New Perspectives on the Definition of Waste in EC Law

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I. Introduction

The definition of the concept of waste laid down in Directive 75/442/EEC on waste constitutes the keystone of all sectoral regulation on waste products, including the Community rules pertaining to the trans-frontier movement of waste[1]. The definition runs as follows: "any substance or object in the categories set out in Annex 1 which the holder discards or intends or is required to discard" is deemed to be waste. Consequently, any substance or object falling under this definition is subject to the administrative obligations relating to the collection, sorting, storage, transportation, international transfer and treatment methods stemming from the various waste directives and regulations[2].

In order to evade the Caudine Forks of waste regulation, including the financial burden of waste transfer, some economic operators have not hesitated to qualify their residues as either products or by-products. The European Community definition has thus been at the root of various controversies not only in the United Kingdom and the Netherlands but also in all other Member States where national authorities and public officials cross swords with business on the issue of whether such and such a product constitutes waste or not.

This article will assess, in the light of a flurry of recent cases decided by the ECJ, a number of borderline cases. After a brief look at the circumstances relevant for the classification of an object as waste (II), the focus will shift to the criteria for distinguishing between wastes, products, raw materials and by-products (III). Against this background the relevance of these criteria will be tested in the light of more specific examples (IV).

II. The circumstances relevant for the classification of an object as waste

According to Article 1(a) of the Directive, any substance or object in the categories set out in Annex I is to be considered as waste, provided that "the holder discards or intends or is required to discard". Repeated three times, the verb "to discard" occupies a central place in this definition[3]. Accordingly, the concept of waste can only be understood in conjunction with that of discarding[4]. In other words, the scope of the applicability of the concept of waste and, by extension, of both Community and national rules, depends on the meaning given to this term. However, Community legislation has avoided specifying what precisely is meant by this term.

Against this background the European Court of Justice has – for a number of years – been trying to construe this definition according to clear and concrete criteria. Consequently, various criteria were set forth for determining when and how an object or substance falls within the scope of Directive 75/442/EEC. In particular, the ECJ has emphasized that the application of the concept of discarding implies that all the "circumstances" indicating whether the holder has the intention or obligation to discard be taken into consideration[5].

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1 The EC Commission Communication on the Prevention and Recycling of Waste of 27 May 2003 highlights that the definition is the keystone of waste legislation (p. 38). Consequently, changes to this definition are likely to affect an array of legislative instruments, and as such must be consistent with the objectives of all of them, and also with the principles of legal certainty and legitimate expectations.

2 Indeed, Directive 75/442/CEE is a framework directive setting out the general principles in this area, thus a directive determining the broad parameters within which Member State action on waste management is to take place. It is still therefore necessary for Community law to flesh out these principles into more detailed rules in more specifically focussed directives or regulations (C-114/01 - AvestaPolarit Chrome Oy [2003], para. 48).

3 ECJ, Judgment in Case C-129/96 - Inter-Environnement Wallonie [1997] ECR I-741, para. 26; EJJ, Judgment in Joined Cases C-418/97 and C-419/97 - ARCO Chemie [2000] ECR I-4475, para. 36.

4 Inter-Environnement Wallonie, para. 26; ARCO Chemie, para. 36; C-9/00 - Palin Granit [2002] ECR I-3533, para. 22.

5 Arco Chemie, paras. 73, 88 and 97; Palin Granit, para. 25. A complete discussion of all the relevant criteria is impossible in the space available here. For a critical analysis, e.g. Krämer, "The Distinction between Product and Waste in Community Law", 2003, 2(1), Environmental Liability, pp. 3-14; de Sadeleer, "Les déchets, les résidus et les sous-produits. Une trilogie ambiguë « , Revue du Droit de l'Union Européenne, 2004, pp. 457-497.

Let us turn to the most important factors to take into consideration when assessing whether a substance or object falls under the definition of waste:
- the object becomes subject to a disposal or recovery operation under Appendix II of the Directive, or an analogous operation, even where it is destined for re-use ;[6]
- the holder of the object uses a type of treatment which is commonly used to get rid of waste[7];
- the absence of an economic benefit8, in particular where the holder has to pay a specialist company to undertake the collection, transportation and final treatment of the waste;
- the method of production indicates that the object is unwanted[9];
- the fact that the used substance is a production residue[10];
- the object is a residue whose composition is not suitable for the use made of it, or where special environmental precautions must be taken when it is used[11];
- where no use other than disposal can be envisaged for a substance (burial, incineration without energy reclamation)[12];
- the object is included in Appendix I of the Waste Framework Directive[13] or in the European Waste Catalogue[14];
- where the company holding the object has accepted that it is waste[15].

Of course, no a priori preference can be given to any one criterion over another, but rather the criteria must be applied on a case-by-case basis in the light of the particular circumstances. In addition, in outlining these factors it is necessary to bear in mind the objective of Directive 75/442/EEC, ensuring that its efficacy not be compromised. In particular, the term waste must be interpreted in the light of the objectives of the Directive[16], which refer to Article 174(2) EC guaranteeing "a high level of protection" of the environment, corresponding with the obligation set out in Article 4 of the Directive[17]. Accordingly, the verb 'to discard' cannot be interpreted restrictively[18].

III. The difference between waste, products, secondary materials and by-products

Semantic confusion reigns supreme in the realm of waste law. Alongside the familiar categories of wastes and residues, operators and lawmakers have been keen to introduce new concepts such as product, secondary raw material and by-product, though they remain, however, undefined. It is the aim of this third section to distinguish these new concepts from the notion of waste.

1. The difference between waste and products

The distinction between recovery operations and the continuous treatment of raw materials or intermediate products inevitably gives rise to some practical difficulties. For instance a manufacturer may structure its production processes in such a way as to use residues and by-products directly. In this case

6 ECJ, Judgment in Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95 - Tombesi [1997] ECR I-3561; Inter-Environnement Wallonie, paras. 25-26.

