathode-ray tubes and other activated glasses

[B2030] Ceramic wastes in non-dispersible form:
- Cermet wastes and scrap (metal ceramic composites)
- Ceramic based fibres not elsewhere specified or included

[B2040] Other wastes containing principally inorganic constituents:
- Partially refined calcium sulphate produced from flue–gas desulphurization (FGD)
- Waste gypsum wallboard or plasterboard arising from the demolition of buildings
- Slag from copper production, chemically stabilized, having a high iron content (above 20%) and processed according to industrial specifications (e.g. DIN 4301 and DIN 8201) mainly for construction and abrasive applications
- Sulphur in solid form
- Limestone from the production of calcium cyanamide (having a pH less than 9)

- Sodium, potassium, calcium chlorides
- Carborundum (silicon carbide)
- Broken concrete
- Lithium-Tantalum and Lithium-Niobium containing glass scraps

[B2050] Coal-fired power plant fly-ash, not included on list A
(Note the related entry on list A [A2060])

[B2060] Spent activated carbon resulting from the treatment of potable water and processes of the food industry and vitamin production
(Note the related entry on list A [A4160])

[B2070] Calcium fluoride sludge

[B2080] Waste gypsum arising from chemical industry processes notincluded on list A
(Note the related entry on list A [A2040])

[B2090] Waste anode butts from steel or aluminium production made of petroleum coke or bitumen and cleaned to normal industry specifications
(excluding anode butts from chlor alkali electrolyses and from metallurgical industry)

[B2100] Waste hydrates of aluminium and waste alumina and residues from alumina production excluding such materials used for gas cleaning, flocculation or filtration processes

[B2110] Bauxite residue ("red mud") (pH moderated to less than 11.5)

[B2120] Waste acidic or basic solutions with a pH greater than 2 and less than 11.5, which are not corrosive or otherwise hazardous (Note the related entry on list A [A4090])

[B3] Wastes containing principally organic constituents, which may contain metals and inorganic materials

[B3010] Solid plastic waste:

The following plastic or mixed plastic materials, provided they are not mixed with other wastes and are prepared to a specification:

- Scrap plastic of non-halogenated polymers and co-polymers, including but not limited to the following:
  - ethylene
  - styrene
  - polypropylene
  - polyethylene terephthalate
  - acrylonitrile
  - butadiene
  - polyacetals
  - polyamides
  - polybutylene terephthalate
  - polycarbonates
  - polyethers
  - polyphenylene sulphides
  - acrylic polymers
  - alkanes C10-C13 (plasticiser)
  - polyurethane (not containing CFCs)
  - polysiloxanes
  - polymethyl methacrylate
  - polyvinyl alcohol
  - polyvinyl butyral
  - polyvinyl acetate

- Cured waste resins or condensation products including the following:
  - urea formaldehyde resins
  - phenol formaldehyde resins
  - melamine formaldehyde resins
  - epoxy resins
  - alkyd resins
  - polyamides

- The following fluorinated polymer wastes
  - Perfluoroethylene/propylene (FEP)
  - Perfluoroalkoxy alkane (PFA)
  - Perfluoroalkoxy alkane (MFA)
  - Polyvinylfluoride (PVF)
  - Polyvinylidenefluoride (PVDF)

[B3020] Paper, paperboard and paper product wastes

The following materials, provided they are not mixed with hazardous wastes:

Waste and scrap of paper or paperboard of:
- unbleached paper or paperboard or of corrugated paper or paperboard
- other paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass
- paper or paperboard made mainly of mechanical pulp (for example, newspapers, journals and similar printed matter)
- other, including but not limited to 1) laminated paperboard 2) unsorted scrap.

[B3030] Textile wastes

The following materials, provided they are not mixed with other wastes and are prepared to a specification:

- Silk waste (including cocoons unsuitable for reeling, yarn waste and garnetted stock)
- not carded or combed
- other
- Waste of wool or of fine or coarse animal hair, including yarn waste but excluding garnetted stock
- noils of wool or of fine animal hair
- other waste of wool or of fine animal hair
- waste of coarse animal hair
- Cotton waste (including yarn waste and garnetted stock)
- yarn waste (including thread waste)
- garnetted stock
- other
- Flax tow and waste
- Tow and waste (including yarn waste and garnetted stock) of true hemp (Cannabis sativa L.)
- Tow and waste (including yarn waste and garnetted stock) of jute and other textile bast fibres (excluding flax, true hemp and ramie)
- Tow and waste (including yarn waste and garnetted stock) of sisal and other textile fibres of the genus Agave
- Tow, noils and waste (including yarn waste and garnetted stock) of coconut

- Tow, noils and waste (including yarn waste and garnetted stock) of abaca (Manila hemp or Musa textilis Nee)
- Tow, noils and waste (including yarn waste and garnetted stock) of ramie and other vegetable textile fibres, not elsewhere specified or included
- Waste (including noils, yarn waste and garnetted stock) of man-made fibres
- of synthetic fibres
- of artificial fibres
- Worn clothing and other worn textile articles
- Used rags, scrap twine, cordage, rope and cables and worn out articles of twine, cordage, rope or cables of textile materials
- sorted
- other

[B3040] Rubber wastes

The following materials, provided they are not mixed with other wastes:
- Waste and scrap of hard rubber (e.g. ebonite)
- Other rubber wastes (excluding such wastes specified elsewhere)

[B3050] Untreated cork and wood waste:
- Wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms
- Cork waste: crushed, granulated or ground cork

[B3060] Wastes arising from agro-food industries provided it is not infectious:
- Wine lees
- Dried and sterilized vegetable waste, residues and by-products, whether or not in the form of pellets, of a kind used in animal feeding, not elsewhere specified or included
- Degras: residues resulting from the treatment of fatty substances or animal or vegetable waxes
- Waste of bones and horn-cores, unworked, defatted, simply prepared (but not cut to shape), treated with acid or degelatinised
- Fish waste
- Cocoa shells, husks, skins and other cocoa waste
- Other wastes from the agro-food industry excluding by-products which meet national and international requirements and standards for human or animal consumption

[B3070] The following wastes:
- Waste of human hair
- Waste straw
- Deactivated fungus mycelium from penicillin production to be used as animal feed

[B3080] Waste parings and scrap of rubber

[B3090] Paring and other wastes of leather or of composition leather not suitable for the manufacture of leather articles, excluding leather sludges, not containing hexavalent chromium compounds and biocides (Note the related entry on list A [A3100])

[B3100] Leather dust, ash, sludges or flours not containing hexavalent chromium compounds or biocides (Note the related entry on list A [A3090])

[B3110] Fellmongery wastes not containing hexavalent chromium compounds or biocides or infectious substances (Note the related entry on list A [A3110])

[B3120] Wastes consisting of food dyes

[B3130] Waste polymer ethers and waste non-hazardous monomer ethers incapable of forming peroxides

[B3140] Waste pneumatic tyres, excluding those destined for Annex IV.A operations

[B4] Wastes which may contain either inorganic or organic constituents

[B4010] Wastes consisting mainly of water-based/latex paints, inks and hardened varnishes not containing organic solvents, heavy metals or biocides to an extent to render them hazardous (Note the related entry on list A [A4070])

[B4020] Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives, not listed on list A, free of solvents and other contaminants to an extent that they do not exhibit Annex III characteristics, e.g. water based, or glues based on casein starch, dextrin, cellulose ethers, polyvinyl alcohols (Note the related entry on list A [A3050])

[B4030] Used single use cameras, with batteries not included on list A

Annex III

WASTES PLACED ON LIST C AWAITING CLASSIFICATION

The wastes placed on list C awaiting classification as agreed by the Technical Working Group at its twelfth session are:

C1 PVC-coated cables

C2 Fluorinated polymer wastes

- Polytetrafluoroethylene (PTFE)
- Ethylene/Tetrafluoroethylene (ETFE)

C3 Chlorinated polymer and copolymer wastes

- Polyvinyl chloride
- Polyvinylidene chloride

C4 Residues arising from industrial waste disposal operations

Appendix F: Annexes of OECD Council Decision C(88)90

A series of seven tables serves to define and classify the wastes to be controlled when subject to transfrontier movements. The tables cover the following:

Table Y - Core list of wastes to be controlled
Table 1 - Reasons why materials are intended for disposal
Table 2 - Disposal operations
Table 3 - Generic types of potentially hazardous wastes
Table 4 - Constituents of potentially hazardous wastes
Table 5 - List of hazardous characteristics
Table 6 - Activities which may generate potentially hazardous wastes

DEFINITIONS

For the purposes of this Decision:

WASTES are materials other than radioactive materials intended for DISPOSAL, for reasons specified in Table 1.
DISPOSAL means any of the operations specified in Table 2.

CORE LIST

For the purposes of this Decision those wastes which belong to any of the categories described in Table Y shall be controlled unless such wastes do not possess any of the hazardous characteristics listed in Table 5.

CLASSIFICATION - INTERNATIONAL WASTE IDENTIFICATION CODE

Tables 1 to 6 contain code numbers which, taken together, provide a means of complete characterisation of wastes, through an intemational Waste Identification Code, in order to facilitate their control from generation to disposal.

The International Waste Identification Code (IWIC) is obtained as follows:

1. Choose the one or at most two major reason(s) why the wastes are intended for disposal from the list in Table 1. Mark down the reason(s) as Q... plus the code number(s).
2. Indicate the method which has been selected for disposal of the wastes by choosing the one operation from Table 2 which most closely describes the fate intended for the wastes. Mark down as D... or R... plus the code number from Table 2.A or Table 2.B as appropriate.
3. Decide whether the wastes are liquid (L), sludge (P) or solid (S). Powders are considered to be solids.
4. Select from Table 3, the one descriptor which most closely describes the generic form of the wastes. Mark down this descriptor as L..., P.. or S... plus the code number.
5. Examine Table 4; either the wastes do or do not contain one or more of the constituents listed. If none, mark down as code "CO". If one, mark down the appropriate code number. If more than one, then the best estimate for the group of no more than three entries in terms of descending hazard should be made. This estimate is meant to be qualitative and based upon the best judgment of the generator of the wastes; physical testing is not implied.
6. Select from Table 5 the one or at most two major potential hazard(s) presented by the wastes. Mark down as H... plus the code number(s).
7. Select from Table 6 the most appropriate single activity generating the wastes. Mark down as A... plus the code number.
8. The order of the International Waste Identification Code is the same as Tables 1 through 6. Main heads of the coding system are set off by double oblique lines. Where more than one entry from a specific Table is applicable, the plus sign (+) is used to separate the codes for each such entry:

   Q__ +__//D,R__//L,P,S__//C__ +__ +__//H__+__//A__

TABLE Y

CORE LIST OF WASTES TO BE CONTROLLED

(revised May 1994)

Waste streams:

Y1 Clinical wastes from medical care in hospitals, medical centers and clinics
Y2 Wastes from the production and preparation of pharmaceutical products
Y3 Waste pharmaceuticals, drugs and medicines
Y4 Wastes from the production, formulation and use of biocides and phytopharmaceuticals
Y5 Wastes from the manufacture, formulation and use of wood preserving chemicals
Y6 Wastes from the production, formulation and use of organic solvents
Y7 Wastes from heat treatment and tempering operations containing cyanides
Y8 Waste mineral oils unfit for their originally intended use
Y9 Waste oil/water, hydrocarbon/water mixtures, emulsions
Y10 Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCB's) and/or polychlorinated terphenyls (PCT's) and/or polybrominated biphenyls (PBB's)
Y11 Waste tarry residues arising from refining, distillation and any pyrolytic treatment
Y12 Wastes from production, formulation and use of inks, dyes, pigments, paints, laquers, varnish
Y13 Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives
Y14 Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known
Y15 Wastes of an explosive nature not subject to other legislation
Y16 Wastes from production, formulation and use of photographic chemicals and processing materials
Y17 Wastes resulting from surface treatment of metals and plastics
Y18 Residues arising from industrial waste disposal operations

Wastes having as constituents:

Y19 Metal carbonyls
Y20 Beryllium; beryllium compounds
Y21 Hexavalent chromium compounds
Y22 Copper compounds
Y23 Zinc compounds
Y24 Arsenic; arsenic compounds
Y25 Selenium; selenium compounds
Y26 Cadmium; cadmium compounds
Y27 Antimony; antimony compounds
Y28 Tellurium; tellurium compounds
Y29 Mercury; mercury compounds
Y30 Thallium; thallium compounds
Y31 Lead; lead compounds
Y32 Inorganic fluorine compounds excluding calcium fluoride
Y33 Inorganic cyanides
Y34 Acidic solutions or acids in solid form
Y35 Basic solutions or bases in solid form
Y36 Asbestos (dust and fibres)
Y37 Organic phosphorous compounds
Y38 Organic cyanides
Y39 Phenols; phenol compounds including chlorophenols
Y40 Ethers
Y41 Halogenated organic solvents
Y42 Organic solvents exluding halogenated solvents
Y43 Any congenor of polychlorinated dibenzo-furan
Y44 Any congenor of polychlorinated dibenzo-p-dioxin
Y45 Organohalogen compounds other than substances referred to in this Table (e.g. Y39, Y41, Y42, Y43, Y44)

TABLE 1

REASONS WHY MATERIALS ARE INTENDED FOR DISPOSAL

Q1 Production residues not otherwise specified below
Q2 Off-specification products
Q3 Products whose date for appropriate use has expired
Q4 Materials spilled, lost or having undergone other mishap including any materials, equipment etc. contaminated as result of the mishap
Q5 Materials contaminated or soiled as a result of planned actions, [e.g., residues from cleaning operations, packing materials, containers, etc.]
Q6 Unusable parts, [e.g., reject batteries, exhausted catalyst, etc.]
Q7 Substances which no longer perform satisfactorily, [e.g., contaminated acid, contaminated solvents, exhausted tempering salts, etc.
Q8 Residues of industrial processes, [e.g., slags, still bottoms, etc.]
Q9 Residues from pollution abatement processes, [e.g., scrubber sludges, baghouse dusts, spent filters, etc.]
Q10 Machining/finishing residues, [e.g. lathe turnings, mill scales, etc.]
Q11 Residues from raw materials processing, [e.g., mining residues, oil field slops, etc.]
Q12 Adulterated materials, [e.g. oils contaminated with PCB, etc.]
Q13 Any materials, substances or products whose use has been banned by law in the country of exportation
Q14 Products for which there is no further use, [e.g., agriculture, household, office, commercial and shop discards, etc.]
Q15 Materials, substances or products resulting from remedial actions with respect to contaminated land
Q16 Any materials, substances or products which the generator or exporter declares to be wastes and which are not contained in the above categories

TABLE 2

DISPOSAL OPERATIONS

(Table 2 is divided into two sections)

2.A OPERATIONS WHICH DO NOT LEAD TO THE POSSIBILITY OF RESOURCE RECOVERY, RECYCLING, RECLAMATION, DIRECT RE-USE OR ALTERNATIVE USES

Table 2.A is meant to encompass all such disposal operations which occur in practice, whether or not they are adequate from the point of view of environmental protection.

