OPINION OF ADVOCATE GENERAL ALBER

delivered on 8 June 1999 *

A — Introduction

1. In both the present cases the Nederlandse Raad van State (Council of State, the Netherlands) refers to the Court questions relating to the interpretation and application of the Community concept of 'waste' for the purposes of Council Directive 75/442/EEC of 15 July 1975 on waste, [1] as amended by Council Directive 91/156/EEC of 18 March 1991. [2] Essentially, it raises the question whether certain treated substances burned in the cement industry or to produce electricity are to be regarded as primary raw materials or whether they are (still) to be classified as waste and consequently fall within the scope of Directive 75/442 and its system of authorisation and control.

Case C-418/97

2. In this case the referring court raises the question whether 'LUWA-bottoms' are to be regarded as waste. According to the details set out in the order for reference, that substance is one of the by-products of the manufacturing process used by ARCO Chemie Nederland Ltd (hereinafter 'ARCO'). In addition to other substances, that manufacturing process produces a flow of hydrocarbons containing molybdenum from catalysts used for production purposes. The molybdenum is extracted from the hydrocarbons. ARCO describes the substance obtained as LUWA-bottoms.

3. At the end of 1994 ARCO applied to the Minister van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (Minister for Housing, Planning and the Environment), in connection with the LUWA-bottoms, for authorisation to export waste to Belgium for use as fuel in the cement industry. The export of the substances in question was authorised, but — in accordance with the application — as an export of waste and therefore only for a limited period and only on certain conditions.

4. ARCO, which had applied in those terms only as a precaution in case the competent authority should regard the

* Original language: German.

1 — OJ 1975 L 194, p. 39.

2 — OJ 1991 L 78, p. 32.

substances as constituting waste, lodged a complaint against that decision. It maintained that the LUWA-bottoms could not be regarded as waste. They could be used in their entirety as fuel without requiring any further treatment. They had a high calorific value. Moreover, when used as a fuel in the cement industry molybdenum had no adverse effects on the environment as it was rendered directly and completely inert in that process. Furthermore, they were no different from fuel oil. In fact the use of LUWA-bottoms was beneficial to the environment as it enabled natural fuel reserves to be saved.

5. The referring court is unsure as to whether Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community [3] is applicable to the export of LUWA-bottoms. For that to be the case they would have to constitute waste for the purposes of Directive 75/442 since Regulation No 259/93 refers to the definition of waste given in that directive. Moreover, the holder would also have to discard the waste. The referring court raises the question whether that can be the case where a product of a manufacturing process is made available for use as fuel. As it is also unclear whether Annexes IIA and IIB of Directive 75/442 are to be interpreted as meaning that substances which undergo the recovery or disposal operations listed therein must be regarded as waste in every event, the Raad van State refers the following questions to the Court for a preliminary ruling:

'1. May it be inferred from the mere fact that LUWA-bottoms undergo an operation listed in Annex IIB to Directive 75/442/EEC that that substance has been discarded so as to enable it to be regarded as waste for the purposes of Directive 75/442/EEC?

2. If Question 1 is to be answered in the negative, does the reply to the question whether the use of LUWA-bottoms as a fuel is to be regarded as constituting discarding depend on whether:

(a) LUWA-bottoms are commonly regarded as waste, it being relevant whether they may be recovered in an environmentally responsible manner for use as fuel without substantial processing?

3 — OJ 1993 L 30, p. 1.

(b) the use of LUWA-bottoms as a fuel amounts to a common method of waste recovery?

(c) the substance used is a main product or a by-product (a residue)?'

Case C-419/97

6. The second action raises the question whether powdered wood residues from the construction and demolition sectors used as fuel to generate electricity are to be regarded as waste. In January 1993 Epon — an electricity-generating company — applied for authorisation for a project of this kind. Authorisation was granted for the operation of a plant to process the wood for use as a fuel and for burning. At the same time it was stipulated that certain quality specifications had to be agreed in respect of the wood. In that context limits on the concentrations of certain substances were laid down. Vereniging Dorpsbelang Hees, Stichting Werkgroep Weurt+, Vereniging Stedelijk Leefmilieu Nijmegen and De Groenen Regio Gelderland — probably representing environmental interests — lodged complaints against the authorisation to accept wood of a certain kind.

7. The question now arises whether the wood in this case is to be regarded as waste, bearing in mind the fact that the original application was not for 'authorisation to burn or store waste'. In that context the referring court is unsure as to whether it is relevant that the operations which render the building and demolition waste suitable for re-use 'are carried out already at an earlier stage than burning'. Consequently, it has referred the following questions to the Court for a preliminary ruling:

'1. May it be inferred from the mere fact that wood chips undergo an operation listed in Annex IIB to Directive 75/442/EEC that that substance has been discarded so as to enable it to be regarded as waste for the purposes of Directive 75/442/EEC?

2. If Question 1 is to be answered in the negative, does the reply to the question whether the use of wood chips as a fuel is to be regarded as constituting discarding depend on whether:

(a) in regard to the building and demolition waste from which the

chips are produced operations are carried out already at an earlier stage than burning which are to be regarded as a discarding of the waste, namely operations (recycling operations) to render the waste suitable for re-use (use as a fuel)?

If so, is an operation to render waste suitable for re-use (recycling operation) to be regarded as an operation for recovery of waste only if that operation is expressly mentioned in Annex IIB of Directive 75/442/EEC, or also if that operation is analogous to an operation mentioned in Annex IIB?

(b) wood chips are commonly regarded as waste, it being releant whether they may be recovered in an environmentally responsible manner for use as fuel without substantial processing?

(c) the use of wood chips as a fuel amounts to a common method of waste recovery?'

B — The relevant Community provisions

8. The concept of waste underlying Community law on waste is defined in Article 1(a) of Directive 75/442. According to that definition, as amended by Directive 91/156, 'waste' means:

'any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard'.

9. Article 1(a) also provides that the Commission must draw up a list of wastes belonging to the categories listed in Annex I. That list is referred to as the 'European Waste Catalogue'. [4]

10. The abovementioned Annex I to Directive 75/442 lists various specific categories of waste under Q1 to Q15. By contrast, the last category, Q16, comprises quite simply 'Any materials, substances or products

4 — Commission Decision 94/3/EC of 20 December 1993 establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste (OJ 1994 L 5, p. 15).

which are not contained in the above categories'.

11. The first paragraph of Article 4 of the directive provides that 'Member States shall 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...'.

12. The disposal operations such as they occur in practice are listed in Annex IIA (D1 to D15) and the relevant recovery operations in Annex IIB (R1 to R13). [5] Recovery operation R9, which is defined as 'Use principally as a fuel or other means to generate energy', as amended by Directive 91/156, is of crucial importance to the present cases.

13. Since the questions referred for a preliminary ruling are in certain respects identical in content and simply relate to different products (LUWA-bottoms and wood chips), they may be dealt with together.

5 — Those annexes were amended most recently by Commission Decision 96/350/EC of 24 May 1996 adapting Annexes IIA and IIB to Council Directive 75/442/EEC on waste (OJ 1994 L 135, p. 32). In their submissions some of the parties rely on this new version of the annexes.

C — The first question

14. By this question the national court seeks to ascertain whether it may be inferred from the fact that a substance undergoes an operation referred to in Annex IIB to Directive 75/442 that that substance constitutes waste.