7 ARCO Chemie, paras. 69 and 73. However, the fact that the burning of a residue (petroleum coke) is a standard waste recovery method is not relevant since the purpose of a refinery producing this residue is precisely to produce different types of fuel (Order in Case C-1/03 - Saetti, para. 46).

8 Tombesi, paras. 47, 48 and 52 ; Palin Granit Oy [2002] ECR I-3533, para. 38.

9 ARCO Chemie, paras. 83-87; Palin Granit Oy, para. 33; C-457/02 - Niselli, para. 43.

10 ARCO Chemie, para. 84; Palin Granit Oy, paras. 32-37 ; Niselli, para. 42 ; Saetti, para. 34.

11 ARCO Chemie, para. 87; Palin Granit Oy, para. 44.

12 ARCO Chemie, para. 86.

13 Annex I clarifies and illustrates that definition by providing lists of substances and objects which can be classified as waste. However, the list of objects and residues is only intended as guidance, and the classification of waste is to be inferred primarily from the holder's actions and the meaning of the term "discard".

14 Drawing on the Appendix I classification, the EWC has been enacted by Commission Decision 2000/523/EC of 3 May 2000, as amended by the Decision of 16 January 2001. This list has also been amended by Commission Decisions 2001/118/EC and 2001/119/EC and the Council Decision 2001/573/EC, dated respectively 16 and 22 January and 23 July 2001 (OJ L 47, p. 1 and 32 and OJ L 203/18) and entered into force on 1 January 2002. See the use of this criterion by Advocate General Kokott in the Case Paul van de Walle, para. 29.

15 ARCO Chemie, para. 73. Considered in isolation, this criterion is not relevant (Order in Case Saetti, para. 46).

16 ECJ, Judgment in Joined Cases C-206/88 & C-207/88 - Vessoso & Zanetti [1990] ECR I-1461, para. 12; ARCO Chemie, para. 37; Palin Granit Oy, para. 25.

17 ARCO Chemie, para. 40; C-9/00 - Palin Granit Oy, para. 23.

18 ARCO Chemie, paras. 36-40, Van de Walle, para. 45.

the recovery operation will be bound up with the normal production processes. In its judgment in Inter-Environment Wallonie, the ECJ stressed that it was necessary to distinguish between waste recovery within the meaning of Directive 75/442/EEC and the "normal industrial treatment of products which are not waste"[19]. Although alluding to the difficulties in drawing this distinction, the Court did not develop its thinking on this point. Some additional indications can however be found in the Opinion delivered by Advocate General Jacobs[20]. The difference between these two processes is determined by the classification given to the material subject to treatment, and must accordingly be resolved on a case-by-case basis.

2. The difference between waste and secondary raw materials

The transformation of waste with a view to producing usable raw materials constitutes a recovery operation for the purposes of Appendix II of the Waste Framework Directive. Although favouring in Article 3(1)(b)(i) actions designed to obtain such materials, Directive 75/442 does not define secondary raw materials. Nevertheless, Advocate General Jacobs has stressed the role of recovery operations as an essential criterion for distinguishing secondary materials from waste products. In his opinion, recovery can be conceived as "a process by which goods are restored to their previous state or transformed into a useable state or by which certain usable components are extracted or produced"[21].

The pre-processing operations (including sorting, washing, preliminary elimination of toxic substances) that are necessary for the recovery of a substance (e.g. fuel to be used for the production of energy) cannot, however, be equated with a recovery operation depriving the same substance of its status as waste. Put simply, waste cannot therefore be placed beyond the reach of Community and national law alike on the sole grounds that it has been treated, without its features having been in any way modified[22]. For instance, the grinding into powder of wood impregnated with toxic substances is not an operation of such a nature as to "have the effect of transforming those objects into a product analogous to a raw material, with the same characteristics as that raw material and capable of being used in the same conditions of environmental protection", because it does not eliminate its toxicity[23].

Recovery is therefore deemed to have been completed and, by extension, waste taken to have become a secondary raw material when the substance can be used as a raw material without the need for any supplementary treatment[24]. Were this view not espoused, then it would be possible for waste to lose its classification for the simple reason that it had undergone a particular transformation designed as part of its recovery as a substance.

3. The difference between waste and by-products

a. Core issues

When objects or substances are used in their existing form by third parties to whom they have been transferred, they need not necessarily be considered as waste. For example, a used motor vehicle sold to a new owner that continues to use it as a vehicle is not waste (see section IV.1.).

Moreover it transpires that many economic operators consider that too broad an interpretation of the concept of waste would be prejudicial to their activities[25]. Leaving aside the at times excessive red tape and waste management taxes, the subjective understanding of the act of discarding is not regarded as capable of taking into account the hard facts of commercial life. Operators do not consider production residues as having been abandoned when

19 Inter-Environnement Wallonie, para. 33.

20 Opinion of Advocate General Jacobs in Tombesi, paras. 52 et seq. and in Inter-Environnement Wallonie, paras 77 et seq.

21 Opinion of Advocate General Jacobs in Tombesi, para. 52. Applied to the particular case of residues or by-products of a production process, this definition allows for the elaboration of a range of criteria for differentiation, even if the Advocate General recognised that a potentially large number of marginal cases could in practice arise.

22 Tombesi, paras. 53-54.

23 Arco Chemie, para. 96.

24 This principle emerged from the Mayer Parry case where the Court held that the term "recycling" for the purposes of Directive 94/62/EC on Packaging and Packaging Waste had to be understood as the act of returning that material to its original state, and of re-using it in accordance with its original purpose; C-444/00 - Mayer Parry [2003] ECR I-6163, para. 83.