D1 Deposit into or onto land, [e.g., landfill, etc.]
D2 Land treatment, [e.g., biodegradation of liquid or sludgy discards in soils, etc.]
D3 Deep injection, [e.g., injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.]
D4 Surface impoundment, [e.g., placement of liquid or sludge discards into pits, ponds or lagoons, etc.]
D5 Specially engineered landfill, [e.g., placement into lined discrete cells which are capped and isolated from one another and the environment, etc.]
D6 Release into a water body except seas/oceans
D7 Release into seas/oceans including sea-bed insertion
D8 Biological treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations in Table 2.A
D9 Physico chemical treatment not specified elsewhere in this Table which results in final compounds or mixtures which are discarded by means of any of the operations in Table 2.A, [e.g., evaporation, drying, calcination, etc.]
D10 Incineration on land
D11 Incineration at sea
D12 Permanent storage, [e.g., emplacement of containers in a mine, etc.]
D13 Blending or mixing prior to submission to any of the operations in Table 2.A
D14 Repackaging prior to submission to any of the operations in Table 2.A
D15 Storage pending any of the operations in Table 2.A

2.B OPERATIONS WHICH MAY LEAD TO RESOURCE RECOVERY, RECYCLING, RECLAMATION, DIRECT RE-USE OR ALTERNATIVE USES

Table 2.B is meant to encompass all such operations with respect to materials considered to be or legally defined as hazardous wastes and which otherwise would have been destined for operations included in Table 2.A.

R1 USE as a fuel (other than in direct incineration) or other means to generate energy
R2 Solvent reclamation/regeneration
R3 Recycling/reclamation of organic substances which are not used as solvents
R4 Recycling/reclamation of metals and metal compounds
R5 Recycling/reclamation of other inorganic materials
R6 Regeneration of acids or bases
R7 Recovery of components used for pollution abatement
R8 Recovery of components from catalysts
R9 Used oil re-refining or other reuses of previously used oil
R10 Land treatment resulting in benefit to agriculture or ecological improvement
R11 Uses of residual materials obtained from any of the operations numbered R1-R10
R12 Exchange of wastes for submission to any of the operations numbered R1-R11
R13 Accumulation of material intended for any operation in Table 2B

TABLE 3
GENERIC TYPES OF POTENTIALLY HAZARDOUS WASTES* (THESE MAY BE LIQUID, SLUDGE OR SOLID IN FORM)

(revised May 1994)

Code Number**
1. Clinical wastes from medical care in hospitals, medical centers and clinics
2. Wastes from the production and preparation of pharmaceutical products
3. Waste pharmaceuticals, drugs and medicines
4. Wastes from the production, formulation and use of biocides and phytopharrnaceuticals
5. Wastes from the manufacture, formulation and use of wood preserving chemicals
6. Wastes from the production, formulation and use of organic solvents
7. Wastes from heat treatment and tempering operations containing cyanides
8. Waste mineral oils unfit for their orginally intended use
9. Waste oil/water, hydrocarbon/water mixtures, emulsions
10 Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCB's) and/or polychlorinated terphenyls (PCT's) and/or polybrominated biphenyls (PBB's)
11 Waste tarry residues arising from refining, distillation and any pyrolytic treatment
12 Wastes from production, formulation and use of inks, dyes, pigments, paints, laquers, varnish
13 Wastes from production, formumation and use of resins, latex, plasticizers, glues/adhesives
14 Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known
15 Wastes of an explosive nature not subject to other legislation
16 Wastes from production, formulation and use of photographic chemicals and processing materials
17 Wastes resulting from surface treatment of metals and plastics
18 Residues arising from industrial waste disposal operations

Code Number	Materials which contain any of the constituents listed in Table 4 and consisting of:
19	Animal or vegetable soaps, fats, waxes
20	Non-halogenated organic substances not employed as solvents
21	Inorganic substances without metals

* If liquid, preface "L" is used
If sludge, preface "P" is used
If solid, preface "S" is used

** Items 1 to 18 in Table 3 correspond to items Y1 to Y18 in Table Y

22 Ashes and/or cinders
23 Soil, sand, clay including dredging spoils
24 Non-cyanidic tempering salts
25 Metallic dust, powder
26 Spent catalyst materials
27 Liquids or sludges containing metals
28 Residue from pollution control operations, except (29) and (30)
29 Scrubber sludges
30 Sludges from water purification plants and waste water treatment plants
31 Decarbonization residue
32 Ion-exchange column residue
33 Sewage sludges
34 Wastewaters not otherwise taken into account within Table 3
35 Residue from cleaning of tanks and/or equipment
36 Contaminated equipment
37 Contaminated containers, whose contents included one or more of the constituents listed inTable 4
38 Batteries and other electrical cells
39 Vegetable oils
40 Materials which have been segregated from households and which also exhibit any of the characteristics listed in Table 5
41 Any other wastes which contain any of the constituents listed in Table 4

TABLE4

CONSTITUENTS OF POTENTIALLY HAZARDOUS WASTES

(revised May1994)

Code number	Constituents* :
C1	Beryllium, beryllium compounds [Y20]
C2	Vanadium compounds
C3	Hexavalent chromium compounds [Y21]
C4	Cobalt compounds
C5	Nickel compounds
C6	Copper compounds [Y22]
C7	Zinc compounds [Y23]
C8	Arsenic; arsenic compounds [Y24]
C9	Selenium; selenium compounds [Y25]
C10	Silver compounds
C11	Cadmium; cadmium compounds [Y26]
C12	Tin compounds
C13	Antimony; antimony compounds [Y27]
C14	Tellurium; tellurium compounds [Y28]
C15	Barium; barium compounds; excluding barium sulfate
C16	Mercury; mercury compounds [Y29]
C17	Thallium; thallium compounds [Y30]
C18	Lead; lead compounds [Y31]
C19	Inorganic sulphides
C20	Inorganic fluorine compounds excluding calcium fluoride [Y32]
C21	Inorganic cyanides [Y33]
C22	The following alkaline or alkaline earth metals: lithium, sodium, potassium, calcium, magnesium in uncomSbined form
C23	Acidic solutions or acids in solid form [Y34]
C24	Basic solutions or bases in solid form [Y35]
C25	Asbestos (dust and fibres) [Y36]
C26	Organic phosphorus compounds [Y37]
C27	Metal carbonyls [Y19]
C28	Peroxides
C29	Chlorates

* The correspondance with Table Y is indicated in brackets.

C30 Perchlorates
C31 Azides
C32 Polychlorinated biphenyls (PCB's) and/or polychlorinated terphenyls (PCT's) and/or polybrominated biphenyls (PBB's) [Y10]
C33 Pharrnaceutical or veterinary compounds
C34 Biocides and phyto-pharmaceutical substances
C35 Infectious substances
C36 Creosotes
C37 Isocyanates, thiocyanates
C38 Organic cyanides [Y38]
C39 Phenois; phenol compounds including chlorophenols [Y39]
C40 Ethers [Y40]
C41 Halogenated organic solvents [Y41]
C42 Organic solvents, excluding halogenated solvents [Y42]
C43 Organohalogen compounds other than substances referred to in this Table [Y45]
C44 Aromatic compounds; polycyclic and heterocyclic organic compounds
C45 Organic nitrogen compounds; especially aliphatic amines
C46 Organic nitrogen compounds; especially aromatic amines
C47 Substances of an explosive character [Y15]
C48 Sulphur organic compounds
C49 Any congenor of polychlorinated dibenzo-furan [Y43]
C50 Any congenor of poly chlorinated dibenzo-p-diox in [Y44]
C51 Hydrocarbons and their oxygen, nitrogen and/or sulphur compounds not otherwise taken into account in Table 4

TABLE 5

LIST OF HAZARDOUS CHARACTERISTICS

(revised May 1994)

Code Number*	Characteristics
H1	**Explosive.** An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.
H3	**Flammable liquids.** The word "flammable" has the same meaning as "inflammable". Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for exaïnple, paints, varnishes, lacquers, etc. but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5•C, closed-cup test, or not more than 65.6•C, open-cup test. (Since the results of open-cup tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such differences would be within the spirit of this definition.)
H4.1	**Flammable Solids.** Solids, or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.
H4.2	**Substances or Wastes Liable to Spontaneous Combustion.** Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up in contact with a*, and being liable to catch fire.
H4.3	**Substances or Wastes which, in Contact with Water Emit Flammable Gases.** Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

* Corresponds to hazard class numbering system included in the United Nations Recommendations on the Transport of Dangerous Goods (Orange Book) for Hl through H9; omissions of H2, H7 and H9 are deliberate.

H5.1	**Oxidizing.** Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion of other materials.
H5.2	**Organic Peroxides.** Organic substances or wastes which contain the bivalent-0-0-structure are thermally unstable substances which may undergo exothermic selfaccelerating decomposition.
H6.1	**Poisonous (Acute).** Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.
H6.2	**Infectious substances.** Substances or wastes containing viable micro organisms or their toxins which are known or suspected to cause disease in animals or humans.
H8	**Corrosives.** Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards.
H10	**Liberation of toxic gases in contact with air or water.** Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.
H11	**Toxic (Delayed or chronic).** Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity.
H12	**Ecotoxic.** Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by rneans of bioaccumulation and/or toxic effects upon biotic systems.
H13	Capable, by any means, after disposal, of yielding another material, e.g., leachate, which possesses any of the characteristics listed above.

The potential hazards posed by certain types of wastes are not yet fully documented; objective tests to define quantitatively these hazards do not exist. Further research is necessary in order to develop means to characterise potential hazards posed to man and/or the environment b y these wastes. Standardized tests have been derived with respect to pure substances and materials. Many Member countries have developed tests which can be applied to materials destined for disposal by means of operations listed in Table 2 in order to decide if these materials exhibit any of the characteristics listed in Table 5.

TABLE 6

ACTIVITIES WHICH MAY GENERATE POTENTIALLY HAZARDOUS WASTES

Agriculture - Farming Industry	
A100	Agriculture, forest management
A101	Cultivation
A102	Animal husbandry
A103	Forest management and forest exploitation (lumbering)
A110	Animal and vegetable products from the food sector
A111	Meat industry, slaughterhouses, butchery
A112	Dairy industry
A113	Animal and vegetable oil and grease industry
A114	Sugar industry
A115	Others
A120	Drink industry
A121	Distillation of alcohol and spirits
A122	Brewing of beer
A123	Manufacture of other drinks
A130	Manufacture of animal feed
Energy	
A150	Coal industry
A151	Production and preparation of coal and coal products
A152	Coking operations
A160	Petroleum industry
A161	Extraction of petroleum and natural gas
A162	Petroleum refining
A163	Storage of petroleum and products derived from refining of natural gas
A170	Production of electricity
A171	Central thermal facilities
A172	Central hydraulic facilities
A173	Central nuclear facilities
A174	Other central electricity facilities
A180	Production of water
Metallurgy - Mechanical and Electrical Engineering	
A200	Extraction of metallic ores
A210	Ferrous metallurgy
A211	Cast iron production (coke oven)
A212	Raw steel production (pig iron)
A213	Primary steel transformation (rolling mills)
A220	
A221	Production of aluminia
A222	Aluminium metallurgy
A223	Metallurgy of lead and zinc
A224	Metallurgy of precious metals
A225	Metallurgy of other non-ferrous metals
A226	Ferro-alloy industry
A227	Manufacture of electrodes
A230	Foundry and metalworking operations
A231	Ferrous metal foundries
A232	Non-ferrous metal foundries
A233	Metalworking (not including machining)
A240	Mechanical, electrical and electronic construction
A241	Machining
A242	Thermal treatment
A243	Surface treatment
A244	Application of paint
A245	Assembly, wiring
A246	Production of batteries and dry cells
A247	Production of electrical wires and cables (cladding, plating, insulation)
A248	Production of electronic components

Non-Metallic Minerals - Construction Materials - Ceramics - Glass

A260	Mining and quarrying of non-metallic minerals
A270	Construction materials, ceramics, glass
A271	Production of lime, cement and plaster
A272	Fabrication of ceramic products
A273	Fabrication of products containing asbestoscement
A274	Production of other construction materials
A275	Glass industry
A280	Building, building sites, landscaping

Primary Chemical Industry

A300	Production of primary chemicals and chemical feedstocks
A301	Chlorine industry
A351	Fertilizer fabrication
A401	Other manufacturing generators of primary inorganic industrial chemicals
A451	Petroleum and coal industry
A501	Manufacture of basic plastic materials
A551	Other primary organic chemical manufacture
A601	Chemical treatment of fats; fabrication of basic substances for detergents
A651	Fabrication of pharmaceuticals, pesticides, biocides, weed killers
A669	Industries producing products based upon primary chemicals