Arguments of the parties

15. The parties consider that the answer to the first question should be that the fact that a substance undergoes an operation referred to in Annex IIB to Directive 75/442 is not sufficient for that substance to be regarded as waste for the purposes of Directive 75/442. The reasons given simply differ slightly in terms of detail.

16. For example, Epon does not answer the question in general terms but concentrates mainly on one recovery operation, that is to say 'Use principally as a fuel or other means to generate energy'. [6] Epon considers that if all substances that underwent such an operation, for example, were regarded as waste, coal burned in an electricity-generating station would also have to be classified as waste. The same applies to petrol and kerosene. The operations referred to in

6 — Category R1 of Annex IIB, as amended in 1996.

Annex IIB are to be regarded as recovery operations only where a substance is being discarded. In that context Epon also refers to the case-law of the Court according to which a distinction must be drawn between waste recovery and normal industrial treatment of products. [7] If the use of petrol or kerosene were to be regarded as discarding, that distinction drawn by the Court would be abandoned.

17. The Danish Government also considers that Annexes IIA and IIB merely contain examples of the methods that may be applied to substances which have been established as constituting waste.

18. The Commission notes that it must first be established whether a particular substance constitutes waste. Only then is treatment necessary in accordance with Annex II. If, conversely, it were to be inferred from the treatment that a substance constituted waste, the term 'waste' might be interpreted too broadly. Fuel oil is cited as an example. Furthermore, the Commission proposes that the answer should be qualified somewhat since certain categories in Annex IIB are worded in such a way that there can be no doubt that they relate to the treatment of waste. Therefore, if a substance is consigned to such an operation, it may be assumed that it constitutes waste.

19. The United Kingdom too draws a distinction between the individual means of recovery, but comes to the conclusion that use as a fuel (R9), [8] which is relevant to these proceedings, does not automatically imply that the substance treated constitutes waste.

20. Similarly, the German Government considers that Annexes IIA and IIB simply provide indications as to whether the substance treated constitutes waste. In the case of certain operations it is immediately apparent that waste is being treated. However, in the case of others no such inference can be drawn since raw materials can also undergo such operations. Coal is cited as an example.

21. The Dutch Government also maintains that the operations listed in Annex IIB may also relate to non-waste. It adds that waste may also undergo operations, such as collection and transportation, which cannot be regarded as disposal or recovery.

22. Finally, the Austrian Government also takes the view that an operation listed in Annex IIB must be accompanied by an intention to discard if a substance is to be regarded as constituting waste. With regard

7 — Judgment in Case C-129/96 *Inter-Environnement Wallonie* v *Région wallonne* [1997] ECR I-7411, paragraph 33.

8 — Annex IIB as amended by Directive 91/156.

to Case C-419/97 the Austrian Government considers that such an intention exists in respect of wood from demolition.

Analysis

23. The first question referred for a preliminary ruling refers to the definition of 'waste' in Article 1(a) of Directive 75/442. According to that definition, 'waste' means any substance in the categories set out in Annex I which the holder discards or intends or is required to discard. Annex I fails to provide any further clarification of the term since it contains a residual category, Q16, 'Any materials, substances or products which are not contained in the above categories', which enables virtually any substance to be regarded as waste.

24. Consequently, the term 'discard' is of particular importance. Directive 75/442 contains no specific definition of the term 'discard'. However, in its judgment in *Inter-Environnement Wallonie* the Court held that it is clear from the provisions of Directive 75/442, as amended, and in particular from Annexes IIA and IIB, that the term 'discard' covers both disposal and recovery of a substance or object.[9] That means that a substance is also discarded if it is consigned to a recovery operation. It may consequently be inferred that whenever a substance undergoes an operation referred to in Annex II the holder is discarding that substance. However, that conclusion may not be drawn in every case. The fact that the holder of a substance subjects it to an operation referred to in Annex II does provide a strong indication that he intends to discard it. However, in this case in particular — recovery as a fuel — it cannot be automatically inferred that such intention exists. The relevant category in Annex IIB, as amended in 1991, reads [in the German text]: 'R9 Verwendung als Brennstoff (außer bei Direktverbrennung)...' (Use as fuel (other than direct burning). The [German] wording as amended in 1996 is somewhat clearer and is contained in category R1: 'Hauptverwendung als Brennstoff oder andere Mittel der Energieerzeugung' (Use principally as a fuel or other means to generate energy). [The English text states 'Use principally as a fuel or other means to generate energy' in both versions.] However, fuel oil, coal and other primary fuels can also undergo such operations. If intent to discard were inferred from the operation and the substance concerned were consequently deemed to constitute waste, fuel oil and coal would also have to be regarded as waste. The fact that a substance undergoes an operation referred to in Annex IIB does provide a strong indication that it is being discarded but does not mean that the substance concerned may be regarded as constituting waste in every case.

25. It is uncertain whether the distinction drawn by some of the parties between the individual categories and operations is correct. Categories R11 to R13[10] refer

9 — Judgment in Case C-129/96, cited in footnote 7, paragraph 27.

10 — As amended in 1996.

specifically to the use, exchange and storage of waste. To that extent it is established that substances which undergo such operations are by definition waste. However, those cases specifically demonstrate all the more clearly, as the Commission has pointed out, that it must first be established whether or not a substance that undergoes an operation referred to in Annex IIB constitutes waste. Conversely, however, as I have already explained, it does not follow that any substance that can be subjected to such operations constitutes waste. For that reason, there is no need — except in the case of the abovementioned categories R11 to R13 — to consider whether a substance may nevertheless be regarded as waste because it undergoes a certain operation. That would also completely exclude the subjective criterion relating to discarding.

D — Part (a) of the second question in Case C-418/97 and part (b) of the second question in Case C-419/97

26. This question seeks to establish whether commonly held views are relevant to the definition of 'waste' and whether the fact that a substance may be recovered in an environmentally responsible manner for use as fuel without substantial processing is of crucial importance in determining whether or not it may be regarded as constituting waste.

Arguments of the parties

27. Not all the parties expressly consider in their observations the questions raised by the referring court. Some of them simply comment in general on the criteria relating to the definition of 'waste'. These general observations will also be taken into account in examining the arguments of the parties on part (a) of the second question and part (b) of the second question.

28. The plaintiffs in the main proceedings in Case C-419/97 consider that the wood chips constitute waste which cannot be re-used in an environmentally responsible manner. Firstly, they submit that the demolition wood used to produce the wood chips contains a large number of pollutants which might release dioxins, *inter alia*, when burnt. On account of this composition, which no treatment can alter, there is no doubt that they constitute waste. Moreover, that waste must actually be regarded as hazardous since it also contains heavy metals, for example. Furthermore, the abovementioned contaminants are not easy to detect. The wood chips must also be regarded as waste on account of their origin as wood from demolition since the holder could not re-use those substances after their initial use. For that reason the waste was also offered free of charge. Thus, the holder intended to discard those substances which, moreover, no longer had any commercial value.

29. The plaintiffs also point out that the contaminated wood chips could be used in a more environmentally sound manner in a waste-incineration plant. Special filters are installed in such plants and the relevant pollutants are also measured.

30. Epon considers that the wood chips do not constitute waste. The reason it gives is that the chips can be used without substantial processing and in an environmentally responsible manner in a manufacturing process that is identical to an operation in which primary raw materials are used. In his Opinion in *Inter-Environnement Wallonie*, [11] Advocate General Jacobs also observed that there is general consensus among the OECD States that where a secondary raw material or residue can be used directly in a further process, possibly as a substitute for a primary raw material, it is unlikely to constitute waste.