25 See in particular the criticisms of Smith II, "The Challenges of Environmentally Sound and Efficient Regulation of Waste - The Need for Enhanced International Understanding", JEL 1993, p. 91.

they can be usefully re-integrated as replacements for raw materials. In addition, manufacturers are favourably inclined towards a narrowing of the scope of application of waste regulations down to only those substances destined for elimination as well as those which must be subject to physico-chemical treatment prior to recovery. The upshot of this would be that any substance which could be re-used would fall outside the law on waste by virtue of its status as a by-product.

There exist therefore two diametrically opposed views on the matter. On the one side there is a subjective conception, supported by myself and Jacques Sambon[26], which tends to enhance the producer's responsibility for substances or residues that it is not in a position to re-use. According to this first view, "recovered" waste covers not only substances that have been transformed into secondary raw materials, but also any substance, residue or by-product which the industrial holder discards, even where it can be re-used. This view can be classed as subjective because the determining criteria focus on the absence, or not, of an actual or potential use of the waste on the part of the holder. Such non-use is only confirmed by the necessity to resort to an Annex II recovery or disposal operation.

This first view stands in opposition to an objective conception, endorsed in particular by Advocate General Jacobs[27] and, in Belgium, by Messrs Morrens and Bruycker[28]. In contrast to the subjective view, this second position tends, where certain requirements are satisfied, to favour the immediate re-use of production residues by according them their own particular status. This has the effect of limiting the scope of the concept of waste, and the position can be summarised as follows. A substance or an object – such as a production residue – should not be classed as waste where its holder is able to find an acceptable use for it as a product or secondary raw material, so long as such use is complete, direct, effective and can also be distinguished from waste disposal methods.

In Palin Granit Oy and AvestaPolarit Chrome Oy, and more recently in Niselli, the Court of Justice appears to have accepted the latter view, albeit in a somewhat confused manner. It introduced a distinction between by-products which undertakings do not wish to discard within the meaning of Article 1(a)(i) of the Framework Directive and residues covered by the provisions of the Directive. According to the Court, "there is no reason to hold that the provisions of Directive 75/442 which are intended to regulate the disposal or recovery of waste apply to goods, materials or raw materials which have an economic value as products regardless of any form of processing and which, as such, are subject to the legislation applicable to those products"[29].

In order to fall outside the definition of waste several conditions must be satisfied. Since the definition of waste is framed in broad terms[30], these conditions must be interpreted strictly. According to the Court, "the reasoning applicable to by-products should be confined to situations in which the reuse of the goods, materials or raw materials is not a mere possibility but a certainty, without any further processing prior to reuse and as an integral part of the production process"[31]. The Court then went on to indicate that the holder must additionally "lawfully" use the substance[32]. The following sections will offer a systematic treatment of the conditions which operators must fulfil if they are to classify their substances as by-products.

b. First condition: integral part of the production process

Where the by-product is exploited or marketed following further processing, this must be "an integral part of the production process"[33]. For example, when mining residues that have not been removed

26 De Sadeleer/Sambon, "Le régime juridique de la gestion des déchets en Région wallonne et en Région de Bruxelles-Capitale", 1995, 1 APT 5; de Sadeleer, Le droit communautaire et les déchets, 1995, pp. 251-261.

27 Advocate General Jacobs argued in his Opinion in the Inter-Environment Wallonie case that when residues, by-products, secondary raw materials or other products resulting from industrial processes are used as an integral part of the production process in their present state they are not waste. Such substances would also have to meet the normal requirements relating to the protection of the environment and public health applicable to non-waste products or processes (para. 80). It is nonetheless clear from this case that the direct or indirect incorporation of a substance into an industrial production process does not in itself prevent it from being a waste.

28 Morrens/De Bruycker, "Qu'est-ce qu'un déchet dans l'Union européenne ?", 1993, 3 Amén.-Env. p. 157.

29 Palin Granit Oy, para. 35; AvestaPolarit Chrome Oy, para. 35.

30 Palin Granit Oy, para. 36; AvestaPolarit Chrome Oy, para. 36.

31 Palin Granit Oy, para. 36; AvestaPolarit Chrome Oy, para. 36.

32 AvestaPolarit Chrome Oy, para. 43.

33 Palin Granit Oy, paras 34 and 36; AvestaPolarit Chrome Oy, paras. 34-37.

from the colliery are used in order to fill galleries in that mine, they can be considered as by-products as long as the operator of the mine holding them has neither the intention nor the obligation to discard them. In other words, the operator needs the residue as part of its principal activity[34]. Accordingly, consumption residues cannot be regarded as by-products of a manufacturing or extraction process if they are capable of being reused as an integral part of the production process[35].

In addition, it should be noted that use as a by-product cannot be a front for traditional waste disposal methods. The particular treatment operation adopted may not, under the guise of the use of the substance as a product or raw material, be used to mask a waste disposal operation outside the regulatory framework required by the law.

The requirement of integration into the production process can be brought into sharper relief with the aid of several court rulings. Both incineration facilities burning household waste and coal-fired power stations produce a great deal of airborne ash. Although such ash is of absolutely no use to the operators of these installations, it can be recovered directly by other industries for use in the manufacture of certain types of concrete. Various courts have ruled that airborne ash does not constitute waste on the grounds that no treatment operation is necessary[36]. This solution is however questionable from the standpoint of this first requirement of the Court of Justice. In addition to the fact that it must not be subject to any pre-processing, it is also necessary that the ash be used "as an integral part of the production process". This condition would not appear to be fulfilled when the ash is the residue from the burning of refuse in a household waste incinerator which is then re-used for producing cement[37].

On the other hand, the following example would appear to satisfy the requirements laid down by the Court of Justice. The incineration of petroleum coke in an integrated combined heat and power station, supplying the steam and electrical needs of the refinery producing the residue cannot be classified as waste because the treatment is the result of a technical choice[38]. Similarly, any oil which could be immediately filtered out with a view to being re-used in another role would not constitute waste, even where it could not be used in any production process[39].

c. Second condition: direct use without previous transformation

If the substance can be used directly in another production process, it acquires the quality of by-product and thus falls outside the ambit of the waste regulations. The Court requires that the exploitation or marketing of the by-product within the context of a subsequent process not be preceded by any prior transformation[40].