Other manufacture of finished chemicals

A700	Production of inks, varnish, paints, glues
A701	Production of ink
A702	Production of paint
A703	Production of varnish
A704	Production of glue
A710	Fabrication of photographic products
A711	Production of photosensitive plates
A712	Fabrication of products for photographic treatments
A720	Perfume industry and fabrication of soap and detergent products
A721	Fabrication of soap products
A722	Fabrication of detergent products
A723	Fabrication of perfume products
A730	Finished rubber and plastic materials
A731	Rubber industry
A732	Finished plastic materials
A740	Fabrication of products based upon asbestos
A750	Production of powders and explosives

Textiles and Leathers - Various Wood Based and Furniture Industries

A760	Textile and clothing industry
A761	Combing and carding of textile fibres
A762	Threading, spinning, weaving
A763	Bleaching, dyeing, printing
A764	Clothing manufacture
A770	Leather and hide industry
A771	Tanneries, tanning
A772	Fur trade
A773	Manufacture of shoes and other leacher products
A780	Wood and furniture industry
A781	Sawmills, production of wood panels
A782	Manufacture of wood and furniture products
A790	Various related industries

Paper - Cardboard - Printing

A800	Paper and cardboard industry
A801	Fabrication of paper pulp
A802	Manufacture of paper and cardboard
A803	Finished goods of paper and cardboard
A810	Printing, publishing, photographic laboratories
A811	Printing, publishing
A812	Photographic laboratories

Commercial Services

A820	Laundries, bleaching services, dyers
A830	Business enterprise
A840	Transport, automobile dealers and repair facilities
A841	Automobile dealers and automobile repair facilities
A842	Transportation
A850	Hotels, cafes, restaurants

General Services

A860	Health
A861	Health (Hospitals, medical centress, nursing homes, laboratories)
A870	Research
A871	Research including research laboratories
A880	Administrative activities, officesHouseholds

Households

A890	Households

Pollution Control - Waste Disposal

A900	Cleaning and maintenance of public areas
A910	Urban water treatment facilities
A920	Urban waste treatrnent
A930	Treatment of industrial effluents and wastes
A931	Incineration
A932	Physico-chemical treatment
A933	Biological treatment
A934	Solidification of wastes
A935	Collection and/or pretreatment of wastes
A936	Landbased disposal above, on or below the surface

Regeneration - Recovery

A940	Regeneration activities
A941	Regeneration of oils
A942	Regeneration of solvents
A943	Regenetation of ion exchange resins
A950	Recovery activities

Appendix G: European Waste Catalogue (Council Decision 94/3/EEC)

ANNEX

List of wastes pursuant to Article 1 (a) of Council Directive 75/442/EEC on waste (EUROPEAN WASTE CATALOGUE)

Introductory note

1. Article 1 (a) of Directive 75/442/EEC defines the term 'waste' as: 'any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard'.

2. The second indent of Article 1 (a) requires the Commission acting in accordance with the procedure laid down in Article 18 to draw up a list of waste belonging to the categories listed in Annex I. This list is commonly referred to as the European Waste Catalogue (EWC), and applies to all wastes, irrespective of whether they are destined for disposal or for recovery operations.

3. The EWC is an harmonized, non-exhaustive list of wastes, that is to say, a list which will be periodically reviewed and if necessary revised in accordance with the committee procedure. However, the inclusion of a material in the EWC does not mean that the material is a waste in all circumstances. The entry is only relevant when the definition of waste has been satisfied.

4. The waste featuring in the EWC is subject to the provisions of the Directive unless Article 2 (1) (b) of this Directive applies.

5. The EWC is to be a reference nomenclature providing a common terminology throughout the Community with the purpose to improve the efficiency of waste management activities. In this respect the European Waste Catalogue should constitute the basic reference for the Community Programme on waste statistics launched pursuant to the Council resolution of 7 May 1990 on waste management policy(1).

6. The EWC will be subject to adaptation to scientific and technical progress in accordance with the procedure laid down in Article 18 of the Directive.

7. The reading of an individual code of waste in the EWC should not be isolated from its heading.

8. The EWC does not prejudge the list of 'hazardous wastes' as required by Article 1 (4) of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste (2).

INDEX

16 00 00 Waste not otherwise specified in the catalogue
17 00 00 Construction and demolition waste (including road construction)
18 00 00 Wastes from human or animal health care and/or related research (excluding kitchen and restaurant wastes which do not arise from immediate health care)
19 00 00 Wastes from waste treatment facilities, off-site wastewater treatment plants and the water industry
20 00 00 Municipal wastes and similar commercial, industrial and institutional wastes including separately collected fractions

01 00 00 WASTE RESULTING FROM EXPLORATION, MINING, DRESSING AND FURTHER TREATMENT OF MINERALS AND QUARRY
01 01 00 waste from mineral excavation
01 01 01 waste from mineral metalliferous excavation
01 01 02 waste from mineral non-metalliferous excavation
01 02 00 waste from mineral dressing
01 02 01 waste from the dressing of metalliferous minerals
01 02 02 waste from the dressing of non-metalliferous minerals
01 03 00 waste from further physical and chemical processing of metalliferous minerals
01 03 01 tailings
01 03 02 dusty and powdery waste
01 03 03 red mud from the alumina production
01 03 99 wastes not otherwise specified
01 04 00 waste from further physical and chemical processing of non metalliferous minerals
01 04 01 waste gravel and crushed rocks
01 04 02 waste sand and clays
01 04 03 dusty and powdery waste
01 04 04 waste from potash and rock salt processing
01 04 05 waste from washing and cleaning of minerals
01 04 06 waste from stone cutting and sawing
01 04 99 wastes not otherwise specified
01 05 00 drilling muds and other drilling wastes
01 05 01 oil-containing drilling muds and wastes
01 05 02 barite-containing drilling muds and wastes
01 05 03 chloride-containing drilling muds and wastes
01 05 04 fresh-water drilling muds and wastes
01 05 99 wastes not otherwise specified

02 00 00 WASTE FROM AGRICULTURAL, HORTICULTURAL HUNTING, FISHING AND AQUACULTURE PRIMARY PRODUCTION, FOOD PREPARATION AND PROCESSING
02 01 00 primary production waste
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 (excluding packaging)
02 01 05 agrochemical wastes
02 01 06 animal feces, urine and manure (including spoiled straw), effluent collected separately and treated off-site
02 01 07 waste from forestry exploitation
02 01 99 wastes not otherwise specified
02 02 00 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 00 wastes from fruit, vegetables, cereals, edible oils, cocoa coffee and tobacco preparation, processing; conserve production tobacco processing
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 00 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 00 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 00 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 00 wastes from the production of alcoholic and non-alcoholic beverages (excluding coffee, tea and cocoa)
02 07 01 wastes from washing, cleaning and mechanical reduction of the raw material
02 07 02 wastes from spirits distillation
02 07 03 waste 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 00 00 WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PAPER, CARDBOARD, PULP, PANELS AND FURNITURE
03 01 00 wastes from wood processing and the production of panels and furniture
03 01 01 waste bark and cork
03 01 02 sawdust
03 01 03 shavings, cuttings, spoiled timber/particle board/veneer
03 01 99 wastes not otherwise specified
03 02 00 wood preservation waste
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 03 00 wastes from pulp, paper and cardboard production and processing
03 03 01 bark
03 03 02 dregs and green liquor sludge (from black liquor treatment)
03 03 03 bleaching sludges from hypochlorite and chlorine processes
03 03 04 bleaching sludges from other bleaching processes
03 03 05 de-inking sludges from paper recycling
03 03 06 fibre and paper sludge
03 03 07 rejects from paper and cardboard recycling
03 03 99 wastes not otherwise specified

04 00 00 WASTES FROM THE LEATHER AND TEXTILE INDUSTRIES
04 01 00 wastes from the leather industry
04 01 01 fleshings and limesplit waste
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 containing chromium
04 01 07 sludges 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 00 wastes from textile industry

04 02 01 wastes from unprocessed textile fibres and other natural fibrous substances mainly of vegetable origin
04 02 02 wastes from unprocessed textile fibres mainly of animal origin
04 02 03 wastes from unprocessed textile fibres mainly artificial or synthetic
04 02 04 wastes from unprocessed mixed textile fibres before spinning and weaving
04 02 05 wastes from processed textile fibres mainly of vegetable origin
04 02 06 wastes from processed textile fibres mainly of animal origin
04 02 07 wastes from processed textile fibres mainly of artificial or synthetic origin
04 02 08 wastes from processed mixed textile fibres
04 02 09 wastes from composite materials(impregnated textile, elastomer, plastomer)
04 02 10 organic matter from natural products (e.g. grease, wax)
04 02 11 halogenated wastes from dressing and finishing
04 02 12 non-halogenated wastes from dressing and finishing
04 02 13 dye stuffs and pigments
04 02 99 wastes not otherwise specified

05 00 00 WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL
05 01 00 Oily sludges and solid wastes
05 01 01 sludges from on-site effluent treatment
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 sludges from plant, equipment and maintenance operations
05 01 07 acid tars
05 01 08 other tars
05 01 99 wastes not otherwise specified
05 02 00 Non oily sludges and solid wastes
05 02 01 boiler feed water sludges
05 02 02 waste from cooling columns
05 02 99 wastes not otherwise specified
05 03 00 spent catalysts
05 03 01 spent catalysts containing precious metals
05 03 02 other spent catalysts
05 04 00 spent filter clays
05 04 01 spent filter clays
05 05 00 oil desulphurisation waste
05 05 01 waste containing sulphur
05 05 99 wastes not otherwise specified
05 06 00 waste from the pyrolytic treatment of coal
05 06 01 acid tars
05 06 02 asphalt
05 06 03 other tars
05 06 04 waste from cooling columns
05 06 99 wastes not otherwise specified
05 07 00 wastes from natural gas purification
05 07 01 sludges containing mercury
05 07 02 wastes containing sulphur
05 07 99 wastes not otherwise specified
05 08 00 wastes from oil regeneration
05 08 01 spent filter clays
05 08 02 acid tars
05 08 03 other tars
05 08 04 aqueous liquid waste from oil regeneration
05 08 99 wastes not otherwise specified

06 00 00 WASTES FROM INORGANIC CHEMICAL PROCESSES

06 01 00 waste acidic solutions
06 01 01 sulfuric acid and sulfurous 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 99 waste not otherwise specified
06 02 00 waste alkaline solutions
06 02 01 calcium hydroxide
06 02 02 soda
06 02 03 ammonia
06 02 99 wastes not otherwise specified
06 03 00 waste salts and their solutions
06 03 01 carbonates (except 02 04 02 and 19 10 03)
06 03 02 saline solutions containing sulfates, sulfites or sulfides
06 03 03 solid salts containing sulfates, sulfites or sulfides
06 03 04 saline solutions containing chlorides fluorides and halides
06 03 05 solid salts containing chlorides, fluorides and other halogenated solid salts
06 03 06 saline solutions containing phosphates and related solid salts
06 03 07 phosphates and related solid salts
06 03 08 saline solutions containing nitrates and related compounds
06 03 09 solid salts containing nitrides (nitrometallic)
06 03 10 solid salts containing ammonium
06 03 11 salts and solutions containing cyanides
06 03 12 salts and solutions containing organic compounds
06 03 99 wastes not otherwise specified
06 04 00 metal-containing wastes
06 04 01 metallic oxides
06 04 02 metallic salts (except 06 03 00)
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 00 sludges from on-site effluent treatment
06 05 01 sludges from on-site effluent treatment
06 06 00 wastes from sulphur chemical processes (production and transformation) and desulphurisation processes
06 06 01 waste containing sulphur
06 06 99 wastes not otherwise specified
06 07 00 wastes from halogen chemical processes
06 07 01 wastes containing asbestos from electrolysis
06 07 02 activated carbon from chlorine production
06 07 99 wastes not otherwise specified
06 08 00 wastes from production of silicon and silicon derivatives
06 08 01 wastes from production of silicon and silicon derivatives
06 09 00 wastes from phosphorus chemical processes
06 09 01 phosphogypsum
06 09 02 phosphorous slag
06 09 99 wastes not otherwise specified
06 10 00 wastes from nitrogen chemical processes and fertilizer manufacture
06 10 01 waste from nitrogen chemical processes and fertilizer manufacture
06 11 00 wastes from the manufacturing of inorganic pigments and opacificiers
06 11 01 gypsum from titanium dioxide production
06 11 99 wastes not otherwise specified
06 12 00 wastes from production, use and regeneration of catalysts
06 12 01 spent catalysts containing precious metals
06 12 02 other spent catalysts
06 13 00 wastes from other inorganic chemical processes
06 13 01 inorganic pesticides, biocides and wood preserving agents
06 13 02 spent activated carbon (except 06 07 02)

06 13 03 carbon black
06 13 99 wastes not otherwise specified

07 00 00 WASTES FROM ORGANIC CHEMICAL PROCESSES
07 01 00 waste from the manufacture, formulation, supply and use(MFSU) of basic organic chemicals
07 01 01 aqueous washing liquids and mother liquors
07 01 02 sludges from on-site effluent treatment
07 01 03 organic halogenated solvents, washing liquids and mother liquors
07 01 04 other organic solvents washing liquids and mother liquors
07 01 05 spent catalysts containing precious metals
07 01 06 other spent catalysts
07 01 07 halogenated still bottoms and reaction residues
07 01 08 other still bottoms and reaction residues
07 01 09 halogenated filter cakes spent absorbents
07 01 10 other filter cakes spent absorbents
07 01 99 wastes not otherwise specified
07 02 00 waste from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 01 aqueous washing liquids and mother liquors
07 02 02 sludges from on-site effluent treatment
07 02 03 organic halogenated solvents, washing liquids and mother liquors
07 02 04 other organic solvents washing liquids and mother liquors
07 02 05 spent catalysts containing precious metals
07 02 06 other spent catalysts
07 02 07 halogenated still bottoms and reaction residues
07 02 08 other still bottoms and reaction residues
07 02 09 halogenated filter cakes spent absorbents
07 02 10 other filter cakes spent absorbents
07 02 99 wastes not otherwise specified
07 03 00 waste from the MFSU of organic dyes and pigments (excluding 06 11 00)
07 03 01 aqueous washing liquids and mother liquors
07 03 02 sludges from on-site effluent treatment
07 03 03 organic halogenated solvents, washing liquids and mother liquors
07 03 04 other organic solvents washing liquids and mother liquors
07 03 05 spent catalysts containing precious metals
07 03 06 other spent catalysts
07 03 07 halogenated still bottoms and reaction residues
07 03 08 other still bottoms and reaction residues
07 03 09 halogenated filter cakes spent absorbents
07 03 10 other filter cakes spent absorbents
07 03 99 wastes not otherwise specified
07 04 00 waste from the MFSU of organic pesticides (except 02 01 05)
07 04 01 aqueous washing liquids and mother liquors
07 04 02 sludges from on-site effluent treatment
07 04 03 organic halogenated solvents, washing liquids and mother liquors
07 04 04 other organic solvents washing liquids and mother liquors
07 04 05 spent catalysts containing precious metals
07 04 06 other spent catalysts
07 04 07 halogenated still bottoms and reaction residues
07 04 08 other still bottoms and reaction residues
07 04 09 halogenated filter cakes spent absorbents
07 04 10 other filter cakes spent absorbents
07 04 99 wastes not otherwise specified
07 05 00 waste from the MFSU of pharmaceuticals
07 05 01 aqueous washing liquids and mother liquors
07 05 02 sludges from on-site effluent treatment
07 05 03 organic halogenated solvents, washing liquids and mother liquors
07 05 04 other organic solvents, washing liquids and mother liquors
07 05 05 spent catalysts containing precious metals
07 05 06 other spent catalysts
07 05 07 halogenated still bottoms and reaction residues