31. The Court draws a distinction between waste recovery and normal industrial treatment. Epon understands the latter as meaning industrial treatment normally undergone by primary raw materials. Such operations do not include recovery and reclamation. It claims that, since the wood chips undergo the same treatments as coal (grinding and subsequent burning to produce energy), they do not constitute waste but a secondary raw material.

32. In that context, not only is the use of wood chips in an environmentally responsible manner possible, it also has favourable effects on the environment. For example, CO_2 emissions from burning are reduced if wood chips are used instead of coal. However, if they were regarded as waste it would also be environmentally disadvantageous for a second reason. On account of the particular conditions governing the treatment of waste, industry will in future invest less in the re-use of waste and burn more coal in a case such as this, for example. The question whether a substance can be used in a normal industrial operation should, in its view, be an additional criterion in determining whether a substance is to be classified as waste, a criterion moreover which supports the case against a substance constituting waste.

33. It also maintains that the wood used is not — as the plaintiffs claim — contaminated by hazardous substances. Rules on the subject had been laid down to protect the environment.

11 — Case C-129/96, cited in footnote 7, point 78.

34. With reference to the criterion of discarding, Epon claims that the holder of the wood chips probably has as little intention of discarding that substance as a holder of coal, a primary raw material.

35. The Danish Government considers that the term 'waste' must be interpreted broadly. That is clear from the spirit and aims of Directive 75/442 and is of crucial importance to the introduction of provisions relating to the environment. The Court should abide by its definition of 'waste', under which subsequent treatment does not necessarily mean that the substance treated ceases to constitute waste. The question whether or not a substance can be used or recovered without further processing is irrelevant as regards the issue of discarding. In that context the Danish Government refers to fly ash which is listed as waste in the Waste Catalogue but is nevertheless used in the production of cement without further processing. If importance were attached to the question whether re-use was possible without further processing, fly ash could not be regarded as waste.

36. The Danish Government also takes the view that the question whether a substance may be recovered in an environmentally responsible manner — in this case as a fuel — is likewise irrelevant. The purpose of Directive 75/442 is specifically to ensure that waste is treated in an environmentally sound manner. Thus, Directive 75/442 would be deprived of meaning if the issue of environmentally sound treatment were already covered by the definition of 'waste'.

37. On the other hand, the Danish Government does consider that several criteria must be examined and weighed up against one another when determining whether or not a substance constitutes waste in the course of a specific examination. They include the composition and the previous and subsequent treatment of the substance. In that respect no single criterion can determine whether or not a substance constitutes waste.

38. With regard to the term 'discard' the Danish Government observes that it hinges on a specific assessment of the intentions and actions of the holder and that his reasons in each case are irrelevant.

39. The Austrian Government also takes the view that the fact that substances may be recovered in an environmentally responsible manner for use as fuel does not mean that they do not, in principle, constitute waste. As regards the LUWA-bottoms at issue, it contends that they are not an intentionally manufactured by-product of primary production but a residue from the reclamation of catalyst components from a part of the production process that was inherently unintentional. The general view is that by-products at most, but not resi-

dues of residues, are to be regarded as non-waste.

40. In accordance with Article 4 of Directive 75/442, the necessary measures must be taken to ensure that waste is recovered without endangering human health and without harming the environment.

41. The German Government considers that there is an intention to discard a substance where the substance is obtained by means of a production process which does not (or did not) have as its primary or incidental purpose to produce that substance. The intended purpose is determined by the thinking of the producer, general thinking on the subject and the question whether the substance can be used in an environmentally sound manner without further treatment. A by-product that satisfies the latter requirement should not be regarded as waste.

42. With regard to the concept of discarding in general, the German Government submits that it is a subjective criterion but not one which may be interpreted as meaning that the producer's arbitrary contention that the substance in question does not constitute waste is the only factor to be taken into consideration. If that were the case, the application of Community law would depend on the producer alone. For that reason it is necessary to lay down criteria relating to the term 'discard'. In that context reference is made to the aim of Directive 75/442. The harmonisation of terminology sought by the Community legislature requires an objective criterion for examining the objective or declared intention of the producer. In connection with that objective examination it may be asked whether the substances concerned are such that Community provisions relating to control and recovery must be applied to them in order to avoid any risk to human health or the environment. In that context the German Government refers to the Commission's submission that a substance does not necessarily have to display hazardous characteristics to be classified as waste.

43. The German Government considers that a lack of commercial value may indicate that a substance constitutes waste since that might induce the holder to tip it if there were no controls. The position is more difficult where the substance still has a positive commercial value as, according to the judgment in *Tombesi*,[12] it may be regarded as waste even if that is so. In that case too the aim of the legislation on waste must be taken as a basis. In that context the German Government speaks of a danger typical of waste. If the substance in question contains or possesses particular features or characteristics so that certain conditions — such as those set out in the Community rules on waste — must be satisfied when it is used, it may be assumed that it constitutes waste where its composition or characteristics differ from those of natural raw materials or conventional pro-

12 — Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95 [1997] ECR I-3561, paragraph 52.

ducts to such an extent that it has to be treated in a particular way — so as not to have an impact on the environment — in order to avoid the risks typically associated with the treatment of waste.

44. Where a substance has an impact on the environment in the same way as a primary fuel if it is burned without pre-processing or particular precautions, it does not — in the view of the German Government — constitute waste. The aim of Community law is to ensure that waste is disposed of in an environmentally sound manner. In that respect the Member States are required to supervise all stages of waste disposal. Therefore, the classification of substances as waste must turn on the possible risk posed by those substances. For that reason the holder's declaration that his substances will be used only in the cement factory is not sufficient for the substance to be regarded as non-waste if non-hazardous recovery is possible only in cement production. Only if the substance continues to be regarded as waste can it be verified that it is in fact being recovered in an environmentally sound manner.

45. In its submission the Netherlands Government first refers to the term 'discard' and points out that in accordance with the definition of waste based on that term the danger does not necessarily arise from the substance itself but from the fact that the holder is discarding it. The term 'waste', as defined, must be interpreted broadly. That follows both from the aim of Directive 75/442, which is to protect human health and the environment and thus requires a high level of protection, and from Annex I in which virtually all substances are regarded as waste on account of the residual category Q16. Furthermore, it is clear from the case-law that the Court has always held that the term 'waste' must be interpreted broadly. The Netherlands Government refers in that connection to the judgment in *Inter-Environnement Wallonie*. [13] In that case the Court ruled that the fact that a substance is used in an environmentally sound manner is not the sole decisive factor. Rather, a distinction must be drawn between waste and normal industrial treatment of products which are not waste. In that respect the Netherlands Government refers to three factors which enable a distinction to be drawn between waste and a secondary raw material in a normal industrial operation. The first of those three criteria, which must be assessed together, is whether the substance undergoes one of the operations referred to in Annex IIA or IIB to Directive 75/442. The second criterion lies in the origin of the substance and the third in the nature or composition of the substance. When assessing those criteria, the subjective intention of the holder, which must be assigned an objective meaning, must be taken into account.

13 — Case C-129/96, cited in footnote 7.