In any case, this second condition does not require the producer itself to re-use the substance or object. It is sufficient that such a re-use be effec-

34 Palin Granit Oy, para. 37.

35 Niselli, para. 48.

36 In a ruling of 23 September 1994 the Antwerp Appeal Court reversed a lower court's finding against importers of slag produced in Netherlands and recovered in Belgium for the manufacture of concrete. The court held that the slag did not constitute waste on the grounds that it had immediately been recovered during the course of an industrial production process in an industry with an express authorisation to do so. The materials in question were, according to the court, secondary raw materials. This judgement has been criticised within the academic literature, in particular because the authorisation to exploit did not expressly provide for the recovery of secondary raw materials (Antwerp, 23 September 1994, T.M.R., 1995/1, p. 24, obs. L. Lavrysen).
The German Administrative Court (Verwaltungsgericht) adopted a similar viewpoint in two decisions the 24 June 1993. Both construction debris and old tyres are no longer considered as waste when the holder can guarantee an effective and rapid re-use of these objects which does not cause any harm to the environment (BVerwG, Urt. v. 24 June 1993 - 7 C10/92S and 7 C11/92S, NVwZ 1993, p. 988- 992). However, the negative value of these objects (7 C11/92S) or the fact that the holder does not have the sufficient technical, financial and organisational means to re-use them without harming the environment is confirmation of their status as waste, since any re-use is very unlikely.

37 According to the Oliehandel Kuwait order handed down by the European Court of Justice (Joined Cases C-307/00 to C-311/00), economic operators did not challenge the classification by the Dutch Environment Ministry of operations that utilise incineration residues in the manufacture of mortar for concrete as waste management operations (C-308/00 and C-311/00). This dispute turns on the issue of whether the operation involved is one of recovery or disposal.

38 Order in Case C-1/03 – Saetti.

39 The EC Committee on the adaptation of waste law to scientific and technical progress appears to subscribe to this interpretation. The Committee has in fact found that "a production residue, the generation of which is not intentional, but which production procedures allow to be recovered on-site is not a waste". EC Committee on the adaptation of waste law to scientific and technical progress, Doc. TAG/EWS/93.1 of 18-19 February 1993, quoted by Hannequart, Le Droit Européen des Déchets, 1993, p. 130. It should however be noted that this Committee is not competent to produce binding definitions of the concept of waste.

tively carried out "as an integral part of the production process", irrespective of the particular economic operator that actually re-uses it.

In a good number of cases, this requirement will not be satisfied by economic operators when it is generally indispensable to sort the production residues (such as for scrap paper and used glass) and treat them (using crushing and regeneration techniques) before they can be re-used. The fact that these different operations are carried out means that the treated residues in question cannot be classed as by-products. It would be necessary to await the completion of the modification process and the consequential transformation of the product into a secondary raw material (see above section II.2.), which could then be used as a raw material, in order for the waste regime no longer to apply to the substances.

d. Third condition: complete use

Where the object or substance cannot be completely re-used in the form of a by-product, the surplus or residue must maintain its status as waste and accordingly be managed in accordance with the rules applicable to waste. Thus in the Palin Granit Oy case the Court took note of the uncertainty surrounding the possibility of "re-using in its entirety" the leftover stone, concluding that the objects were waste[41]. In AvestaPolarit Chrome Oy, the Court held that it was necessary to exclude from the concept of by-product all residues that could not be directly re-used[42].

e. Fourth condition: lawful use of the substance or object as a product or raw material

It is additionally necessary that such use be lawful[43]. Thus the holder of the object or substance must have the right either to use it or to allow it to be used as a product. The following examples are illustrative of the way in which this condition should be applied.

The refinement of oil involves the production of different residues with an important calorific value. Where it is not possible to burn these residues in traditional facilities (steam boilers, industrial furnaces, kilns), they must be considered as waste.

On the other hand, if safety or environmental protection requirements prevented the use of mining residues (on the grounds that residues contaminated by dangerous substances present a threat for the aquifers), the operator of the mine would have to fill its galleries with other materials. The holder would then have to be regarded as being under the obligation to discard the debris that could not be used to fill the de-activated galleries[44]. In the same way, an expired material whose use is forbidden can never be considered as a by-product. Thus, when a substance is classed as waste under national rules in accordance with category Q.13 of Directive 75/442/EEC, this classification is decisive, even if it is possible for the holder to use or re-use the substance.

The conditions to which the exploitation is subject, contained in the environmental permit granted to the facility where the residues are directly re-used, ensure that compliance with these requirements can be monitored. Thus for example, if the manufacturer has no right to use a particular by-product as a substitute for a raw material, this fourth condition will not be satisfied.

Finally, it should be noted that the lawful use criterion allows public authorities to enforce management regulations where immediate recovery of the waste would breach the environmental and human health protection obligations derived from Article 4 of the Framework Directive. Under these general policing powers, the authorities may intervene even when the relevant recovery operation is not expressly prohibited.

f. Fifth condition: actual use

The use and marketing of the substance or object as a by-product must be certain[45]. In other words the substance must actually be re-used. The absence of any guarantee of the use of a residue means that it is subject to EC rules on waste. A declaration of intent is not sufficient. In order to prevent fraud, public authorities should oblige the holder to furnish appropriate guarantees relating to the direct re-use of the by-product, in particular by requiring the posting of a monetary bond[46].

40 AvestaPolarit Chrome Oy, paras 34-37.

41 Palin Granit Oy, para. 40.

42 AvestaPolarit Chrome Oy, paras. 36-42.

43 AvestaPolarit Chrome Oy, para. 43.

44 AvestaPolarit Chrome Oy, paras. 36-38.

45 AvestaPolarit Chrome Oy, paras. 34-37; Niselli, para. 45.

46 AvestaPolarit Chrome Oy, para. 43.

As it happens, the fact that an undertaking intends to exploit or market a by-product in conditions which are economically advantageous for it, is an additional indication that this fifth condition has been met. It is, in fact, due to such an economic gain that the substance no longer appears as a burden which the holder would wish to discard[47].