07 05 08 other still bottoms and reaction residues
07 05 09 halogenated filter cakes, spent absorbents
07 05 10 other filter cakes, spent absorbents
07 05 99 wastes not otherwise specified
07 06 00 waste from the MFSU of fats, grease, soaps, detergents disinfectants and cosmetics
07 06 01 aqueous washing liquids and mother liquors
07 06 02 sludges from on-site effluent treatment
07 06 03 organic halogenated solvents, washing liquids and mother liquors
07 06 04 other organic solvents, washing liquids and mother liquors
07 06 05 spent catalysts containing precious metals
07 06 06 other spent catalysts
07 06 07 halogenated still bottoms and reaction residues
07 06 08 other still bottoms and reaction residues
07 06 09 halogenated filter cakes, spent absorbents
07 06 10 other filter cakes, spent absorbents
07 06 99 wastes not otherwise specified
07 07 00 waste from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 01 aqueous washing liquids and mother liquors
07 07 02 sludges from on site effluent treatment
07 07 03 organic halogenaged solvents, washing liquids and mother liquors
07 07 04 other organic solvents, washing liquids and mother liquors
07 07 05 spent catalysts containing precious metals
07 07 06 other spent catalysts
07 07 07 halogenated still bottoms and reaction residues
07 07 08 other still bottoms and reaction residues
07 07 09 halogenated filter cakes, spent absorbents
07 07 10 other filter cakes, spent absorbents
07 07 99 wastes not otherwise specified

08 00 00 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS(PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVE, SEALANTS AND PRINTING INKS
08 01 00 wastes from MFSU of paint and varnish
08 01 01 waste paints and varnish containing halogenated solvents
08 01 02 waste paints and varnish free of halogenated solvents
08 01 03 waste from water-based paints and varnishes
08 01 04 powder paints
08 01 05 hardened paints and varnishes
08 01 06 sludges from paint or varnish removal containing halogenated solvents
08 01 07 sludges from painter varnish removal free of halogenated solvents
08 01 08 aqueous sludges containing paint or varnish
08 01 09 waste from paint or varnish removal(except 08 01 05 and 08 01 06)
08 01 10 aqueous suspensions containing paint or varnish
08 01 99 wastes not otherwise specified
08 02 00 wastes from MFSU of other coating (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 00 waste from MFSU of printing inks
08 03 01 waste ink containing halogenated solvents
08 03 02 waste ink free of halogenated solvents
08 03 03 waste from water-based ink
08 03 04 dried ink
08 03 05 ink sludges containing halogenated solvents
08 03 06 ink sludges free of halogenated solvents
08 03 07 aqueous sludges containing ink
08 03 08 aqueous liquid waste containing ink
08 03 09 waste printing toner (including cartridges)
08 03 99 wastes not otherwise specified

08 04 00 wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 01 waste adhesives and sealants containing halogenated solvents
08 04 02 waste adhesives and sealants free of halogenated solvents
08 04 03 wastes from water-based adhesives and sealants
08 04 04 hardened adhesives and sealants
08 04 05 adhesives and sealants sludges containing halogenated solvents
08 04 06 adhesives and sealants sludges free of halogenated solvents
08 04 07 aqueous sludges containing adhesives and sealants
08 04 08 aqueous liquid wastes containing adhesives and sealants
08 04 99 wastes not otherwise specified

09 00 00 WASTES FROM THE PHOTOGRAPHIC INDUSTRY
09 01 00 wastes from 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 waste containing silver from on-site treatment of photographic waste
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 09 single-use cameras with batteries
09 01 10 single use cameras without batteries
09 01 99 wastes not otherwise specified

10 00 00 INORGANIC WASTES FROM THERMAL PROCESSES
10 01 00 wastes from power station and other combustion plants(except 19 00 00)
10 01 01 bottom ash
10 01 02 coal fly ash
10 01 03 peat fly ash
10 01 04 oil fly ash
10 01 05 calcium based reaction wastes from flue gas desulphurisation in solid form
10 01 06 other solid wastes from gas treatment
10 01 07 calcium based reaction wastes from flue gas desulphurisation in sludge form
10 01 08 other sludges from gas treatment
10 01 09 sulfuric acid acid
10 01 10 spent catalysts e.g. from removal of NOx
10 01 11 aqueous sludges from boiler cleansing
10 01 12 spent linings and refractories
10 01 99 wastes not otherwise specified
10 02 00 wastes from the iron and steel industry
10 02 01 waste from the processing of slag
10 02 02 unprocessed slag
10 02 03 solid wastes from gas treatment
10 02 04 sludges from gas treatment
10 02 05 other sludges
10 02 06 spent linings and refractories
10 02 99 wastes not otherwise specified
10 03 00 wastes from aluminium thermal metallurgy
10 03 01 tars and other carbon-containing wastes from anode manufacture
10 03 02 anode scraps
10 03 03 skimmings
10 03 04 primary smelting slags/white drosses
10 03 05 alumina dust
10 03 06 used carbon strips and fire proof materials from electrolysis
10 03 07 spent pot linings
10 03 08 salt slags from secondary smelting
10 03 09 black drosses from secondary smelting
10 03 10 waste from treatment of salt slags and black drosses treatment
10 03 11 flue gas dust

10 03 12 other particulates and dust(including ball mill dust)
10 03 13 solid waste from gas treatment
10 03 14 sludges from gas treatment
10 03 99 wastes not otherwise specified
10 04 00 wastes from lead thermal metallurgy
10 04 01 slags (first and second smelting)
10 04 02 dross and skimmings (first hand second smelting)
10 04 03 calcium arsenate
10 04 04 flue gas dust
10 04 05 other particulates and dust
10 04 06 solid waste from gas treatment
10 04 07 sludges from gas treatment
10 04 08 spent linings and refractories
10 04 99 wastes not otherwise specified
10 05 00 wastes from zinc thermal metallurgy
10 05 01 slags (first and second smelting)
10 05 02 dross and skimmings (first and second smelting)
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 from gas treatment
10 05 07 spent linings and refractories
10 05 99 wastes not otherwise specified
10 06 00 wastes from copper thermal metallurgy
10 06 01 slags (first and second smelting)
10 06 02 dross and skimmings (first and second smelting)
10 06 03 flue gas dust
10 06 04 other particulates and dust
10 06 05 waste from electrolytic refining
10 06 06 solid waste from gas treatment
10 06 07 sludges from gas treatment
10 06 08 spent linings and refractories
10 06 99 wastes not otherwise specified
10 07 00 wastes from silver gold and platinum thermal metallurgy
10 07 01 slags (first and second smelting)
10 07 02 dross and skimmings (first and second smelting)
10 07 03 solid waste from gas treatment
10 07 04 other particulates and dust
10 07 05 sludges from gas treatment
10 07 06 spent linings and refractories
10 07 99 wastes not otherwise specified
10 08 00 wastes from other non-ferrous thermal metallurgy
10 08 01 slags (first and second smelting)
10 08 02 dross and skimmings (first and second smelting)
10 08 03 flue gas dust
10 08 04 other particulates and dust
10 08 05 solid waste from gas treatment
10 08 06 sludges from gas treatment
10 08 07 spent linings and refractories
10 08 99 wastes not otherwise specified
10 09 00 wastes from casting of ferrous pieces
10 09 01 casting cores and moulds containing organic binders which have not undergone pouring
10 09 02 casting cores and moulds containing organic binders which have undergone pouring
10 09 03 furnace slag
10 09 04 furnace dust
10 09 99 wastes not otherwise specified
10 10 00 wastes from casting of non-ferrous pieces
10 10 01 casting cores and moulds containing organic binders which have not undergone pouring
10 10 02 casting cores and moulds containing organic binders which have undergone pouring
10 10 03 furnace slag

10 10 04 furnace dust
10 10 99 wastes not otherwise specified
10 11 00 wastes from manufacture of glass and glass products
10 11 01 waste preparation mixture before thermal processing
10 11 02 waste glass
10 11 03 waste glass-based fibrous materials
10 11 04 flue gas dust
10 11 05 other particulates and dust
10 11 06 solid waste from gas treatment
10 11 07 sludges from gas treatment
10 11 08 spent linings and refractories
10 11 99 wastes not otherwise specified
10 12 00 wastes from manufacture of ceramic goods, bricks, tiles and constructions products
10 12 01 waste preparation mixture before thermal processing
10 12 02 flue gas dust
10 12 03 other particulates and dust
10 12 04 solid waste from gas treatment
10 12 05 sludges from gas treatment
10 12 06 discarded moulds
10 12 07 spent linings and refractories
10 12 99 wastes not otherwise specified
10 13 00 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 02 wastes from asbestos-cement manufacture
10 13 03 wastes from other cement-based composite materials
10 13 04 waste from calcination and hydration of lime
10 13 05 solid waste from gas treatment
10 13 06 other particulates and dust
10 13 07 sludges from gas treatment
10 13 08 spent linings and refractories
10 13 99 wastes not otherwise specified

11 00 00 INORGANIC WASTE WITH METALS FROM METAL TREATMENT AND THE COATING OF METALS NON-FERROUS HYDRO-METALLURGY
11 01 00 liquid wastes and sludges from metal treatment and coating of metals(e.g. galvanic processes, zinc coating processes, pickling processes, etching, phosphatizing, alkaline degreasing)
11 01 01 cyanidic (alkaline) wastes containing heavy metals other than chromium
11 01 02 cyanidic (alkaline) wastes which do not contain heavy metals
11 01 03 cyanide-free wastes containing chromium
11 01 04 cyanide-free wastes not containing chromium
11 01 05 acidic pickling solutions
11 01 06 acids not otherwise specified
11 01 07 alkalis not otherwise specified
11 01 08 phosphatizing sludges
11 02 00 wastes and sludges from non-ferrous hydrometallurgical processes
11 02 01 sludges from copper hydrometallurgy
11 02 02 sludges from zinc hydrometallurgy (including jarosite, goethite)
11 02 03 wastes from the production of anodes for aqueous electrolytic processes
11 02 04 sludges not otherwise specified
11 03 00 sludges and solids from tempering processes
11 03 01 wastes containing cyanide
11 03 02 other wastes
11 04 00 other inorganic wastes with metals not otherwise specified
11 04 01 other inorganic wastes with metals not otherwise specified

12 00 00 WASTES FROM SHAPING AND SURFACE TREATMENT OF METALS AND PLASTICS
12 01 00 wastes from shaping (including forging, welding, pressing drawing, turning, cutting and filing)
12 01 01 ferrous metal filings and turnings
12 01 02 other ferrous metals particles
12 01 03 non-ferrous metal filings and turnings

12 01 04 other non-ferrous metal particles
12 01 05 plastics particles
12 01 06 waste machining oils containing halogens (not emulsioned)
12 01 07 waste machining oils free of halogens (not emulsioned)
12 01 08 waste machining emulsions containing halogens
12 01 09 waste machining emulsions free of halogens
12 01 10 synthetic machining oils
12 01 11 machining sludges
12 01 12 spent waxes and fats
12 01 13 welding wastes
12 01 99 wastes not otherwise specified
12 02 00 wastes from mechanical surface treatment processes (blasting, grinding honing, lapping, polishing)
12 02 01 spent blasting grit
12 02 02 sludges from grinding honing and lapping
12 02 03 polishing sludges
12 02 99 wastes not otherwise specified
12 03 00 wastes from water and steam degreasing processes (except 11 00 00)
12 03 01 aqueous washing liquids
12 03 02 steam degreasing wastes

13 00 00 OIL WASTES (except edible oils, 05 00 00 and 12 00 00)
13 01 00 waste hydraulic oils and brake fluids
13 01 01 hydraulic oils, containing PCBs or PCTs
13 01 02 other chlorinated hydraulic oils (not emulsions)
13 01 03 non chlorinated hydraulic oils (not emulsions)
13 01 04 chlorinated emulsions
13 01 05 non chlorinated emulsions
13 01 06 hydraulic oils containing only mineral oil
13 01 07 other hydraulic oils
13 01 08 brake fluids
13 02 00 waste engine, gear & lubricating oils
13 02 01 chlorinated engine, gear and lubricating oils
13 02 02 non-chlorinated engine, gear, lubricating oils
13 02 03 other engine, gear and lubricating oils
13 03 00 waste insulating and heat transmission oils and other liquids
13 03 01 insulating or heat transmission oils and other liquids containing PCBs or PCTs
13 03 02 other chlorinated insulating and heat transmission oils and other liquids
13 03 03 non-chlorinated insulating and heat transmission oils and other liquids
13 03 04 synthetic insulating and heat transmission oils and other liquids
13 03 05 mineral insulating and heat transmission oils
13 04 00 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 00 oil/water separator contents
13 05 01 oil/water separator solids
13 05 02 oil/water separator sludges
13 05 03 interceptor sludges
13 05 04 desalter sludges or emulsions
13 05 05 other emulsions
13 06 00 oil waste not otherwise specified
13 06 01 oil waste not otherwise specified