46. Finally, the Netherlands Government applies those criteria to Case C-418/97 and concludes that LUWA-bottoms constitute waste. The fact that the LUWA-bottoms could be used in the cement industry in an environmentally responsible manner does not alter that conclusion in any way. That also follows from the judgment in *Inter-Environnement Wallonie*.[14] The fact that the substance can be used in an environmentally sound manner, although only in the cement industry, does not mean that it is no longer to be regarded as waste. The definition of waste cannot be subject to the particular operation which a substance undergoes. If that were the case control — including control over the shipment of such substances — would become impossible.

47. With regard to Case C-419/97 the Netherlands Government also concludes that on the three criteria that it suggests the wood chips must be regarded as waste. Thus, the ability to recover the substances in an environmentally sound manner is irrelevant.

48. With regard to the question whether a substance must be regarded as constituting waste the United Kingdom Government raises the question whether it follows from Annex I of Directive 75/442 and the Waste Catalogue that the substance has characteristics typical of waste products and cannot be used in the same way as any other form of fuel. The LUWA-bottoms, for example, are to be regarded as fuel, not waste, if they can be used as fuel in a cement kiln in the same way as any other fuel, that is to say without the need for special measures to protect human health or the environment. The fact that it would not be possible to use the substance as fuel in other processes of energy generation does not detract from the categorisation of the substance as fuel rather than waste when it is destined for burning in a cement kiln. If the substance were destined for use as fuel in some other process of energy generation, which would require the taking of special protection measures, which would not be necessary if the substance were destined for use in a cement kiln, then that substance would constitute waste. That a substance may be regarded as waste or non-waste depending on whether or not it is used in an operation subject to supervision under Directive 75/442 is consistent with the spirit and purpose of the Directive.

49. Subsequently the United Kingdom submitted at the hearing — with reference to Annex I — that the LUWA-bottoms quite clearly have the characteristics of waste. In its view, they seem to fall into categories Q1 and Q8 of Annex I,[15] since they are residues from production processes.

14 — Case C-129/96, cited in footnote 7.

15 — As amended by Directive 91/156, Category Q1 reads: 'Production or consumption residues not otherwise specified below'. Category Q8 reads: 'Residues of industrial processes (e.g. slags, still bottoms, etc.)'.

50. The United Kingdom next raises the question whether a derived fuel, as opposed to a primary product, does to a certain extent constitute waste if it has a negative value, that is to say if the producer of the material has to pay for its subsequent use as fuel. In that context the United Kingdom refers to the case-law of the Court of Justice according to which waste may have a commercial value. [16] Even though that does not rule out the significance of the criterion 'negative value' in all circumstances, it nevertheless indicates that there are other criteria for classifying a substance as waste. It also points to the problem that the market value depends on the state of the market and therefore can be only one of several arguments. Consequently, the United Kingdom takes into account the question whether the derived fuel may be used in the same way as a conventional non-waste fuel.

51. Finally, it also notes that a distinction must be drawn between products whose useful life is over and which can no longer be used for their primary purpose and other derived products. The former have waste characteristics alone. Old car tyres are an example.

52. The Commission first points out that, in accordance with the definition contained in Directive 75/442/EEC, the question whether the holder of the substance intends to discard it is relevant to the term 'waste'. It adds that the directive does not take commonly held views as a basis. Indeed, that is not an appropriate criterion in Community law, as the term may vary from one Member States to another, whereas the aim of Directive 75/442 is specifically to harmonise terminology. There could be problems in particular relating to the transportation of waste over borders if the definition of (different) commonly held views were used as a basis.

53. Furthermore, Directive 75/442 does not refer to any view that is shared by all the Member States. The Commission also disputes the assertion that there is a formal consensus between the individual Member States at OECD level as to the concept of 'waste'. It has OECD documents which show that the Member States' views differ.

54. Under Directive 75/442, it is also irrelevant whether or not a substance can be recovered without substantial processing and in an environmentally responsible manner. In that respect the Commission refers to the judgment in *Inter-Environnement Wallonie*. [17] Moreover, it follows from Category Q14 of Annex I [18] that the substance need not be hazardous in itself. If the holder has no (further) use for the

16 — Judgment in Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95, cited in footnote 12.

17 — Case C-129/96, cited in footnote 7.

18 — That category, as amended by Directive 91/156, reads: 'Products for which the holder has no further use (e.g. agricultural, household, office, commercial and shop discards, etc.)'.

substance and he discards it, that substance constitutes waste for the purposes of Directive 75/442. The mere fact that the holder no longer wants the substance gives rise to the danger of uncontrolled disposal which is exactly what the Community legislature is seeking to prevent by Article 4 of the Directive.

55. Under Directive 75/442 waste must be treated in an environmentally responsible manner. However, the mere fact that it may be so treated is not, for that reason alone, to be taken as an indication that a substance may not still be regarded as constituting waste.

56. If — as the United Kingdom suggests — the sole criterion were to be that a substance, such as LUWA-bottoms, caused no environmental pollution when recovered in a certain manner, supervision, including supervision of subsequent shipment, would be impossible. It would also be impossible to verify whether the substance was in fact used in the production of cement. Therefore, neither the wording of the definition nor the intended purpose of the Community legislation permits individual substances to be excluded from the definition of waste simply because they may be recovered somewhere without any adverse effects on the environment. Consequently, the question whether a substance constitutes waste hinges on whether it is being discarded and not on the possible way in which it may be used subsequently.

57. The Commission also considers that the calorific value of a substance is no criterion for determining whether or not a substance constitutes waste. As regards the commercial value of certain substances, the Commission points out that that value may change from one day to the next. Even where waste has a commercial value — because it constitutes a cheaper fuel than normal substances — it must be borne in mind that it may contain pollutants and the necessary rules on supervision would no longer apply if such substances ceased to be classified as waste.

58. Finally, in its concluding observations the Commission points out that according to the case-law of the Court waste is to be regarded as goods the movement of which, in accordance with Article 30 of the EC Treaty (now, after amendment, Article 28 EC), must in principle not be prevented. [19] If a substance is classified as waste, that automatically means that certain restrictions are imposed on its use as a fuel in order to protect the environment and human health. They include the requirement to obtain an export licence and the provision of a bank guarantee to ensure that the waste is in fact disposed of, or

19 — Case C-155/91 *Commission* v *Council* [1993] ECR I-939, paragraph 12.

recovered, in an environmentally sound manner in the country of destination.

Analysis

59. The definition of 'waste' contained in Article 1(a) of Directive 75/442, as amended by Directive 91/156, takes into account Annex I and whether the holder discards or intends or is required to discard the substance concerned. Since under category Q16 of Annex I virtually all substances may be regarded as waste and Annex I cannot be used to define the concept of waste in that respect, the term 'discard' is of crucial importance to the definition of waste. However, at least the first two of the three cases referred to provide no assistance in defining the term 'waste' more precisely as they are subjective terms which must be assigned an objective meaning to render supervision possible. The question whether a substance is regarded as waste and whether the rules on supervision contained in the legislation on waste may be applied to it may not turn on the producer's claims as to his intention to discard. That would make it very easy to circumvent the requirements imposed by the legislation on waste. Therefore, further criteria must be applied to determine what constitutes waste.