Having said this however, any guarantee of actual re-use could be compromised by the length of time for which the residues destined to be re-used as by-products are stored. The provisional deposit of a residue in anticipation of some indefinite future use is in fact likely to give rise to the very same type of ecological risk as a definitive deposit. An excessive time delay between the production of mining residues and their re-use is invariably indicative of an inability on the part of the holder to guarantee that they will be re-used in accordance with the administrative rules in force. It would appear reasonable to classify such residues as waste due to the inordinate time lapse and the hazards thereby occasioned[48]. Moreover, the indefinite storage of residues is in the final analysis tantamount to a disposal or recovery operation within the meaning of category D 15 of Appendix II A or category R 13 of the Appendix II B.

g. Concluding remarks

The analysis developed by the Court of Justice in Palin Granit Oy, AvestaPolarit Chrome Oy and Niselli can be qualified as objective because it is founded on a basic dichotomy between the concepts of waste and by-product. This distinction turns on the decisive criteria of the existence and effectiveness of a complete, continuous, admissible, and direct use of the waste in a production process. The simple fact of re-use in line with the above conditions transforms the substance into a by-product which is no longer subject to the provisions regulating recovery and disposal. The final re-use of a substance discarded by its producer thus has the effect of turning it ab initio into a by-product, even if its holder no longer has any interest in it (subjective view). Be that as it may however, the requirement to give a broad understanding to the concept of waste (see above section II.) means that the conditions laid down by the Court of Justice must be interpreted strictly[49].

IV. Borderline cases

Since the scope of the application of the Community rules is contingent on an analysis of all the circumstances – including the behaviour of the holder – on a case-by-case basis, it is important to test the conditions drawn from the Court's jurisprudence by applying them to certain types of waste. Generally speaking, one has to concede that in a majority of cases the presence of waste is not contested by the operators[50]. However, the cases discussed below give rise to conflicting opinions. As we will see, the legal position as to whether those objects or substances fall under the EC definition is not clear-cut.

1. Second-hand clothes

The legal classification that must be given to textiles collected from private individuals by not-for-profit organisations raises several difficulties.

There is no mention of textiles or clothes as such in the categories of waste set out in Appendix I of the Directive, although the category Q14 does include "products for which the holder has no further use (e.g. … household … discards)". It can nonetheless be concluded that a holder gets rid of old clothes because they are no longer deemed fit for use, thus falling under category Q14.

47 Palin Granit Oy, para. 37; AvestaPolarit Chrome Oy, paras. 34 and 37; Niselli, para. 46.

48 In his Opinion delivered in the Case Palin Granit Oy, Advocate General Jacobs argued that residues which remain indefinitely on an industrial site have been discarded and are consequently waste. The deposit and storage of significant quantities of debris manifestly entails a pollution risk, including noise pollution, and also risks creating a rural eyesore. This is precisely the eventuality which Directive 75/442/CEE attempts to avoid (para. 34; see also the Court's Judgment in AvestaPolarit Chrome Oy, para. 39). In a case which raised broadly similar issues, a judgment of the French Council of State on the classification of depleted uranium monoxide raises a few conceptual problems. The Council of State found that the fact that the use of the depleted uranium monoxide to produce enriched uranium monoxide "could be deferred in particular on the basis of economic factors was not susceptible to allow the conclusion that the depleted uranium monoxide involved was in fact waste" (Council of State, 23 May 2001, Association pour le défense de l'environnement du pays arédien et du Limousin, No. 201938).

49 Palin Granit Oy, para. 36.

50 According to Van Calster, a fool-proof harmonization of the concept of waste is not within the Community's reach, see Yearbook of European Environmental Law, 2003, p. 449.

According to the ECJ case law discussed above (see above section II.3.), the re-use of residues – whether by the producer or a third party to whom they have been transferred – in the appropriate conditions, prevents them from being classed as waste. They are rather by-products which the holder does not wish to discard. Accordingly a used garment that is given to another person with a view to it being worn without the need for any substantial treatment beyond cleaning or patching (operations which are in any case normally carried out by the holder), is not subject to the law on waste.

The following example is more complex. A holder's act of depositing a used garment in a bag destined to be collected by a charitable organisation or in a container specifically provided for this purpose would appear to be one of discarding. Does this mean that the garment thereby becomes waste? Such a conclusion is open to doubt. When an individual hands over a garment to a charitable organisation, this is done in the hope that another person, usually in a developing country, can wear it. There is therefore no intention to discard the object as rubbish, but rather to discard it so that it can continue to be worn[51].

However, in order to be worn by another person, the clothes collected must be subject to an initial sorting in order to select those of good quality. At this stage, it should be noted that the treatment methods used in order to select the clothes can serve as good indications. Moreover, the fact that the operations are not included in the Appendix II B recovery operations does not in itself mean that the clothes collected do not fall under the definition of "waste"[52]. It is thus necessary to consider whether operations of sorting, mending and washing can be considered as recovery operations on a level with the other operations listed in Appendix II B. If this is found to be the case, then it would indicate an intention on the part of the holder to discard the clothes. In addition, the second condition laid down by the ECJ for determining whether a residue qualifies as a by-product (see above section III.3.c.) and thereby falls outside the ambit of waste law would not be met. Indeed the completion of an Annex II B operation entails a previous transformation of the garments, thereby precluding their classification as by-products. It is therefore of the utmost importance to subject the way in which the collected clothes are treated by specialised undertakings to particularly close scrutiny.

It goes without saying that if a garment that can be no longer be worn has to be reduced to its raw state (unravelling and rewinding, shredding), the particular operations would have to be classed as recovery and the object would therefore be a waste.