14 00 00 WASTES FROM ORGANIC SUBSTANCES EMPLOYED AS SOLVENTS
(except 07 00 00 and 08 00 00)
14 01 00 wastes from metal degreasing and machinery maintenance
14 01 01 chlorofluorocarbons
14 01 02 other halogenated solvents and solvent mixes
14 01 03 other solvents and solvent mixes
14 01 04 aqueous solvent mixes containing halogens

14 01 05 aqueous solvent mixes free of halogens
14 01 06 sludges or solid wastes containing halogenated solvents
14 01 07 sludges or solid wastes free of halogenated solvents
14 02 00 wastes from textile cleaning and degreasing of natural products
14 02 01 halogenated solvents and solvent mixes
14 02 02 solvent mixes or organic liquids free of halogenated solvents
14 02 03 sludges or solid wastes containing halogenated solvents
14 02 04 sludges or solid wastes containing other solvents
14 03 00 wastes from the electronic industry
14 03 01 chlorofluorocarbons
14 03 02 other halogenated solvents
14 03 03 solvents and solvent mixes free of halogenated solvents
14 03 04 sludges or solid wastes containing halogenated solvents
14 03 05 sludges or solid wastes containing other solvents
14 04 00 wastes from coolants foam/aerosol propellants
14 04 01 chlorofluorocarbons
14 04 02 other halogenated solvents and solvent mixes
14 04 03 other solvents and solvent mixes
14 04 04 sludges or solid wastes containing halogenated solvents
14 04 05 sludges or solid wastes containing other solvents
14 05 00 wastes from solvent and coolant recovery (still bottoms)
14 05 01 chlorofluorocarbons
14 05 02 halogenated solvents and solvent mixes
14 05 03 other solvents and solvent mixes
14 05 04 sludges containing halogenated solvents
14 05 05 sludges containing other solvents

15 00 00 PACKAGING ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00 packaging
15 01 01 paper and cardboard
15 01 02 plastic
15 01 03 wooden
15 01 04 metallic
15 01 05 composite packaging
15 01 06 mixed
15 02 00 absorbents, filter materials, wiping cloths and protective clothing
15 02 01 absorbents, filter materials, wiping cloths, protective clothing

16 00 00 WASTE NOT OTHERWISE SPECIFIED IN THE CATALOGUE
16 01 00 end of life vehicles
16 01 01 catalysts removed from vehicles containing precious metals
16 01 02 other catalysts removed from vehicles
16 01 03 used tyres
16 01 04 discarded vehicles
16 01 05 light fraction from automobile shredding
16 01 99 wastes not otherwise specified
16 02 00 discarded equipment and shredder residues
16 02 01 transformers and capacitors containing PCB or PCTs
16 02 02 other discarded electronic equipment (e.g. printed circuit boards)
16 02 03 equipment containing chlorofluorocarbons
16 02 04 discarded equipment containing free asbestos
16 02 05 other discarded equipment
16 02 06 wastes from the asbestos processing industry
16 02 07 waste from the plastic converter industry
16 02 08 shredder residues
16 03 00 off-specification batches
16 03 01 inorganic off-specification batches
16 03 02 organic off-specification batches
16 04 00 waste explosives

16 04 01 waste ammunition
16 04 02 fireworks waste
16 04 03 other waste explosives
16 05 00 chemicals and gases in containers
16 05 01 industrial gases in high pressure cylinders, LPG containers and industrial aerosol containers(including halons)
16 05 02 other waste containing inorganic chemicals, e.g. lab chemicals not otherwise specified, fire extinguishing powders
16 05 03 other waste containing organic chemicals, e.g. lab chemicals not otherwise specified
16 06 00 batteries and accumulators
16 06 01 lead batteries
16 06 02 Ni-Cd batteries
16 06 03 mercury dry cells
16 06 04 alkaline batteries
16 06 05 other batteries and accumulators
16 06 06 electrolyte from batteries and accumulators
16 07 00 waste from transport and storage tank cleaning (except 05 00 00 and 12 00 00)
16 07 01 waste from marine transport tank cleaning, containing chemicals
16 07 02 waste from marine transport tank cleaning, containing oil
16 07 03 waste from railway and road transport tank cleaning containing oil
16 07 04 waste from railway and road transport tank cleaning containing chemicals
16 07 05 waste from storage tank cleaning, containing chemicals
16 07 06 waste from storage tank cleaning, containing oil
16 07 07 solid wastes from ship cargoes
16 07 99 waste not otherwise specified

17 00 00 CONSTRUCTION AND DEMOLITION WASTE (INCLUDING ROAD CONSTRUCTION)
17 01 00 concrete, bricks, tiles ceramics, and gypsum based materials
17 01 01 concrete
17 01 02 bricks
17 01 03 tiles and ceramics
17 01 04 gypsum based construction materials
17 01 05 asbestos based construction materials
17 02 00 wood glass and plastic
17 02 01 wood
17 02 02 glass
17 02 03 plastic
17 03 00 asphalt, tar and tarred products
17 03 01 asphalt containing tar
17 03 02 asphalt(not containing tar)
17 03 03 tar and tar products
17 04 00 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 08 cables
17 05 00 soil and dredging spoil
17 05 01 soil and stones
17 05 02 dredging spoil
17 06 00 insulation materials
17 06 01 insulation materials containing asbestos
17 06 02 other insulation materials
17 07 00 mixed construction and demolition waste
17 07 01 mixed construction and demolition waste

18 00 00 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (excluding kitchen and restaurant wastes which do not arise from immediate health care)
18 01 00 waste from natal care, diagnosis, treatment or prevention of disease in humans
18 01 01 sharps
18 01 02 body parts and organs including blood bags and blood preserves
18 01 03 other wastes whose collection and disposal is subject to special requirements in view of the prevention of infection
18 01 04 wastes whose collection and disposal is not subject to special requirements in view of the prevention of infection (e.g. dressings, plaster casts, linen, disposable clothing, diapers)
18 01 05 discarded chemicals and medicines
18 02 00 waste from research, diagnosis, treatment or prevention of disease involving animals
18 02 01 sharps
18 02 02 other wastes whose collection and disposal is subject to special requirements in view of the prevention of infection
18 02 03 wastes whose collection and disposal is not subject to special requirements in view of the prevention of infection
18 02 04 discarded chemicals

19 00 00 WASTES FROM WASTE TREATMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE WATER INDUSTRY
19 01 00 wastes from incineration or pyrolysis of municipal and similar commercial, industrial and institutional wastes
19 01 01 bottom ash and slag
19 01 02 ferrous materials removed from bottom ash
19 01 03 fly ash
19 01 04 boiler dust
19 01 05 filter cake from gas treatment
19 01 06 aqueous liquid waste from gas treatment and other aqueous liquid wastes
19 01 07 solid waste from gas treatment
19 01 08 pyrolysis wastes
19 01 09 spent catalysts e.g. from NOx removal
19 01 10 spent activated carbon from flue gas treatment
19 01 99 wastes not otherwise specified
19 02 00 wastes from specific physico/chemical treatments of industrial wastes (e.g. dechromatation, decyanidation neutralization)
19 02 01 metal hydroxide sludges and other sludges from metal insolubilisation treatment
19 02 02 premixed wastes for final disposal
19 03 00 stabilized/solidified wastes
19 03 01 wastes stabilized/solidified with hydraulic binders
19 03 02 wastes stabilized/solidified with organic binders
19 03 03 wastes stabilized by biological treatment
19 04 00 vitrified wastes and wastes from vitrification
19 04 01 vitrified wastes
19 04 02 fly ash and other flue gas treatment wastes
19 04 03 non-vitrified solid phase
19 04 04 aqueous liquid waste from vitrified waste tempering
19 05 00 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 wastes
19 05 03 off specification compost
19 05 99 wastes not otherwise specified
19 06 00 wastes from anaerobic treatment of wastes
19 06 01 anaerobic treatment sludges of municipal and similar wastes
19 06 02 anaerobic treatment sludges of animal and vegetal wastes
19 06 99 wastes not otherwise specified
19 07 00 landfill leachate
19 07 01 landfill leachate
19 08 00 wastes from waste water treatment plants not otherwise specified
19 08 01 screenings
19 08 02 wastes from desanding

19 08 03 grease and oil mixture from oil/waste water separation
19 08 04 sludges from the treatment of industrial waste water
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 99 wastes not otherwise specified
19 09 00 wastes from the preparation of drinking water or water for industrial use
19 09 01 solid wastes from primary filtration and screening
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 0999 wastes not otherwise specified

20 00 00 MUNICIPAL WASTES AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00 separately collected fractions
20 01 01 paper and cardboard
20 01 02 glass
20 01 03 small plastics
20 01 04 other plastics
20 01 05 small metals (cans etc.)
20 01 06 other metals
20 01 07 wood
20 01 08 organic compostable kitchen waste (including frying oil and kitchen waste from canteens and restaurants)
20 01 09 oil and fat
20 01 10 clothes
20 01 11 textiles
20 01 12 paint, inks adhesives and resins
20 01 13 solvents
20 01 14 acids
20 01 15 alkalines
20 01 16 detergents
20 01 17 photo chemicals
20 01 18 medicines
20 01 19 pesticides
20 01 20 batteries
20 01 21 fluorescent tubes and other mercury containing waste
20 01 22 aerosols
20 01 23 equipment containing chlorofluorocarbons
20 01 24 electronic equipment (e.g. printed circuit boards)
20 02 00 garden and park waste (including cemetery waste)
20 02 01 compostable wastes
20 02 02 soil and stones
20 02 03 other non-compostable wastes
20 03 00 other municipal waste
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 05 end of life vehicles

(1) OJ No C 122, 18. 5. 1990, p. 2.(2) OJ No L 377, 31. 12. 1991, p. 20.

Appendix H: The OECD Green, Amber and Red lists

OECD Council Decision C(92)39 Final

Note: These lists should be identical to Annexes II, III and IV of Regulation 259/93/EEC. However, this latest amendment has not yet been incorporated into Regulation 259/93/EEC (see Appendix I).

UPDATED OECD GREEN, AMBER AND RED LISTS
Incorporating amendments adopted after 1st January 1995

Refering to the lists of waste set out in the Guidance Manual - Environment Monograph N° 96, the third amendment:
- adds one additional item to the Green List (i.e. GC 080 Mill scale),
- groups the three entries dealing with iron and steel slag (i.e. GC 060, GC 070, and GG 070) into one single, and rephrased category under entry GC 070.

This amendment was adopted 21 September 1995 and was originally set forth in C(95)155/FINAL.

The fourth amendment:
- modifies the Green List entry GG060 and includes a new Amber List entry AD 170 for Spent activated carbon,
- modifies the Green List entry GA 210 and includes a new Amber List entry AA190 for Magnesium waste and scrap,
- deletes the Green List entry GA 380 and modifies the Amber List entry AA 080 for Thallium waste and scrap,
- deletes the Green List entry GA 390 for Thorium waste and scrap,
- and modifies Green List entries GC 050 to GC 053, includes a new Green List entry GC060 and a new Amber List entry AB 080 for spent catalysts.

This amendment was adopted by Council 10 December 1996 and was originally set forth in C(96)231/FINAL.88

Appendix 3
GREEN LIST OF WASTES[48]
(revised March 1996)

Regardless of whether or not wastes are included on this list, they may not be moved as Green Tier wastes if they are contaminated by other materials to an extent which (a) increases the risks associated with the waste sufficiently to render it appropriate for inclusion in the amber or red lists, when taking into account the criteria in Annex 2, or (b) prevents the recovery of the waste in an environmentally sound manner.

GA. METAL AND METAL-ALLOY WASTES IN METALLIC, NON DISPERSIBLE FORM[49]

The following waste and scrap of precious metals and their alloys :

GA010	ex	711210-	of gold

48 Whenever possible, the code number of the Harmonized Commodity Description and Coding System, established by the Brussels Convention of 14th June 1983 under the auspices of the Customs Co-operation Council (Harmonized System Code) is listed opposite an entry. This code may apply to both wastes and products. This Decision does not include items which are not wastes. Therefore, the code - used by customs officials in order to facilitate their procedures as well as by others - is only provided here to help in identifying wastes that are listed and subject to this Decision. However, corresponding official Explanatory Notes as issued by the Customs Co-operation Council should be used as interpretative guidance to identify wastes covered by generic headings. The indicative "ex" identifies a specific item contained within a heading of the Harmonized System Code. The code in bold in the first column is the OECD code: it consists of two letters (one for the list: Green, Amber

49 "Non-dispersible" does not include any wastes in the form of powder, sludge, dust or solid items containing encased hazardous waste liquids.

GA020	ex	711220-	of platinum (the expression "platinum" includes platinum, iridium, osmium, palladium, rhodium and ruthenium)
GA030	ex	711290-	of other precious metal, e.g., silver N.B. Mercury is specifically excluded as a contaminant of these metals or their alloys or amalgams.