60. The third case referred to, the requirement to discard, is likewise of no assistance in defining the term 'waste'. It covers only part of discarding and is also too vague. Article 4 of the Directive also fails to afford further clarification. True, it provides that waste must be disposed of or recovered in an environmentally sound manner, which could be equated with a requirement to discard, However, the only inference to be drawn is that discarding includes disposal or recovery. There is no further information as to which operations it might cover. In that context reference should also be made to the sixth recital in the preamble to Directive 91/156, which states that it is desirable to encourage the recycling of waste and re-use of waste as raw materials and that it may be necessary to adopt specific rules for re-usable waste. The Commission has stated that those provisions have not yet been adopted but that there is a pressing need to do so in order to define the term 'waste' more precisely, since the respective procedures have a considerable bearing on the concept of waste. [20]

61. The referring court then raises the question whether commonly held views on the term 'waste' may be applied as a further criterion for defining the term 'waste'. However, that poses a problem if only because one subjective term is being used to define another. Furthermore, as the Commission submits, the meaning of the term may vary from Member State to Member State. That would preclude the harmonisation intended by Directive 75/442. The third recital in the preamble

20 — It is also clear from the Commission's answer to the written question (No E-3123/98) put by Member of the European Parliament Gianni Tamino, that no Commission proposal has been made but that a change of the present definition of waste would require a modification of Directive 75/442. The exclusive interpretation of this definition remains a prerogative of the Court of Justice (OJ 1999 C 135, p. 169 et seq.).

to Directive 91/156 states that common terminology and a definition of waste are needed in order to improve the efficiency of waste management. That cannot be achieved by a criterion which is formulated differently in different Member States. It might even impede the operation of the common system of control. That is conceivable in the case of the transfrontier shipment of waste if the substance were not regarded as waste in a particular Member State and the delivery was therefore not notified to the State of destination. [21]

62. In that context the referring court raises the question whether or not it is relevant that a substance may be recovered in an environmentally responsible manner for use as fuel without further processing. In respect of those criteria it must be noted that in accordance with Article 4 of Directive 75/442 waste must be recovered or disposed of without endangering human health and without using processes or methods which could harm the environment. Since that applies to all waste, Directive 75/442 therefore assumes that it is possible in any event to dispose of or recover waste in an environmentally responsible manner. If all substances which could be disposed of or recovered in such a manner were excluded from the definition of waste there would no longer be any waste at all for the purposes of Directive 75/442.

63. Moreover, in that respect reference must be made to the case-law of the Court. In its judgment in *Inter-Environnement Wallonie*, [22] it ruled, with reference to Article 4 of Directive 75/442, that that directive may apply to disposal or recovery operations forming part of an industrial process where those operations do not appear to constitute a danger to human health or the environment. [23] Therefore, a substance is not excluded from the definition of waste in Article 1(a) of Directive 75/442 by the mere fact that it directly or indirectly forms an integral part of an industrial production process. [24] It follows that the criteria to which the national court refers may not be used, or may at best be used as a supplement, to define the term 'waste'.

64. On the contrary, the Court has held that a distinction must be drawn between waste recovery within the meaning of Directive 75/442 and normal industrial treatment of products which are not waste, no matter how difficult that distinction may be. [25] Such a distinction may be drawn only on a case-by-case basis. In doing so, account must be taken of whether all the circumstances of the case warrant or require the inclusion of the relevant sub-

21 — Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community (OJ 1993 L 30, p. 1).

22 — Case C-129/96, cited in footnote 7.
23 — Case C-129/96, cited in footnote 7, paragraph 30.
24 — Case C-129/96, cited in footnote 7, paragraph 34.
25 — Case C-129/96, cited in footnote 7, paragraph 33.

stance in the waste management provided for in the Directive.

65. As the Directive makes clear, waste may pose a certain danger which requires certain measures and controls. For example, under Article 3(1)(a) measures must be taken to encourage the reduction of waste production *and its harmfulness*. That is to be achieved in particular by the marketing of products designed so as 'to make no contribution or to make the smallest possible contribution... to *increasing the amount or harmfulness* of waste and pollution hazards'. [26] That waste is to be regarded as substances which may in some way pose dangers to human health and the environment follows from the fact that, under the first sentence of Article 4 of the Directive, measures must be taken to ensure that waste is recovered or disposed of without posing such dangers.

66. The Directive also provides for a number of measures to prevent any risk inherent in the waste from materialising. For example, waste management plans must be drawn up (Article 7) and undertakings involved in the disposal or recovery of waste must obtain a permit (Articles 9 and 10) and must be registered with the competent authorities (Article 11(2)). In addition, under Article 13 such undertakings are to be subject to periodic inspections and some are required to keep a record of the measures that they have taken (Article 14).

67. Under the 12th recital in the preamble to Directive 91/156, waste must be monitored from its production to its final disposal. In that respect it should be noted that the classification of a substance as waste also entails the application of other rules which refer to the term 'waste' contained in Directive 75/442. An example is Regulation No 259/93 which lays down rules on the shipment of waste. As is clear from the foregoing considerations, the Community legislature assumes that waste, that is to say substances discarded by their holder, poses a certain threat.

68. As the Commission rightly submits, the danger typical of waste does not necessarily lie in the nature of the substance itself. It may also lie in the fact that the holder discards that substance and it is consequently abandoned or stored without supervision or control. In that context the Commission refers to category Q14 of Annex I which also classifies as waste products for which the holder has no further use. That description does not refer to the danger posed by a particular substance but simply to the fact that the substance is no longer to be put to its original use. However, supervision becomes

26 — Second indent of Article 3(1)(a). My emphasis.

necessary as soon as a substance ceases to be used and must extend to the time when the substance is disposed of or recovered so that no harm is caused to human health or the environment. If that supervision covers substances that are not in themselves hazardous, then it must surely also extend to substances which contain hazardous substances, such as the wood chips at issue which are hazardous because they are contaminated with carcinogens and other substances. However, it should be noted that it is for the national court to determine whether or not the demolition wood and the wood chips produced from it do in fact contain the alleged contaminants.

69. Where the relevant substance may pose a danger in a particular situation and must therefore be subject to the monitoring provided for in Directive 75/442, that monitoring must remain in place until the disposal or recovery operation has been completed, [27] that is to say the substance is to be regarded as waste until that point. That also applies to a substance such as LUWA-bottoms that may possibly be recovered in a particular operation without harming the environment or human health in any way. That substance too must be subject to the supervision specific to waste until the operation has been completed, as that is the only possible way of ensuring that it will in fact be recovered in such an environmentally sound manner. However, as long as it has to be subject to such monitoring it must be regarded as constituting waste.

70. The same applies to wood or wood chips that contain pollutants. Since the necessary monitoring also extends to the operations to be carried out, contaminated substances and substances which cannot be recovered safely in all operations cannot in any event be recovered in normal operations in the same way as substances which are not waste. Therefore, a distinction must be drawn between waste recovery and normal industrial treatment, on account of the typical risk attaching to waste. Therefore, a production process cannot be held to be normal if normal (primary) raw materials which are not waste are replaced in normal industrial treatment by substances which originally fulfilled another purpose and cannot or may not do so any longer (or never could) and which are now consigned to another purpose or to disposal and may consequently pose a certain danger.

71. That applies even if waste can be recovered without further conditions and without any adverse effects on human health or the environment. In that case too it is necessary for the substance to remain subject to comprehensive monitoring in accordance with Community rules — until the specific risk attaching to waste ceases to exist — so that the other requirements of Directive 75/442, such as the

27 — Twelfth recital in the preamble to Directive 75/442.

encouragement of the recovery of waste by means of recycling, re-use or any other recovery process rather than disposal, may be fulfilled and safeguarded.[28] For that reason Epon's submission that the wood chips may be used as a substitute for coal without detriment to the environment cannot change the conclusion reached in this respect.