2. Manure

Imports of manure from large-scale agricultural enterprises in Flanders, the Netherlands and Brittany give rise to a number of questions.

It should first be noted the second major section heading in the European Waste Catalogue (see above section II.) covers "wastes from agriculture, horticulture…" with a sub-section applying to "animal faeces, urine and manure (including soiled straw), effluent collected separately and treated offsite" (02 01 06). Although the EWC is not binding[53], being a "harmonised list" it remains useful for interpreting the different categories of waste. Furthermore, manure is included in the orange list of wastes in Regulation 259/93 on the shipment of waste in the section entitled "liquid pig manure; faeces" (category AC 260 of Appendix III)[54].

Care should be taken to distinguish between the different aspects of this problem.

First some farmers use as an input either their own manure or that of other farmers in the immediate vicinity. This will then be a direct re-use of a residue (see above section II.3, c) within the pro-

51 See the comments of Krämer, footnote 5 above, p. 10.

52 The Appendices II A and II B of Directive 75/442/CEE simply provide non-exhaustive lists of examples of those recovery and disposal techniques that are actually used in practice. This means that any methods that are analogous to the recovery and disposal operations expressly included in these two Appendices must be considered on an equal footing for the purposes of waste classification (see Niselli, para. 40).

53 Since the principal purpose of this Catalogue is to establish a "reference nomenclature providing a common terminology throughout the Community", the list of wastes contained within it is neither binding nor exhaustive. In particular, the list's introductory note specified that even though it is a harmonised list subject to periodic review, "the inclusion of a material in the list does not mean that the material is a waste in all circumstances. Materials are considered to be waste only where the definition of waste in Article 1(a) of Directive 75/442/EEC is met".

54 Commission Decision of 18 May 1998 amending, in accordance with Article 42 § 3, Annexes II and III of Council Regulation EEC/259/93 on the supervision and control of shipments of waste within, into and out of the European Community, OJ L 1998/165.

duction process (see above section II.3.b.) which can be classed as a by-product, unless national lawmakers have decided to adopt an alternative regime[55].

Moving on to a second example, a cattle breeder produces effluents which are collected and stored (cf. "collected separately" in entry 02 01 06 EWC) and then spread over agricultural land (cf. "treated" in entry 02 01 06 EWC) belonging to other farmers. Three elements of this example point to the conclusion that the substance is a waste. First, since the manure is spread over land geographically distinct from the production site, the waste must be regarded as falling under sub-category 02 01 06 being indicative of an act of discarding the waste. Second, the manure is in any case an a priori waste as the initial holder has either discarded it or was obliged to discard it on account of its having become a burden. Third, and finally, in the absence of an operation capable of transforming the manure into a secondary raw material (see above section II.2), the spread manure must be regarded as a waste subjected to a recovery process (the operations manure in Appendix II B include "land treatment resulting in benefit to agriculture" (R 10)).

It would therefore appear that the manure is not a by-product because the spreading is not carried out as an integral part of the production process (see above section III.3.b.). In particular, manure produced in foreign pig farms is generally transported over long distances and stored in transit facilities. Some guidance in this area has been offered by the Belgian Cour d'Arbitrage. Ruling on a jurisdictional dispute involving animal waste in Flanders[56], the Court confirmed that the substances retain their status as waste, thus remaining subject to the applicable rules on waste, unless and until they are either supplied to and used by a third party (where the material can be reused without any preparation) or are transformed (where the waste can only be re-used after having been treated).

A final illustrative example is that of the industrial farmer who hands over the waste to a specialised undertaking, which then mixes it with other substances (such as mushroom bed compost) in order either to enhance agronomic performance or to abate pungent smells. The core issue is whether this mixing counts as a recovery operation (with the mixed substance thus being regarded as tantamount to a secondary material), or whether by contrast recovery can only be taken as having occurred when the manure is spread by the farmers (category R 10 of Appendix II B). If the manure could be classed as a secondary raw material then it could be exported to other Member States without any restrictions. In that case, the secondary material is tantamount to a product that falls outside the scope of Directive 75/442/EEC. On the other hand, if the authorities were to determine that the operation was insufficient to constitute a complete recovery of the material, the mixed manure would be considered waste up until the moment of spreading.

It is also important to consider whether the mixing constitutes a complete recovery operation so as to qualify the substances produced as secondary raw materials even though the operation does not figure in the procedures set out in Directive 75/442/EEC. The operation of mixing is not necessarily tantamount either to recycling or the extraction of organic substances, because it entails neither a fundamental transformation of the products (which implies recycling) nor any selection (which implies extraction). If the operation is to be regarded simply as assimilation, the mixture obtained will remain a waste whose successive holders will attempt to discard right up until the final recovery operation when the mixture is spread on agricultural land. The undertaking which in the meantime carries out the mixing holds the waste and is thereby subject to the rules pertaining to the management and importation of waste. This as a rule means that it is only on spreading that the materials lose their classification as waste, or more precisely when the transformed manure has been entirely assimilated into the crops. Any remuneration for getting rid of the waste on the part of the holder to the farmers is yet another indication pointing to this conclusion[57].

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55 A number of substances are excluded from the ambit of Directive 75/442/EEC provided a number of conditions are met (Article 2.2). Accordingly, the ECJ has ruled that national lawmakers were empowered to restrict the scope of Directive 75/442/EEC (C-114/61 - AvestaPolarit Chrome Oy, para. 49). See in this respect the critics of Krämer, "Member States' environmental legislation and the application of EC Waste law-the classification of waste", Environmental Liability, 2003, Vol. 11, No. 6, pp. 231-233.

56 C.A., 15 April 1997, No. 19/97, Amén.-Env., 1997/4, obs. de Sadeleer.

57 Palin Granit Oy, para. 38.

In short, the transformation can only be regarded as a complete recovery operation where it causes the manure to lose all features characteristic of waste, i.e. the transformation must be significant (see above section II.2.). In such a case the mixture obtained will no longer be classed as waste, as the constituent substances in the mixture will have lost this classification on account of the treatment operation to which they have been subjected.