The following ferrous waste and scrap of iron or steel:

GA040		720410 -	Waste and scrap of cast iron
GA050		720421 -	Waste and scrap of stainless steel
GA060		720429 -	Waste and scrap of other alloy steels
GA070		720430 -	Waste and scrap of tinned iron or steel
GA080		720441 -	Turnings, shavings, chips, milling waste, filings, trimmings and stampings, whether or not in bundles
GA090		720449 -	Other ferrous waste and scrap
GA100		720450 -	Remelting scrap ingots
GA110	ex	730210 -	Used iron and steel rails

The following waste and scrap of non-ferrous metals and their alloys:

GA120		740400	Copper waste and scrap
GA130		750300	Nickel waste and scrap
GA140		760200	Aluminium waste and scrap
GA150		780200	Lead waste and scrap
GA160		790200	Zinc waste and scrap
GA170		800200	Tin waste and scrap
GA180	ex	810191	Tungsten waste and scrap
GA190	ex	810291	Molybdenum waste and scrap
GA200	ex	810310	Tantalum waste and scrap
GA210		810420	Magnesium waste and scrap (excluding those listed in AA190)
GA220	ex	810510	Cobalt waste and scrap
GA230	ex	810600	Bismuth waste and scrap
GA240	ex	810710	Cadmium waste and scrap
GA250	ex	810810	Titanium waste and scrap
GA260	ex	810910	Zirconium waste and scrap
GA270	ex	811000	Antimony waste and scrap
GA280	ex	811100	Manganese waste and scrap
GA290	ex	811211	Beryllium waste and scrap
GA300	ex	811220	Chromium waste and scrap
GA310	ex	811230	Germanium waste and scrap
GA320	ex	811240	Vanadium waste and scrap
	ex	811291	Wastes and scrap of
GA330			- Hafnium
GA340			- Indium
GA350			- Niobium
GA360			- Rhenium
GA370			- Gallium
GA400	ex	280490	Selenium waste and scrap
GA410	ex	280450	Tellurium waste and scrap
GA420	ex	280530	Rare earths waste and scrap

GB. METAL BEARING WASTES ARISING FROM MELTING, SMELTING AND REFINING OF METALS

GB010	262011	Hard zinc spelter
GB020		Zinc containing drosses:
GB021		- Galvanizing slab zinc top dross (> 90% Zn)

GB022			- Galvanizing slab zinc bottom dross (> 92% Zn)
GB023			- Zinc die casting dross (> 85% Zn)
GB024			- Hot dip galvanizers slab zinc dross (batch) (> 92% Zn)
GB025			- Zinc skimmings
GB030			Aluminium skimmings
GB040	ex	262090	Slags from precious metals and copper processing for further refining
GB050	ex	262090	Tantalum bearing tin slags with less than 0.5 % tin

GC. OTHER WASTES CONTAINING METALS

GC010			Electrical assemblies consisting only of metals or alloys
GC020			Electronic scrap (e.g. printed circuit boards, electronic components, wire, etc.) and reclaimed electronic components suitable for base and precious metal recovery
GC030	ex	890800	Vessels and other floating structures for breaking up, properly emptied of any cargo and other materials arising from the operation of the vessel which may have been classified as a dangerous substance or waste
GC040			Motor vehicle wrecks, drained of liquids Spent catalysts excluding liquids used as catalysts:
GC050			Spent Fluid Catalytic Cracking (FCC) Catalysts (eg: aluminium oxide, zeolites)
GC060			Spent metal bearing catalysts containing any of:

- Precious metals:

Gold	Silver

- Platinum-group metals:

Ruthenium	Rhodium
Palladium	Osmium
Iridium	Platinum

- Transition metals:

Scandium	Titanium
Vanadium	Chromium
Manganese	Iron
Cobalt	Nickel
Copper	Zinc
Yttrium	Zirconium
Niobium	Molybdenum
Hafnium	Tantalum
Tungsten	Rhenium

- Lanthanides (rare earth metals):

Lanthanum	Cerium
Praesodinium	Neodymium
Samarium	Europium
Gadolinium	Terbium
Dysprosium	Holmium
Erbium	Thulium
Ytterbium	Lutetium

GC070	ex	261900	Slags arising from the manufacture of iron and carbon steel (including low alloy steel) excluding those slags which have been specifically produced to meet both national and relevant international requirements and standards[50]
GC080	ex	261900	Mill scale (ferrous metal)

GD. WASTES FROM MINING OPERATIONS: THESE WASTES TO BE IN NON-DISPERSIBLE FORM

[50] This entry covers the use of such slags as a source of titanium dioxide and vanadium

GD010	ex	250490	Natural graphite waste
GD020	ex	251400	Slate waste, whether or not roughly trimmed or merely cut, by sawing or otherwise
GD030		252530	Mica waste
GD040	ex	252930	Leucite, nepheline and nepheline syenite waste
GD050	ex	252910	Felspar waste
GD060	ex	252921	Fluospar waste
	ex	252922	
GD070	ex	281122	Silica wastes in solid form excluding those used in foundry operations

GE. GLASS WASTE IN NON-DISPERSIBLE FORM

GE010	ex	700100	Cullet and other waste and scrap of glass except for glass from cathode-ray tubes and other activated glasses
GE020			Glass fibre wastes

GF. CERAMIC WASTES IN NON-DISPERSIBLE FORM

GF010			Ceramic wastes which have been fired after shaping, including ceramic vessels (before and/or after use)
GF020	ex	811300	Cermet wastes and scrap (metal ceramic composites)
GF030			Ceramic based fibres not elsewhere specified or included

GG. OTHER WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

GG010			Partially refined calcium sulphate produced from flue gas desulphurisation(FGD)
GG020			Waste gypsum wallboard or plasterboard arising from the demolition of buildings
GG030	ex	2621	Bottom ash and slag tap from coal fired power plants
GG040	ex	2621	Coal fired power plants fly ash
GG050			Anode butts of petroleum coke and/or bitumen
GG060	ex	2803	Spent activated carbon, resulting from the treatment of potable water and processes of the food industry and vitamin production
GG080	ex	262100	Slag from copper production, chemically stabilized, having a high iron content (above 20%) and processed according to industrial specifications (e.g. DIN 4301 and DIN 8201) mainly for construction and abrasive applications
GG090			Sulphur in solid form
GG100			Limestone from the production of calcium cyanamide (having a pH less than 9)
GG110	ex	262100	Neutralized red mud from alumina production
GG120			Sodium, potassium, calcium chlorides
GG130			Carborundum (silicon carbide)
GG140			Broken concrete
GG150	ex	262090	Lithium-Tantalum and Lithium-Niobium containing glass scraps

GH. SOLID PLASTIC WASTES:

Including, but not limited to:

GH010		3915	Waste, parings and scrap of plastics of :
GH011	ex	391510	- polymers of ethylene
GH012	ex	391520	- polymers of styrene
GH013	ex	391530	- polymers of vinyl chloride
GH014	ex	391590	- polymers or co-polymers e.g.: . polypropylene

			. polyethylene terephthalate . acrylonitrile copolymer . butadiene copolymer . styrene copolymer . polyamides . polybutylene terephthalate . polycarbonates . polyphenylene sulphides . acrylic polymers . paraffins (C10-C13)[51] . polyurethane (not containing chlorofluorocarbons) . polysiloxalanes (silicones) . polymethyl methacrylate . polyvinyl alcohol . polyvinyl butyral . polyvinyl acetate . polymers of fluorinated ethylene (Teflon, PTFE)
GH015	ex	391590	- resins or condensation products e.g.: . urea formaldehyde resins . phenol formaldehyde resins . melamine formaldehyde resins . epoxy resins . alkyd resins . polyamides

GI. PAPER, PAPERBOARD AND PAPER PRODUCT WASTES:

GI010	4707	Waste and scrap of paper or paperboard:
GI011	470710	- of unbleached kraft paper or paperboard or of corrugated paper or paperboard
GI012	470720	- of other paper or paperboard, made mainly of bleached chemical pulp, not colored in the mass
GI013	470730	- of paper or paperboard made mainly of mechanical pulp (for example, newspapers, journals and similar printed matter)
GI014	470790	- other, including but not limited to: 1) laminated paperboard 2) unsorted waste and scrap

GJ. TEXTILE WASTES:

GJ010	5003	Silk waste (including cocoons unsuitable for reeling, yarn waste and garnetted stock)
GJ011	500310	- not carded or combed
GJ012	500390	- other
GJ020	5103	Waste of wool or of fine or coarse animal hair, including yarn waste but excluding garnetted stock
GJ021	510310	- noils of wool or of fine animal hair
GJ022	510320	- other waste of wool or of fine animal hair
GJ023	510330	- waste of coarse animal hair
GJ030	5202	Cotton waste (including yarn waste and garnetted stock)
GJ031	520210	- yarn waste (including thread waste)
GJ032	520291	- garnetted stock
GJ033	520299	- other
GJ040	530130	Flax tow and waste
GJ050	ex 530290	Tow and waste (including yarn waste and garnetted stock) of true hemp (Cannabis sativa L.)

[51] These cannot be polymerised and are used as plasticisers.

GJ060	ex	530390	Tow and waste (including yarn waste and garnetted stock) of jute and other textile bast fibres (excluding flax, true hemp and ramie)
GJ070	ex	530490	Tow and waste (including yarn waste and garnetted stock) of sisal and other textile fibres of the genus Agave
GJ080	ex	530519	Tow, noils and waste (including yarn waste and garnetted stock) of coconut
GJ090	ex	530529	Tow, noils and waste (including yarn waste and garnetted stock) of abaca (Manila hemp or Musa textilis Nee)
GJ100	ex	530599	Tow, noils and waste (including yarn waste and garnetted stock) of ramie and other vegetable textile fibres, not elsewhere specified or included
GJ110		5505	Waste (including noils, yarn waste and garnetted stock) of man-madefibres
GJ111		550510	- of synthetic fibres
GJ112		550520	- of artificial fibres
GJ120		630900	Worn clothing and other worn textile articles
GJ130	ex	6310	Used rags, scrap twine, cordage, rope and cables and worn out articles of twine, cordage, rope or cables of textile materials
GJ131	ex	631010	- sorted
GJ132	ex	631090	- other

GK. RUBBER WASTES:

GK010		400400	Waste, parings and scrap of rubber (other than hard rubber) and granules obtained therefrom
GK020		401220	Used pneumatic tyres
GK030	ex	401700	Waste and scrap of hard rubber (for example, ebonite)

GL. UNTREATED CORK AND WOOD WASTES:

GL010	ex	440130	Wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms
GL020		450190	Cork waste; crushed, granulated or ground cork

GM. WASTES ARISING FROM AGRO-FOOD INDUSTRIES

GM070	ex	2307	Wine lees
GM080	ex	2308	Dried and sterilized vegetable waste, residues and by-products, whether or not in the form of pellets, of a kind used in animal feeding, not elsewhere specified or included
GM090		152200	Degras; residues resulting from the treatment of fatty substances or animal or vegetable waxes
GM100		050690	Waste of bones and horn-cores, unworked, defatted, simply prepared (but not cut to shape), treated with acid or degelatinised
GM110	ex	051191	Fish waste
GM120		180200	Cocoa shells, husks, skins and other cocoa waste
GM130			Wastes from the agro-food industry excluding by-products which meet national and international requirements and standards for human or animal consumption

GN. WASTES ARISING FROM TANNING AND FELLMONGERY OPERATIONS AND LEATHER USE

GN010	ex	050200	Waste of pigs', hogs' or boars' bristles and hair or of badger hair and other brush making hair
GN020	ex	050300	Horsehair waste, whether or not put up as a layer with or without supporting material
GN030	ex	050590	Waste of skins and other parts of birds, with their feathers or down, of feathers and parts of feathers (whether or not with trimmed edges) and

			down, not further worked than cleaned, disinfected or treated for preservation
GN040	ex	411000	Parings and other waste of leather or of composition leather, not suitable for the manufacture of leather articles, excluding leather sludges

GO. OTHER WASTES CONTAINING PRINCIPALLY ORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND INORGANIC MATERIALS

GO010	ex	050100	Waste of human hair
GO020			Waste straw
GO030			Deactivated fungus mycelium from penicillin production to be used as animal feed
GO040			Waste photographic film base and waste photographic film not containing silver
GO050			Single use cameras without batteries

Appendix 4
AMBER LIST OF WASTES[52]

(revised March 1996)

Regardless of whether or not wastes are included on this list, they may not be moved as Amber Tier wastes if they are contaminated by other materials to an extent which (a) increases the risks associated with the waste sufficiently to render it appropriate for inclusion in the red list, when taking into account the criteria in Annex 2, or (b) prevents the recovery of the waste in an environmentally sound manner.

AA. METAL BEARING WASTES

AA010	ex	261900	Dross, scalings and other wastes from the manufacture of iron and steel[53]
AA020	ex	262019	Zinc ashes and residues[53]
AA030		262020	Lead ashes and residues[53]
AA040	ex	262030	Copper ashes and residues[53]
AA050	ex	262040	Aluminium ashes and residues[53]
AA060	ex	262050	Vanadium ashes and residues[53]
AA070		262090	Ashes and residues[53] containing metals or metal compounds not elsewhere specified or included
AA080	ex	811291	Thallium waste, scrap and residues
AA090	ex	280480	Arsenic waste and residues[53]
AA100	ex	280540	Mercury waste and residues
AA110			Residues from alumina production not elsewhere specified or included
AA120			Galvanic sludges
AA130			Liquors from the pickling of metals
AA140			Leaching residues from zinc processing, dusts and sludges such as jarosite, hematite, goethite, etc.

[52] Whenever possible, the code number of the Harmonized Commodity Description and Coding System, established by the Brussels Convention of 14th June 1983 under the auspices of the Customs Co-operation Council (Harmonized System Code) is listed opposite an entry. This code may apply to both wastes and products. This Decision does not include items which are not wastes. Therefore, the code - used by customs officials in order to facilitate their procedures as well as by others - is only provided here to help in identifying wastes that are listed and subject to this Decision. However,corresponding official Explanatory Notes as issued by the Customs Co-operation Council should be used as interpretative guidance to identify wastes covered by generic headings. The indicative "ex" identifies a specific item contained within a heading of the Harmonized System Code. The code in bold in the first column is the OECD code: it consists of two letters (one for the list: Green, Amber or Red and one for the category of waste: A,B,C...) followed by a number.

[53] This listing includes wastes in the form of ash, residue, slag, dross, skimming, scaling, dust, powder,sludge and cake, unless a material is expressly listed elsewhere.