72. From the foregoing considerations it follows that the operations to which a substance is subsequently submitted are not of crucial importance to its classification as waste. Similarly, the question whether the relevant substance has a commercial value cannot directly determine whether or not it constitutes waste. For example, in its judgment in *Tombesi* the Court ruled that the system of supervision and control established by Directive 75/442, as amended, is intended to cover all objects and substances discarded by their owners, even if they have a commercial value and are collected on a commercial basis for recycling, reclamation or re-use.[29] The fact that a substance has no (residual) commercial value may at most provide an indication as to the holder's intention to discard.

E — Part (a) of the second question in Case C-419/97

73. This question seeks to establish when and as a result of what treatment a waste substance ceases to constitute waste.

Arguments of the parties

74. The plaintiffs in Case C-419/97 consider that grinding waste — in this case wood chips — does not cause it to lose the character of waste. All the component parts remain in that substance. If that substance were no longer to be regarded as constituting waste, the movement of waste might no longer be subject to control. For example, it would be possible to burn old car tyres, once they had undergone certain transformations, in the same way as wood from demolition. Commercial re-use could not, in the plaintiffs' view, be used as a criterion to define a substance as non-waste. Burning was an operation provided for in category R9 of Directive 75/442,[30] and only thereafter could it be assumed that the product no longer constitutes waste. By selling the wood chips to Epon the holder had simply intended to circumvent the requirements relating to the treatment of hazardous waste. Even if the substance ceased to

28 — Article 3(1)(b).

29 — Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95, cited in footnote 12, paragraph 52.

30 — That provision, as amended by Directive 91/156, reads: 'Use principally as a fuel or other means to generate energy'.

constitute waste, its further progress would still have to be supervised.

75. Epon considers that the wood chips are the product of a recycling operation. As part of that operation the materials must be ground to a powder, as otherwise they could not be used in the electricity-generating station. Therefore, a secondary raw material is produced, that is to say a new substance that no longer constitutes waste. The origin of the substance is irrelevant in that respect. Epon again refers to the OECD and submits that there is a consensus that where a secondary raw material or residue can be used directly in a further process, possibly as a substitute for a primary raw material, it can hardly be regarded as waste. In that respect reference is also made to the judgment in *Inter-Environnement Wallonie*,[31] in which the Court held that a substance is not excluded from the definition of waste merely because it forms an integral part of an industrial production process. However, the end-product of such treatment may — in Epon's view — be regarded not as waste but as a secondary raw material. Even on the criterion of discarding, the conclusion remains the same, as there is no intention to discard in the case of a secondary raw material. That follows from the purpose of Directive 75/442, that is to say the avoidance and reduction of waste. That does not apply to secondary raw materials, such as wood chips.

76. Finally, Epon also submits that it would not be beneficial to the environment to apply the system for the control of waste to secondary raw materials, as that would cause profitability problems for the project to burn wood chips, for example. If secondary raw materials were to be regarded as waste, it would be difficult to invest in recovery of them. Primary fuels would be used instead. However, the only difference between primary and secondary raw materials lies in their origin which is irrelevant to the issue of discarding.

77. The Danish Government takes the view that the substances cannot cease to constitute waste merely because they have been ground. If, for example, the doors of the incineration plant are too small and the waste must be ground for that reason, it may not be assumed that the substance ceases to constitute waste. Such a view is unacceptable for reasons of environmental protection. Nevertheless, in principle it is certainly possible for a substance to cease to constitute waste. However, it must then be treated as a primary substance and the holder thereof may not discard it.

31 — Case C-129/96, cited in footnote 7.

78. The Austrian Government sees the process of discarding as a process that begins with the wood from demolition in this case. The grinding merely constitutes a necessary prior operation associated with the final treatment, that is to say use as fuel. The actual recovery does not take place until that second step is taken. That might not apply in the case of uncontaminated wood produced for marketing as a fuel in accordance with special quality criteria.

79. The German Government notes that Community law is silent as to when a substance ceases to constitute waste. It considers that it may be assumed that waste no longer exists only when the recovery operation has been completed. That normally does not occur until the energy potential of the substance has been recovered and, moreover, in an environmentally sound manner as provided for in Article 4 of Directive 75/442. It is clear from categories D14 and D15 and also R11 and R12[32] of the annexes that recovery may take place in several stages. In order to be able to determine when such a process has been completed and a substance ceases to constitute waste, the German Government again refers to the purpose of the Community legislation on waste. In the case of a complete separation of waste, only the sorting residues which are not destined for use and pose a possible risk typical of waste must continue to be regarded as waste.

80. The Netherlands Government also considers that a substance may cease to constitute waste. In that case it must be clear from the composition of the substance produced by the recovery operation that it no longer constitutes waste. Pre-processing which merely enables a substance to be used as fuel cannot, in its view, be regarded as a treatment transforming the substance into non-waste. Pre-processing as it was carried out in the present case was not intended to dispose of the substance directly but to render it suitable for recovery. Therefore, it was subordinate to the relevant recovery operation. It could not be assumed that a secondary raw material had been produced in the course of the pre-processing.

81. In that context the United Kingdom refers again to products whose useful life has expired. They too may cease to constitute waste only when the transformation has been completed. The question then arises as to when such reclamation takes place. The United Kingdom takes the view that the product of such reclamation must be comparable with an original product. In the case of wood chips it suggests that the extraction of the wood from the demolition waste for the purpose of re-use was an operation within category R3 of Annex IIB,

32 — The categories, as amended by Directive 91/156, read:
D14 Repackaging prior to submission to any of the operations in this annex
D15 Storage pending any of the operations in this annex...
R11 Use of wastes obtained from any of the operations numbered R1 — R10
R12 Exchange of wastes for submission to any of the operations numbered R1 — R11.

Recycling/reclamation of organic substances. [33] If that operation were not recognised as constituting reclamation, that activity could not come under Directive 75/442 and its controls. The fact that the wood chips are not referred to in the Annex is irrelevant. Recovery is complete when no further measures are necessary to enable the wood to be used in the same way as any other raw material. However, if the wood chips still have the characteristics typical of waste, with the result that further recovery measures for the purposes of the Directive are necessary, they must be regarded as waste.

82. Finally, the Commission points out that some of the operations referred to in Annex IIB can transform substances into non-waste. However, that is not true of all operations — it cites category R13 [34] as an example — and there were no such operations in this case. By way of explanation the Commission refers to Article 1(b) of Directive 75/442 and the definition of a producer of waste contained therein which includes anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste. It also cites Article 1(d) which defines management as the collection, transport, recovery and disposal of waste. According to that provision, it is possible for certain measures to be carried out prior to disposal or recovery without changing a substance's status as waste. The sorting of the wood probably came within the definition contained in Article 1(g), whereas its conversion into wood chips constituted pre-processing. If the wood had not been ground into chips it could probably not be used as fuel but simply burned. That pre-processing rendered the waste, which would otherwise have had to be disposed of, suitable for recovery as a fuel. The latter constitutes the actual recovery.