3. Polluted soils

Does land accidentally polluted by discharged hydrocarbons constitute waste after excavation and pending decontamination operations? And what is the position before the soils have been excavated and treated?

One school of thought argued that it was not possible to equate the abandonment of waste for the purposes of Article 4.2 of the Waste Directive with the accidental discharge of a pollutant into the soil[58]. Others took the opposing view that the concept of the abandonment of waste must be understood in a broad sense and cannot be reduced simply to legal acts when the holder of a real right intentionally renounces his or her rights in a good pursuant to an intention to get rid of it. This means that any substance, whether intentionally produced or not, which is then left in or on land constitutes a waste irrespective of the involuntary or accidental nature of the deposit, provided that such an incorporation is not one of the specific uses of the object[59].

The Brussels Court of Appeal sent, in a ruling of 19 November 2002, a preliminary reference to the Court of Justice, questioning whether the concept of waste extended to an oil company producing hydrocarbons then sold on to a service station manager. In her Opinion of 29 January 2004 Advocate General Kokott argued that the obligation to decontaminate the polluted soils (whether derived from administrative law or a private law obligation) meant that the land could no longer be used in line with its original purpose, and that it was therefore subject to the applicable rules on waste[60]. The ECJ took the view that "the holder of hydrocarbons which are accidentally spilled and which contaminate soil and groundwater 'discards' those substances, which must as a result be classified as waste within the meaning of Directive 75/442"[61]. The Court went further indicating that "the same classification as "waste" within the meaning of Directive 75/442 applies to soil contaminated as the result of an accidental spill of hydrocarbons. In that case, the hydrocarbons cannot be separated from the land which they have contaminated and cannot be recovered or disposed of unless that land is also subject to the necessary decontamination[62]. Furthermore, the Court expressed the view that the classification as waste of soil contaminated by hydrocarbons is "not dependent on other operations being carried out which are the responsibility of its owner or which the latter decides to undertake. The fact that soil is not excavated therefore has no bearing on its classification as waste"[63].

4. Sewage

The next example is that of sewage produced in wastewater treatment plants, which is often contaminated by heavy metals. This sewage falls a priori within the ambit of category Q 12 of Appendix I of the Directive (adulterated materials). Although it is true that the preamble to Directive 86/278/EEC on the use of sewage sludge in agriculture states that, "sewage sludge used in agriculture is not covered by Council Directive 75/442/EEC", the provisions of Directive 86/278/EEC, which alone have binding force, do not expressly provide for such an interpretation. The French Council of State has accordingly held that sewage sludge does indeed fall under the Directive's definition of the concept of waste, and the same logic would require its subjection, especially for transfers

58 Bocken, "Milieu Wetgeving Onroerende Goederen, Aansprakelijkheid voor de kosten van bodem sanering", 1992, 11 TBR; Gille, "Historische Milieu pasief", 1990-1991, pp. 510-511.

59 Sambon/de Sadeleer, "La protection des sols par la lutte contre les nuisances spécifiques : l'état du droit en Région wallonne et Région bruxelloise", in : Sols contaminés, sols à décontaminer, 1996, p. 62.

60 Opinion of Advocate General Kokott delivered 29 January 2004 in Case C-1/03 - Ministère Public v Van de Walle.

61 C-1/03 - Ministère Public v Van de Walle, para. 50.

62 Ibid., para. 52.

63 Ibid., para. 53.

between Member States of the EC, to the provisions of Regulation 259/93 on the shipment of waste[64].

Some operators of sewage treatment facilities however re-sell their liquid sewage to farmers who substitute it for chemical fertilisers in accordance with the provisions laid down in Directive 86/278/EC, spreading them on their cultivated land. In so doing, the farmers could argue that their sewage satisfies the Court of Justice's definition of by-products. In fact, if the Court's objective conception (above section III.3.a. and g.) is applied, then the muds would not constitute waste where they were directly re-used by farmers. In order for the muds to be classed as by-products, they cannot have been subject to any preliminary treatment (such as purification) prior to re-use by farmers (see above section III.3.c. Similarly, any farmer not respecting the conditions for spreading imposed by Directive 86/278/EEC on the protection of soils when sewage is used in agriculture must be considered as a holder of waste, as the residues directly recovered from the purification facility are not being used legally (see above section III.3.e.). On the other hand, the adoption of a subjective conception would lead to the conclusion that the operator of the purification facility for whom the muds are a burden, discards them by giving them to farmers (on this criteria, see above section II.).

5. Used cars

According to Article 2(2) of Directive 2000/53/EC on end-of-life vehicles, such vehicles are waste within the meaning of Article 1(a) of Directive 75/442/EEC. However, Directive 2000/53/EC gives no indication as to the criteria for determining when or how a vehicle reaches the end of its life.

The intention of the owner of the vehicle is a key element, even if some objective factors do play a role. The owner has the right to drive his or her vehicle so long as it satisfies the various technical requirements imposed by national authorities and provided that the appropriate road tax is paid. Where either of these conditions is no longer fulfilled, the owner no longer has the right to drive the vehicle. Unless it is passed to a mechanic in order to bring it up to scratch, it must be considered as waste (objective view). If however we imagine that the repair costs are too high, or that the vehicle has fallen out of fashion or that it no longer meets the needs of its owner, there is nothing to prevent him or her from discarding it and handing it over to a scrap merchant. Once in a scrap yard the vehicle must be considered as waste from both the subjective and objective points of view. Finally, as long as the owner has the right to drive the vehicle, it can also be sold as a second-hand vehicle. In this case the owner does not discard it within the meaning of the applicable law on waste.