AA150			Precious metal bearing residues in solid form which contain traces of inorganic cyanides
AA160			Precious metal ash, sludge, dust and other residues such as:
AA161			- ash from incineration of printed circuit boards
AA162			- photographic film ash
AA170			Lead-acid batteries, whole or crushed
AA180			Used batteries or accumulators, whole or crushed, other than lead-acid batteries, and waste and scrap arising from the production of batteries and accumulators, not elsewhere specified or included
AA190		810420	Magnesium waste and scrap that is flammable, pyrophoric or emits, upon contact with water, flammable gases in dangerous quantities.

AB. WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

AB010		262100	Slag, ash and residues[53], not elsewhere specified or included
AB020			Residues arising from the combustion of municipal/household wastes
AB030			Wastes from non-cyanide based systems which arise from surface treatment of metals
AB040	ex	700100	Glass waste from cathode-ray tubes and other activated glasses
AB050	ex	252921	Calcium fluoride sludge
AB060			Other inorganic fluorine compounds in the form of liquids or sludges
AB070			Sands used in foundry operations
AB080			Spent catalysts not on the Green List
AB090			Waste hydrates of aluminium
AB100			Waste alumina
AB110			Basic solutions
AB120			Inorganic halide compounds, not elsewhere specified or included
AB130			Used blasting grit
AB140			Gypsum arising from chemical industry processes
AB150			Unrefined calcium sulphite and calcium sulphate from flue gas desulphurisation (FGD)

AC. WASTES CONTAINING PRINCIPALLY ORGANIC CONSTITUENTS, WHICHMAY CONTAIN METALS AND INORGANIC MATERIALS

AC010	ex	271390	Waste from the production/processing of petroleum coke and bitumen,excluding anode butts
AC020			Asphalt cement wastes
AC030			Waste oils unfit for their originally intended use
AC040			Leaded petrol (gasoline) sludges
AC050			Thermal (heat transfer) fluids
AC060			Hydraulic fluids
AC070			Brake fluids
AC080			Antifreeze fluids
AC090			Wastes from production, formulation and use of resins, latex, plasticisers, glues and adhesives
AC100	ex	391590	Nitrocellulose
AC110			Phenols, phenol compounds including chlorophenol in the form of liquids or sludges
AC120			Polychlorinated naphthalenes
AC130			Ethers
AC140			Triethylamine catalysts for setting foundry sands
AC150			Chlorofluorocarbons
AC160			Halons
AC170			Treated cork and wood wastes
AC180	ex	411000	Leather dust, ash, sludges and flours
AC190			Fluff - light fraction from automobile shredding

AC200			Organic phosphorous compounds
AC210			Non-halogenated solvents
AC220			Halogenated solvents
AC230			Halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery operations
AC240			Wastes arising from the production of aliphatic halogenated hydrocarbons (such as chloromethanes, dichloro-ethane, vinyl chloride, vinylidene chloride, allyl chloride and epichlorhydrin)
AC250			Surface active agents (surfactants)
AC260			Liquid pig manure; faeces
AC270			Sewage sludge

AD. WASTES WHICH MAY CONTAIN EITHER INORGANIC OR ORGANIC CONSTITUENTS

AD010			Wastes from the production and preparation of pharmaceutical products
AD020			Wastes from the production, formulation and use of biocides and phytopharmaceuticals
AD030			Wastes from the manufacture, formulation and use of wood preserving chemicals
			Wastes that contain, consist of or are contaminated with any of the following:
AD040			- inorganic cyanides, excepting precious metal-bearing residues in solid form containing traces of inorganic cyanides
AD050			- organic cyanides
AD060			Waste oils/water, hydrocarbons/water mixtures, emulsions
AD070			Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish
AD080			Wastes of an explosive nature, when not subject to specific other legislation
AD090			Wastes from production, formulation and use of reprographic and photographic chemicals and materials not elsewhere specified or included
AD100			Wastes from non-cyanide based systems which arise from surface treatment of plastics
AD110			Acidic solutions
AD120			Ion exchange resins
AD130			Single use cameras with batteries
AD140			Wastes from industrial pollution control devices for cleaning of industrial off-gases, not elsewhere specified or included
AD150			Naturally occuring organic material used as a filter medium (such as bio-filters)
AD160			Municipal/household wastes[54]
AD170	ex	2803	Spent activated carbon having hazardous characteristics and resulting from its use in the inorganic chemical, organic chemical and pharmaceutical industries, waste water treatment, gas/air cleaning processes and similar applications.

[54] In the Basel Convention household wastes -- defined as an "other waste" -- are controlled when they are subject to transfrontier movements. Therefore under this Decision all household wastes (and not just those which exhibit a hazardous characteristic) will be subject to the procedures in Section IV (Amber Tier). Until exporting countries have the legal authority to control transfrontier movements of household wastes, the provisions in Section II(4) will be applied.

Appendix 5
RED LIST OF WASTES
(revised May 1993)

"Containing" or "contamined with", when used in this list, mean that the substance referred to is present to an extent which (a) renders the waste hazardous when taking into account the criteria in Annex 2, or (b) renders it not suitable for submission to a recovery operation.

RA. WASTES CONTAINING PRINCIPALLLY ORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND INORGANIC MATERIALS

RA010	Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB) and/or polychlorinated terphenyl (PCT) and/or polybrominated biphenyl (PBB), including any other polybrominated analogues of these compounds, at a concentration level of 50mg/kg or more
RA020	Waste tarry residues (excluding asphalt cements) arising from refining, distillation and any pyrolitic treatment of organic materials

RB. WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

RB010	Asbestos (dusts and fibres)
RB020	Ceramic based fibres of physico-chemical characteristics similar to those of asbestos

RC. WASTES WHICH MAY CONTAIN EITHER INORGANIC OR ORGANIC CONSTITUENTS

	Wastes that contain, consist of or are contaminated with any of the following :
RC010	- any congenor of polychlorinated dibenzo-furan
RC020	- any congenor of polychlorinated dibenzo-dioxin
RC030	Leaded anti-knock compound sludges
RC040	Peroxides other than hydrogen peroxide

Appendix I: The Green, Amber and Red lists of Regulation 259/93/EEC

Note: See Appendix H

ANNEX

ANNEX II

GREEN LIST OF WASTES (1)

Regardless of whether or not wastes are included on this list, they may not be moved as green wastes if they are contaminated by other materials to an extent which (a) increases the risks associated with the waste sufficiently to render it appropriate for inclusion in the amber or red lists, or (b) prevents the recovery of the waste in an environmentally sound manner.

GA. METAL AND METAL-ALLOY WASTES IN METALLIC, NON-DISPERSIBLE FORM (2)()

The following waste and scrap of precious metals and their alloys:

GA 010 ex 7112 10 - Of gold
GA 020 ex 7112 20 - Of platinum (the expression "platinum" includes platinum, iridium, osmium, palladium, rhodium and ruthenium)
GA 030 ex 7112 90 - Of other precious metal, e.g. silver NB: Mercury is specifically excluded as a contaminant of these metals or their alloys or amalgams. The following ferrous waste and scrap of iron or steel:
GA 040 7204 10 Waste and scrap of cast iron
GA 050 7204 21 Waste and scrap of stainless steel
GA 060 7204 29 Waste and scrap of other alloy steels
GA 070 7204 30 Waste and scrap of tinned iron or steel
GA 080 7204 41 Turnings, shavings, chips, milling waste, filings, trimmings and stampings, whether or not in bundles
GA 090 7204 49 Other ferrous waste and scrap
GA 100 7204 50 Re-melting scrap ingots
GA 110 ex 7302 10 Used iron and steel rails The following waste and scrap of non-ferrous metals and their alloys:
GA 120 7404 00 Copper waste and scrap
GA 130 7503 00 Nickel waste and scrap
GA 140 7602 00 Aluminium waste and scrap
GA 150 ex 7802 00 Lead waste and scrap
GA 160 7902 00 Zinc waste and scrap
GA 170 8002 00 Tin waste and scrap
GA 180 ex 8101 91 Tungsten waste and scrap
GA 190 ex 8102 91 Molybdenum waste and scrap
GA 200 ex 8103 10 Tantalum waste and scrap
GA 210 ex 8104 20 Magnesium waste and scrap
GA 220 ex 8105 10 Cobalt waste and scrap
GA 230 ex 8106 00 Bismuth waste and scrap
GA 240 ex 8107 10 Cadmium waste and scrap
GA 250 ex 8108 10 Titanium waste and scrap
GA 260 ex 8109 10 Zirconium waste and scrap
GA 270 ex 8110 00 Antimony waste and scrap
GA 280 ex 8111 00 Manganese waste and scrap
GA 290 ex 8112 11 Beryllium waste and scrap
GA 300 ex 8112 20 Chromium waste and scrap
GA 310 ex 8112 30 Germanium waste and scrap
GA 320 ex 8112 40 Vanadium waste and scrap ex 8112 91 Wastes and scrap of:

GA 330 - Hafnium
GA 340 - Indium
GA 350 - Niobium
GA 360 - Rhenium
GA 370 - Gallium
GA 380 - Thallium
GA 390 ex 2844 30 Thorium waste and scrap
GA 400 ex 2804 90 Selenium waste and scrap
GA 410 ex 2804 50 Tellurium waste and scrap
GA 420 ex 2805 30 Rare earths waste and scrap

GB. METAL BEARING WASTES ARISING FROM MELTING, SMELTING AND REFINING OF METALS

GB 010 2620 11 Hard zinc spelter
GB 020 Zinc containing drosses:
GB 021 - Galvanizing slab zinc top dross (90 % Zn)
GB 022 - Galvanizing slab zinc bottom dross (92 % Zn)
GB 023 - Zinc die cast dross (85 % Zn)
GB 024 - Hot dip galvanizers slab zinc dross (batch) (92 % Zn)
GB 025 - Zinc skimmings
GB 030 Aluminium skimmings
GB 040 ex 2620 90 Slags from precious metals and copper processing for further refining
GB 050 Tantalum bearing tin slags with less than 0,5 % tin

GC. OTHER WASTES CONTAINING METALS

GC 010 Electrical assemblies consisting only of metals or alloys
GC 020 Electronic scrap (e.g. printed circuit boards, electronic components, wire, etc.) and reclaimed electronic components suitable for base and precious metal recovery
GC 030 ex 8908 00 Vessels and other floating structures for breaking up, properly emptied of any cargo and other materials arising from the operation of the vessel which may have been classified as a dangerous substance or waste
GC 040 Motor vehicle wrecks, drained of liquids
GC 050 Spent catalysts:
GC 051 - Fluid catalytic cracking (FCC) catalysts
GC 052 - Precious metal bearing catalysts
GC 053 - Transition metal catalysts (e.g. chromium, cobalt, copper, iron, nickel, manganese, molybdenum, tungsten, vanadium, zinc)
GC 070 ex 2619 00 Slag arising from the manufacture of iron and steel (including low alloy steel) excluding those slags which have been specifically produced to mmet both national and relevant international requirements and standards (3)
GC 080 Mill scale (ferrous metal)

GD. WASTES FROM MINING OPERATIONS: THESE WASTES TO BE IN NON-DISPERSIBLE FORM

GD 010 ex 2504 90 Natural graphite waste
GD 020 ex 2514 00 Slate waste, whether or not roughly trimmed or merely cut, by sawing or otherwise
GD 030 2525 30 Mica waste
GD 040 ex 2529 30 Leucite, nepheline and nepheline synite waste
GD 050 ex 2529 10 Feldspar waste
GD 060 ex 2529 21 Fluospar waste ex 2529 22
GD 070 ex 2811 22 Silica wastes in solid form excluding those used in foundry operations

GE.GLASS WASTE IN NON-DISPERSIBLE FORM

GE 010 ex 7001 00 Cullet and other waste and scrap of glass except for glass from cathode-ray tubes and other activated glasses
GE 020 Fibre glass wastes

GF. CERAMIC WASTES IN NON-DISPERSIBLE FORM

GF 010 Ceramic wastes which have been fired after shaping, including ceramic vessels (before and/or after use)
GF 020 ex 8113 00 Cermet waste and scrap (metal ceramic composites)
GF 030 Ceramic based fibres not elsewhere specified or included

GG. OTHER WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

GG 010 Partially refined calcium sulphate produced from flue gas desulphurization (FGD)
GG 020 Waste gypsum wallboard or plasterboard arising from the demolition of buildings
GG 030 ex 2621 Bottom ash and slag tap from coal-fired power plants
GG 040 ex 2621 Coal-fired power plants fly ash
GG 050 Anode butts of petroleum coke and/or bitumen
GG 060 ex 2803 Spent activated carbon
GG 070 3103 20 Basic slag arising from the manufacture of iron or steel suitable for phosphate fertiliser and other use
GG 080 ex 2621 00 Slag from copper production, chemical stabilized, having a high iron content (above 20 %) and processed according to industrial specifications (e. g. DIN 4301 and DIN 8201) mainly for construction and abrasive applications
GG 090 Sulphur in solid form
GG 100 Limestone from the production of calcium cyanamide (having a pH less than 9)
GG 110 ex 2621 00 Neutralized red mud from alumina production
GG 120 Sodium, potassium, calcium chlorides
GG 130 Carborundum (silicon carbide)
GG 140 Broken concrete
GG 150 ex 2620 90 Lithium-tantalum and lithium-niobium containing glass scraps

GH. SOLID PLASTIC WASTES

Including, but not limited to:
GH 010 3915 Waste, parings and scrap of plastics of:
GH 011 ex 3915 10 - Polymers of ethylene
GH 012 ex 3915 20 - Polymers of styrene
GH 013 ex 3915 30 - Polymers of vinyl chloride
GH 014 ex 3915 90 - Polymerized or co-polymers: for example: - Polypropylene - Polyethylene terephthalate - Acrylonitrile copolymer - Butadiene copolymer - Styrene copolymer - Polyamides - Polybutylene terephthalates - Polycarbonates - Polyphenylene sulphides - Acrylic polymers - Paraffins (C10 - C13) (1)() - Polyurethane (not containing chlorofluorocarbons) - Polysiloxalanes (silicones) - Polymethyl methacrylate - Polyvinyl alcohol - Polyvinyl butyral - Polyvinyl acetate - Polymers of fluorinated ethylene (Teflon, PTFE) (3)
GH 015 ex 3915 90 - Resins or condensation products, for example: - Urea formaldehyde resins - Phenol formaldehyde resins - Melamine formaldehyde resins - Epoxy resins - Alkyd resins - Polyamides