83. According to the Commission, any other view would lead to a restriction on the scope of the Community rules on waste. In many cases waste would cease to be regarded as such merely because it had undergone a certain conversion to enable it to be recovered as a substance. However, in that case control and environmental protection would no longer be possible.

84. The Commission considers that consequently there is no need to comment on the second part of the question. However, it does point out that Annex IIB is not definitive, that is to say an operation may be regarded as constituting recovery even if it is not expressly referred to in the annex. Since Annex IIB can easily be supplemen-

33 — That category is listed under R2 in Directive 91/156.

34 — That provision, as amended in 1996, reads: 'Storage of wastes pending any of the operations numbered R1 to R12...'.

ted, particular care must be taken when classifying as 'recovery' an operation that is not referred to in that annex.

Analysis

85. It is true that new substances, which must be regarded as constituting secondary raw materials rather than waste, may be produced from recovery operations such as those referred to in Annex IIB. It is also the case that extraction of such substances is to be encouraged pursuant to Directive 75/442. [35] However, the question is whether such a secondary raw material has been produced in this case.

86. In the present case it is not contested that the building waste constitutes waste for the purposes of Directive 75/442. On the criterion which has already been used to determine whether or not a substance constitutes waste, the question here is whether a substance has been produced from that waste which does not itself pose a risk typical of waste. Epon considered that to be the case on account of the operations which the waste had undergone. Those operations consist in sorting the component parts of the wood and grinding them. However, it is established that the composition of the component parts of the wood remains unaltered in the process. That means that the pollutants — if any — are still contained in the wood now ground into powder. It also follows from the judgment in *Tombesi* and the Opinion in that case that the mere fact that waste is ground without its characteristics being in any way altered does not take it outside the scope of the Community legislation. [36]

87. Consequently, the substance has not ceased to constitute waste. No new substance has been produced that is not subject to supervision in connection with waste management. That is particularly true since the substance is to be burned in another operation.

88. Therefore, the operations carried out in this case constitute preparation for subsequent burning, that is to say the actual recovery. That also follows from the fact that the preparations may be regarded as reclamation of organic substances which are not used as solvents, and thus as recovery operations within category R2 [37] of Annex IIB of Directive 75/442. Substances which undergo one of the treatments referred to in Annex IIB may indeed continue to constitute waste. In that respect the Commission correctly refers to categories R11 to R13 of Annex IIB. They refer respectively to the operations numbered R1 to R10 and the wastes obtained from them. It is therefore clear that Directive 75/442 itself assumes that a substance may con-

35 — Article 3(1)(b)(i).

36 — Judgment in Joined Cases C-304/94, C-330/94, C-342/94 and C-224/95, cited in footnote 12, paragraph 53 et seq.; Opinion in that case, point 61.

37 — As amended by Directive 91/156.

tinue to constitute waste even after it has been submitted to one of the operations referred to in categories R1 to R10. It may also be inferred from category D13 of Annex IIA — Blending or mixture prior to submission to any of the operations in this annex [38] — that disposal operations too may comprise several stages.

89. Finally, account must be taken of the definition of 'producer' contained in Article 1(b) of Directive 75/442. 'Producer' is defined there as '... anyone whose activities produce waste ("original producer") and/or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste'. It follows that anyone who has changed the nature or composition of the waste must still be regarded as a producer of waste and the substances concerned must still be regarded as constituting waste.

90. Consequently, it must be considered that in this case the treatment of the wood from demolition is not in any event sufficient to remove the dangers typical of waste posed by the substance and that that substance continues to constitute waste.

91. Therefore, there is no need to answer the second part of the question. However, for the sake of completeness it should be noted that Annex IIB of Directive 75/442, as amended by Directive 91/156, lists, after its introduction, recovery operations as they are carried out in practice. From that it may be inferred that other operations are also conceivable even though they are not carried out in practice. It would be inconsistent with the Directive's aim of protecting human health and the environment if other possible recovery operations were not included in the scope of the Directive. That is because such operations — and consequently the substances treated — would then no longer be subject to supervision in accordance with the Community rules.

F — Part (b) of the second question in Case C-418/97 and part (c) of the second question in Case C-419/97

92. By this question the referring court seeks to ascertain whether it may be inferred from the fact that the substance is treated in a manner which amounts to a

38 — As amended by Directive 91/156.

common method of waste recovery that that substance constitutes waste.

Arguments of the parties

93. Not all the parties comment specifically on this question. Some also refer to their observations on the first question. The Danish Government, for example, again points out that the definition of waste cannot depend on the use of subsequent methods of treatment. Moreover, if that were the case, the term would be increasingly restricted by the development of new technological methods which would not necessarily be analogous to common methods of recovery.

94. Epon too refers first to the first question, adding that a distinction must be drawn between the recovery of waste by burning and the use of secondary raw materials (fuels). If 'a common method of waste recovery' is regarded as a method that is not identical or similar to the use of primary fuels, that criterion of a common method of waste recovery becomes increasing relevant to the present case. The question whether the burning of wood chips is similar to a common method of recovery may also be relevant to the question whether the substance at issue can be said to constitute waste. In that respect it must be assumed that recovery as a fuel, which is comparable to the use of primary raw materials, is not regarded as an accepted method of waste recovery.

95. The Commission points out that the referring court answered the question itself when it noted that any use of a substance as a fuel could be regarded as constituting discarding if the criterion of a common method of recovery were applied without restriction. The Commission also refers to its answer to the first question. Thus, it concludes that the mere fact that a substance undergoes a common method of recovery is not sufficient to regard it as constituting waste.

Analysis

96. The national court does not refer specifically to Annex IIB of Directive 75/442. According to the introduction to that annex, it is intended to list recovery operations as they are carried out in practice. From that it may be inferred that at least some of the recovery operations listed in Annex IIB are common recovery operations. It is probably not disputed that that is true of use as fuel. However, in that respect reference must be made to the point made in connection with the first question, namely that raw materials may also be subjected to the operations listed in

Annex IIB. The burning of fuel oil or coal is cited as an example. Therefore, the fact that a substance is subjected to a method which amounts to a common method of waste recovery does not necessarily mean that it may be assumed that the holder intends to discard it. At most it may be regarded as one of a number of indications as to the holder's intention to discard.

G — Part (c) of the second question in Case C-418/97

97. By this question the referring court seeks to ascertain whether it may be inferred from the fact that a substance is produced merely as a by-product or a residue that that substance constitutes waste.

Arguments of the parties

98. In that context the German Government notes that the distinction between main product and by-product or residue is of no avail in this case since Directive 75/442 does not use those terms. Moreover, the term 'by-product' is not used in a uniform manner across the Member States and therefore it would be better not to use such terms. Furthermore, only the terms 'waste' and 'non-waste' are used in the context of the OECD.

99. However, the purpose of a manufacturing process is often not limited to a single substance. The German Government refers, for example, to the chemical industry where a whole series of related products are produced that are often described as by-products. In that context it is important to establish whether the product in question still forms part of the aim and purpose of the manufacturing process. If it does — albeit only in a derived form — it cannot be held to constitute a waste product. An intention to discard may be assumed only where a substance is produced in a manufacturing process without that being the primary or secondary purpose of the process.

100. The United Kingdom too refers to the problem that in many production processes several substances are produced. It mentions coke, for example, as a by-product of gas production. It is both a by-product and a conventional fuel. If a substance is produced as a by-product of the production of another substance there is no need to determine whether or not its production was intentional. If too much importance were attached to the question whether a substance is a main or by-product, a large

number of standard products would end up being classified as waste.