Technical rules on vehicle safety have not however been harmonised. Moreover, national rules do not always apply to vehicles destined for export outside the European Community. The owner may therefore get rid of the vehicle by exporting it to a country where the technical requirements are less stringent than in the country where it is registered. This explains the large scale transfer of second-hand vehicles between the European Community and Central Europe or Africa. Here, there is only one of two possibilities: the used vehicle either constitutes waste or it remains a product. The basic difficulty lies in distinguishing between a second-hand vehicle (product) and a used vehicle (waste), especially since Directive 2000/53/EC on end-of-life vehicles does not set out any criteria for doing so[65]. In France and the Netherlands this distinction operates for example on the basis of the difference between the vehicle's value and the cost of repairing it. If the net value is negative, then the vehicle will be considered as being at the end of its life. In Austria by contrast, only vehicles destined to be scrapped are deemed to be end-of-life[66].

Where national rules classify the vehicle as second-hand, it can be freely exported to a third country. If on the other hand, it is regarded as waste, it is subject to the provisions of regulation 259/93 on the supervision and control of shipments of waste

64 Council of State, 3 March 2000, Environmental and Agricultural Minister v Sté Wastec-Strobel, No. 188328.

65 According to Krämer, 'a car that is no longer roadworthy within the Community should be considered waste, until there is a certificate issued which indicates that in the their country the car may still be roadworthy', see Krämer, footnote 5 above, p. 10.

66 Onida, "Challenges and Opportunities in EC Waste Management: Perspectives on the Problem of End of Life Vehicles", 2000, 1 Yearbook of European Environmental Law, pp. 273-276.

within, into and out of the European Community. It could still however be freely exported to a non-OECD country, unless that country opposed such transfers (the regulation's green list in fact includes "motor vehicle wrecks, drained of liquids" in category GC 40).

6. Oil slicks

The French courts have addressed the issue of whether grade 2 bitumen leaked from the wrecked oil tanker Erika constituted a waste or a product. Invoking the concept of waste, the commune of Mesquer, which had suffered from this accidental pollution, sued the company Total as producer or previous holder of the waste, seeking compensation for the clean-up costs for the polluted beaches. The Commercial Court of Saint–Nazaire rejected the petition on the grounds that it was "the abandonment that created the waste, that is to say the omission, on the part of its holder to use it"[67]. Noting that the provisions of domestic law had to be interpreted in the light of Community directives, the Rennes Court of Appeal held that grade 2 bitumen, which was the residue from a refinement process, was not a waste but a product whose "originally intended application was the direct use as fuel for needs of electrical production". According to the Court of Appeal the fuel was "combustible material constituting an energy tailored to a specific use and not waste requiring disposal, that is to say needing to be abandoned or which has to be discarded"[68]. This decision has been criticised on account of the very summary nature of its analysis of the concept of waste[69]. Furthermore, Total could certainly be criticised for having discarded, albeit accidentally, a fuel which following the shipwreck had lost all economic value and presented moreover a danger for the environment (see by analogy van de Walle case discussed in section IV.3.). It is also of note that category Q4 of Appendix I of the Directive expressly refers to "materials spilled, lost or having undergone other mishap".

7. Maritime wrecks

Shipwrecks are often dismantled at very competitive prices in States which pay scant attention to workers' rights and environmental protection. It is vital to know at what moment the boat becomes waste and thus subject to the provisions of regulation 259/93 on the shipment of waste. The regulation provides that "vessels and other floating structures for breaking up, properly emptied of any cargo which may have been classified as a dangerous substance or waste" can be exported freely to non-OECD countries, provided that these countries do not oppose such transfers (cf. the regulation's green list, category GC 03). If this is the case then the boats must be considered as waste, thus falling within the ambit of the red list, with the result that their export is subject to a preliminary authorisation by the exporting state. Nevertheless, the inclusion of an object in a Community list is only of indicative value, and it is necessary to ascertain whether the owner of the boat really does have the intention to discard it. A decision of the Dutch Council of State rejected the petition of a Dutch ship-owner contesting the environmental authorities' decision to classify one of its boats which contained asbestos as a dangerous waste and the consequential prohibition of its export[70].

V. Conclusions

Probably no other definition in EC environmental law has produced so much controversy as the one on waste laid down in Article 1 of Directive 75/442/EEC. From the outset, the definition of waste gave rise to conflicting opinions as to whether reused materials should fall within or outside the ambit of waste legislation. The broad interpretation endorsed by the ECJ has been thrown into question by some economic operators. In particular, it has been suggested that wastes, which are used or are capable of being used for economic operations should not be defined as waste, but rather as secondary raw materials or by-

67 T. Com. Saint-Nazaire, 6 December 2000, Commune de Mesquer v Sté Total Raffinage Distribution et Sté Total, No. AO-408.

68 Rennes Court of Appeal, 13 February 2002, Commune de Mesquert/S.A. Total Raffinages Distribution, société Total International Ltd (2003) 1 R.J.E., pp. 52-60.

69 Robin, "La réparation des dommages causés par le naufrage de l'Erika: un nouvel échec dans l'application du principe du pollueur-payeur ", 2003, 1 R.J.E., p. 43.

70 Council of State, 19 June 2002, No. 200105168/2, Upperton.

products. So far, the critics' bark has been worse than their bite and, despite the political pressure, the EC lawmaker has not been inclined to change the definition.

It was the aim of this article to explore the ways in which the concepts of waste, secondary materials, and by-products could be differentiated and in particular, to put the spotlight on a number of border-line cases. The rather cautious approach endorsed by the ECJ should be welcomed. A careful case-by-case approach, in light of various circumstances, should be followed in the light of the criteria laid down by the ECJ.

Rolling back waste legislation on the ground that the definition is unworkable is dishonest from an intellectual point of view. On the contrary, as this analysis demonstrates, it is possible to construe the definition of waste cunningly, with a view to providing for a specific regime applying to by-products. Last but not least, the flexible definition construed by the Court allows for quick action in this evolving field.