GI. PAPER, PAPERBOARD AND PAPER PRODUCT WASTES

GI 010 4707 Waste and scrap of paper or paperboard:
GI 011 4707 10 - Of unbleached kraft paper or paperboard or of corrugated paper or paperboard
GI 012 4707 20 - Of other paper or paperboard, made mainly of bleached chemical pulp, not coloured in the mass
GI 013 4707 30 - Of paper or paperboard made mainly of mechanical pulp (for example, newspapers, journals and similar printed matter)
GI 014 4707 90 - Other, including but not limited to: 1. Laminated paperboard 2. Unsorted waste and scrap

GJ. TEXTILE WASTES

GJ 010 5003 Silk waste (including cocoons unsuitable for reeling, yarn waste and garnetted stock)
GJ 011 5003 10 - Not carded or combed
GJ 012 5003 90 - Other

GJ 020 5103 Waste of wool or of fine or coarse animal hair, including yarn waste but excluding garnetted stock
GJ 021 5103 10 - Noils of wool or of fine animal hair
GJ 022 5103 20 - Other waste of wool or of fine animal hair
GJ 023 5103 30 - Waste of coarse animal hair
GJ 030 5202 Cotton waste (including yarn waste and garnetted stock)
GJ 031 5202 10 - Yarn waste (including thread waste)
GJ 032 5202 91 - Garnetted stock
GJ 033 5202 99 - Other
GJ 040 5301 30 Flax tow and waste
GJ 050 ex 5302 90 Tow and waste (including yarn waste and garnetted stock) of true hemp (Cannabis sativa L.)
GJ 060 ex 5303 90 Tow and waste (including yarn waste and garnetted stock) of jute and other textile bast fibres (excluding flax, true hemp and ramie)
GJ 070 ex 5304 90 Tow and waste (including yarn waste and garnetted stock) of sisal and other textile fibres of the genus Agave
GJ 080 ex 5305 19 Tow, noils and waste (including yarn waste and garnetted stock) of coconut
GJ 090 ex 5305 29 Tow, noils and waste (including yarn waste and garnetted stock) of abaca (Manila hemp or Musa textilis Nee)
GJ 100 ex 5305 99 Tow, noils and waste (including yarn waste and garnetted stock) of ramie and other vegetable textile fibres, not elsewhere specified or included
GJ 110 5505 Waste (including noils, yarn waste and garnetted stock) of man-made fibres
GJ 111 5505 10 - Of synthetic fibres
GJ 112 5505 20 - Of artificial fibres
GJ 120 6309 00 Worn clothing and other worn textile articles
GJ 130 ex 6310 Used rags, scrap twine, cordage, rope and cables and worn out articles of twine, cordage, rope or cables of textile materials
GJ 131 ex 6310 10 - Sorted
GJ 132 ex 6310 90 - Other

GK. RUBBER WASTES

GK 010 4004 00 Waste, parings and scrap of rubber (other than hard rubber) and granules obtained therefrom
GK 020 4012 20 Used pneumatic tyres
GK 030 ex 4017 00 Waste and scrap of hard rubber (for example, ebonite)

GL. UNTREATED CORK AND WOOD WASTES

GL 010 ex 4401 30 Wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms
GL 020 4501 90 Cork waste; crushed, granulated or ground cork

GM. WASTES ARISING FROM AGRO-FOOD INDUSTRIES

GM 070 ex 2307 Wine lees
GM 080 ex 2308 Dried and sterilized vegetable waste, residues and by-products, whether or not in the form of pellets, of a kind used in animal feeding, not elsewhere specified or included
GM 090 1522 Degras; residues resulting from the treatment of fatty substances or animal or vegetable waxes
GM 100 0506 90 Waste of bones and horn-cones, unworked, defatted, simply prepared (but not cut to shape), treated with acid or degelatinized
GM 110 ex 0511 91 Fish waste
GM 120 1802 00 Cocoa shells, husks, skins and other cocoa waste
GM 130 Waste from the agro-food industry excluding by-products which meet national and international requirements and standards for human or animal consumption

GN. WASTES ARISING FROM TANNING AND FELLMONGERY OPERATIONS AND LEATHER USE

GN 010 ex 0502 00 Waste of pigs', hogs' or boars' bristles and hair or of badger hair and other brushmaking hair

GN 020 ex 0503 00 Horsehair waste, whether or not put up as a layer with or without supporting material
GN 030 ex 0505 90 Waste of skins and other parts of birds, with their feathers or down, of feathers and parts of feathers (whether or not with trimmed edges) and down, not further worked than cleaned, disinfected or treated for preservation
GN 040 ex 4110 00 Parings and other waste of leather or of composition leather, not suitable for the manufacture of leather articles, excluding leather sludges

GO. OTHER WASTES CONTAINING PRINCIPALLY ORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND INORGANIC MATERIALS

GO 010 ex 0501 00 Waste of human hair
GO 020 Waste straw
GO 030 Deactivated fungus mycelium from penicillin production to be used as animal feed
GO 040 Waste photographic film base and waste photographic film not containing silver
GO 050 Single-use cameras without batteries

ANNEX III

AMBER LIST OF WASTES (4)()

Regardless of whether or not wastes are included on this list, they may not be moved as amber wastes if they are contaminated by other materials to an extent which (a) increases the risks associated with the waste sufficiently to render it appropriate for inclusion in the red list, or (b) prevents the recovery of the waste in an environmentally sound manner.

AA. METAL BEARING WASTES

AA 010 ex 2619 00 Dross, scalings and other wastes from the manufacture of iron and steel (5)()
AA 020 ex 2620 19 Zinc ashes and residues (5)()
AA 030 2620 20 Lead ashes and residues (5)()
AA 040 ex 2620 30 Copper ashes and residues (5)()
AA 050 ex 2620 40 Aluminium ashes and residues (5)()
AA 060 ex 2620 50 Vanadium ashes and residues (5)()
AA 070 2620 90 Ashes and residues (5)() containing metals or metal compounds not elsewhere specified or included
AA 080 Thallium waste and residues (5)()
AA 090 ex 2804 80 Arsenic waste and residues (5)()
AA 100 ex 2805 40 Mercury waste and residues (5)()
AA 110 Residues from alumina production not elsewhere specified or included
AA 120 Galvanic sludges
AA 130 Liquors from the pickling of metals
AA 140 Leaching residues from zinc processing, dusts and sludges such as jarosite, hematite, goethite, etc.
AA 150 Precious metal bearing residues in solid form which contain traces of inorganic cyanides
AA 160 Precious metal ash, sludge, dust and other residues such as:
AA 161 - Ash from incineration of printed circuit boards
AA 162 - Photographic film ash
AA 170 Lead-acid batteries, whole or crushed
AA 180 Used batteries or accumulators, whole or crushed, other than lead-acid batteries, and waste and scrap arising from the production of batteries and accumulators, not otherwise specified or included

AB. WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

AB 010 2621 00 Slag, ash and residues (5)(), not elsewhere specified or included
AB 020 Residues arising from the combustion of municipal/household wastes
AB 030 Wastes from non-cyanide based systems which arise from surface treatment of metals
AB 040 ex 7001 00 Glass waste from cathode-ray tubes and other activated glasses
AB 050 ex 2529 21 Calcium fluoride sludge
AB 060 Other inorganic fluorine compounds in the form of liquids or sludges

AB 070 Sands used in foundry operations
AB 080 Waste catalysts not on the green list
AB 090 Waste hydrates of aluminium
AB 100 Waste alumina
AB 110 Basic solutions
AB 120 Inorganic halide compounds, not elsewhere specified or included
AB 130 Used blasting grit
AB 140 Gypsum arising from chemical industry processes
AB 150 Unrefined calcium sulphite and calcium sulphate from flue gas desulphurization (FGD)

AC. WASTES CONTAINING PRINCIPALLY ORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND INORGANIC MATERIALS

AC 010 ex 2713 90 Waste from the production/processing of petroleum coke and bitumen, excluding anode butts
AC 020 Asphalt cement wastes
AC 030 Waste oils unfit for their originally intended use
AC 040 Leaded petrol (gasoline) sludges
AC 050 Thermal (heat transfer) fluids
AC 060 Hydraulic fluids
AC 070 Brake fluids
AC 080 Antifreeze fluids
AC 090 Waste from production, formulation and use of resins, latex, plasticizers, glues and adhesives
AC 100 ex 3915 90 Nitrocellulose
AC 110 Phenols, phenol compounds including chlorophenol in the form of liquids or sludges
AC 120 Polychlorinated naphtalenes
AC 130 Ethers
AC 140 Triethylamine catalyst for setting foundry sands
AC 150 Chlorofluorocarbons
AC 160 Halons
AC 170 Treated cork and wood wastes
AC 180 ex 4110 00 Leather dust, ash, sludges and flours
AC 190 Fluff light fraction from automobile shredding
AC 200 Organic phophorous compounds
AC 210 Non-halogenated solvents
AC 220 Halogenated solvents
AC 230 Halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery operations
AC 240 Wastes arising from the production of aliphatic halogenated hydrocarbons (such as chloromethanes, dichloro-ethane, vinyl chloride, vinylidene chloride, allyl chloride and epichlohydrin)
AC 250 Surface active agents (surfactants)
AC 260 Liquid pig manure; faeces
AC 270 Sewage sludge

AD. WASTES WHICH MAY CONTAIN EITHER INORGANIC OR ORGANIC CONSTITUENTS

AD 010 Wastes from the production and preparation of pharmaceutical products
AD 020 Wastes from the production, formulation and use of biocides and phytopharmaceuticals
AD 030 Wastes from the manufacture, formulation and use of wood preserving chemicals Wastes that contain, consist of or are contaminated which any of the following:
AD 040 - Inorganic cyanides, excepting precious metal-bearing residues in solid form containing traces of inorganic cyanides
AD 050 - Organic cyanides
AD 060 Waste oils/water, hydrocarbons/water mixtures, emulsions
AD 070 Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish
AD 080 Wastes of an explosive nature, when not subject to specific other legislation
AD 090 Wastes from production, formulation and use of reprographic and photographic chemicals and materials not elsewhere specified or included
AD 100 Wastes from non-cyanide based systems which arise from surface treatment of plastics

AD 110 Acidic solutions
AD 120 Ion exchange resins
AD 130 Single-use cameras with batteries
AD 140 Wastes from industrial pollution control devices for cleaning of industrial off-gases, not elsewhere specified or included
AD 150 Naturally occuring organic material used as a filter medium (such as bio-filters)
AD 160 Municipal/household wastes

ANNEX IV

RED LIST OF WASTES

"Containing" or "contained with", when used in this list, means that the substance referred to is present to an extent which (a) renders the waste hazardous, or (b) renders it not suitable for submission to a recovery operation.

RA. WASTES CONTAINING PRINCIPALLY ORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND INORGANIC MATERIALS

RA 010 Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB) and/or polychlorinated terphenyl (PCT) and/or polybrominated biphenyl (PBB), including any other polybrominated analogues of these compounds, at a concentration level of 50 mg/kg or more
RA 020 Waste tarry residues (excluding asphalt cements) arising from refining, distillation and any pyrolitic treatment

RB. WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS, WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

RB 010 Asbestos (dusts and fibres)
RB 020 Ceramic-based fibres of physico-chemical characteristics similar to those of asbestos

RC. WASTES WHICH MAY CONTAIN EITHER INORGANIC OR ORGANIC CONSTITUENTS

Wastes that contain, consist of or are contaminated with any of the following:

RC 010 Any congenor of polychlorinated dibenzo-furan
RC 020 Any congenor of polychlorinated dibenzo-dioxin
RC 030 Leaded anti-knock compounds sludges
RC 040 Peroxides other than hydrogen peroxide'

(1)() Wherever possible, the code number of the Harmonized Commodity Description and Coding System, established by the Brussels Convention of 14 June 1983 under the auspices of the Customs Cooperation Council (Harmonized System) is listed opposite an entry. This code may apply to both wastes and products. This Regulation does not include items which are not wastes. Therefore, the code - used by customs officials in order to facilitate their procedures as well as by others - is only provided here to help in identifying wastes that are listed and subject to this Regulation. However, corresponding official Explanatory Notes as issued by the Customs Cooperation Council should be used as interpretative guidance to identify wastes covered by generic headings. The indicative "ex" identifies a specific item contained within a heading of the Harmonized System code. The code in bold in the first column is the OECD code: it consists of two letters (one for the list:
Green, Amber or Red and one for the category of waste: A, B, C . . .) followed by a number.

(2)() "Non-dispersible" does not include any wastes in the form of powder, sludge, dust or solid items containing encased hazardous waste liquids.

(3)() These cannot be polymerized and are used as plasticizers.

(4)() Wherever possible, the code number of the Harmonized Commodity Description and Coding System, established by the Brussels Convention of 14 June 1983 under the auspices of the Customs

Cooperation Council (Harmonized System) is listed opposite an entry. This code may apply to both wastes and products. This Regulation does not include items which are not wastes. Therefore, the code used by customs officials in order to facilitate their procedures as well as by others is only provided here to help in identifying wastes that are listed and subject to this Regulation. However, corresponding official Explanatory Notes as issued by the Customs Cooperation Council should be used as interpretative guidance to identify wastes covered by generic headings. The indicative "ex" identifies a specific item contained within a heading of the Harmonized System code. The code in bold in the first column is the OECD: it consists of two letters (one for the list:
Green; Amber or Red and one for the category of waste: A, B, C, . . .) followed by a number.

(5)() This listing includes wastes in the form of ash, residue, slag, dross, skimming, scaling, dust, powder, sludge and cake, unless a material is expressly listed elsewhere.