101. The Austrian Government observes briefly that the substance at issue is a residue from the reprocessing of a partial waste flow. According to common commercial usage, by-products at most, but not residues of residues, are to be regarded as non-waste.

102. The Danish Government considers that the prior production process is no more decisive than its subsequent treatment for the purpose of determining whether or not a substance constitutes waste. Here too it notes that several factors must be considered together to determine whether or not a substance constitutes waste.

103. By and large both by-products and residues must come within the definition of waste, since the activities of an undertaking are geared towards main products. Therefore, undertakings discard by-products, and are often required to do so by legislation relating to environmental protection. A main product does not normally constitute waste but might be regarded as such in certain circumstances, for example if it did not satisfy internal quality requirements.

104. The Danish Government considers that it is crucial that the definition of 'waste' is not restricted to such an extent that entire categories of waste, such as the abovementioned main products, which fail to satisfy quality requirements, are excluded from that definition. That follows from the judgment of the Court of Justice in Case C-422/92.[39] Consequently, the Danish Government concludes that part (c) of the second question in Case C-418/97 must also be answered in the negative.

105. The Commission too refers to the case-law of the Court — in this case the judgment in *Inter-Environnement Wallonie*[40] — according to which the concept of waste does not in principle exclude any kind of residue, industrial by-product or other substance arising from production processes.[41] It also refers to Annex I of Directive 75/442 which uses the term 'residue' in five categories. Category Q8, for example, refers to residues of industrial processes.

106. The Commission goes on to note that it regards a by-product as being a substance

39 — Case C-422/92 *Commission* v *Germany* [1995] ECR I-1097.

40 — Case C-129/96, cited in footnote 7.

41 — Case C-129/96, cited in footnote 7, paragraph 28.

which is necessarily produced in the manufacture of one or more other substances but which is not an objective of the original producer, merely an unavoidable by-product. Therefore, the substance is of no use to the producer and so he discards it. Consequently, the Commission proposes that the Court should answer the question to the effect that the fact that a substance is a by-product or residue of a production process whose purpose is to obtain a different product is an indication that that substance may constitute waste within the meaning of Directive 75/442.

Analysis

107. The question referred by the national court probably also seeks to ascertain whether a by-product or a residue from a production process may be regarded as waste from the outset. In this respect too reference must first be made to case-law. It is apparent from the case-law that the concept of waste does not exclude residues, by-products and other substances arising from production processes. [42] However, it may not be inferred that such substances alone are to be regarded as waste or that they are always to be so regarded. The Danish Government correctly points out that, if that were the case, an entire category, that is to say products whose production was intentional but which might in certain circumstances constitute waste, would be excluded from the definition of waste. That cannot be consistent with Directive 75/442 as it follows from Annex I to that directive — and in particular from category Q16 — that in principle any substance may be regarded as waste. That may even be the case with a main product if it fails to satisfy the quality requirements, for example.

108. Furthermore, it is difficult to draw a distinction between main products and by-products since — as the United Kingdom correctly submits — there are a number of by-products which constitute conventional fuels, for example. In the case of those substances it cannot be supposed that the holder intends to discard them. That conclusion is reinforced by the fact that those substances have a certain commercial value for him. Consequently, it can only be stated that the fact that a substance is a by-product or a residue of a production process may be an indication that the holder intends to discard it. However, it can by no means be inferred automatically that it constitutes waste.

Summary

109. In conclusion it should be noted that the definition of the term 'waste' contained in the Directive is too vague to provide a generally valid, comprehensive definition of waste. Instead it must be determined on a case-by-case basis whether or not the substance concerned is to be regarded as waste in the particular circumstances. Most

42 — Case C-129/96, cited in footnote 7, paragraph 28.

of the criteria mentioned by the national court may be regarded as an indication that a substance constitutes waste but are in themselves insufficient to determine whether that is in fact the case. For that reason it is necessary to consider the spirit and purpose of the Directive and determine whether or not the substance poses a danger typical of waste. That danger distinguishes between waste and primary raw materials. If a waste material is recovered or reprocessed so that a substance is obtained that no longer poses a danger typical of waste and, when used in a normal manufacturing process, does not pollute the environment any more than, but at most in the same way as, a primary raw material, that substance probably is no longer to be regarded as waste in the sense of being subject to control or authorisation for its further use. It is for the national court and the competent authorities to examine whether or not the substance in question constitutes a danger typical of waste — that is to say one which goes beyond the dangers posed by a comparable primary raw material — so that supervision in accordance with the Directive must continue to be regarded as necessary. Such supervision does not preclude any recycling and use of such substances as substitutes for primary raw materials specifically laid down as policy. The substance and the recovery operation are subject to the controls provided for in the Directive to avoid harm to human health and the environment. For that reason the shipment of such substances must also be supervised and, where necessary, freedom of movement must be restricted for as long as that danger typical of waste persists.

H — Conclusion

110. In the light of the foregoing considerations I propose that the Court should reply as follows to the questions referred to it for a preliminary ruling:

Case C-418/97

(1) It may not be inferred from the mere fact that LUWA-bottoms undergo an operation — such as use as fuel — listed in Annex IIB to Directive 75/442 on waste that that substance has been discarded so as to enable it (consequently)

to be regarded as waste for the purposes of Directive 75/442. However, the recovery of the substance in such an operation may be a strong indication that the substance has been discarded.

(2) The reply to the question whether the use of LUWA-bottoms as a fuel is to be regarded as constituting discarding does not depend on whether

(a) LUWA-bottoms are commonly regarded as waste, it being also irrelevant whether they may be recovered in an environmentally responsible manner for use as fuel without substantial processing,

(b) the use of LUWA-bottoms as a fuel amounts to a common method of waste recovery,

(c) the substance used is a main product or a by-product (a residue).

Instead it must be considered whether the substance still poses a danger typical of waste such that supervision of the recovery appears necessary or whether the substance has ceased to constitute waste, which is the case if it poses no greater danger than a comparable primary raw material.

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(1) It may not be inferred from the mere fact that wood chips undergo an operation — such as use as fuel — listed in Annex IIB to Directive 75/442 on waste that that substance has been discarded so as to enable it (consequently) to be regarded as waste for the purposes of Directive 75/442. However, the recovery of the substance in such an operation may be a strong indication that the substance has been discarded.

(2) (a) The reply to the question whether the use of wood chips as a fuel is to be regarded as constituting discarding may depend on whether, in regard to the building and demolition waste from which the chips are produced, operations are carried out already at an earlier stage than recovery as fuel as a result of which the substance has ceased to constitute waste so that it poses no greater danger than a comparable primary raw material, assuming that such an operation does not have to be mentioned specifically in Annex IIB of Directive 75/442/EEC.

(b) The reply to the question whether the use of wood chips as fuel is to be regarded as constituting discarding does not depend on whether wood chips are commonly regarded as waste, it being also irrelevant whether they may be recovered in an environmentally responsible manner for use as fuel without substantial processing.

(c) Nor does the reply to the question depend on whether the use of wood chips as a fuel amounts to a common method of waste recovery.

In general, it must instead be considered whether the substance still poses a danger typical of waste such that supervision of the recovery appears necessary or whether the substance has ceased to constitute waste, which is the case if it poses no greater danger than a comparable primary raw material.