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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL
AND THE EUROPEAN PARLIAMENT**

on the Interpretative Communication on waste and by-products

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(Text with EEA relevance)

1. INTRODUCTION

The definition of waste has been a key part of protecting the European environment from the impacts of waste generation and management over the past thirty years. Objects or substances that are defined as 'waste' are controlled by Community waste legislation in order to protect human health and the environment. The definition of waste is applied by the competent authorities specified by Directive 2006/12/EC¹ (the Waste Framework Directive), on a case by case basis, when making waste shipment or permit decisions. In general it is clear what is or is not waste. However, a number of issues have arisen in relation to the interpretation of this definition.

One of these is related to the distinction between materials that are not the main objective of a production process but can be considered as non-waste by-products, and those that should be treated as wastes. In reality, there is not a black and white distinction, but rather a wide variety of technical situations with widely differing environmental risks and impacts and a number of grey zones. However, for the purposes of applying environmental legislation, it is necessary to draw a clear line between the two legal situations on a case by case basis – waste or not waste. It is this distinction that has on occasions proved difficult to apply.

In order to improve the legal certainty of waste legislation, and to make the definition of waste easier to understand and apply, this Communication seeks to guide competent authorities in making case by case judgements on whether a given material is a waste or not, and to give economic operators information on how these decisions should be taken. The Communication will also help to smooth out differences in the interpretation of these provisions throughout the EU.

The Communication aims to explain the definition of waste set down in Article 1 of the Waste Framework Directive, as interpreted by the European Court of Justice, in order to ensure that the Directive is properly implemented. In EU waste law, notions such as by-product or secondary raw material have no legal meaning – materials are simply waste or not. For the purposes of this Communication only², the following illustrative terms, in addition to waste as defined in the Directive, will be used:

- Product – all material that is deliberately created in a production process. In many cases it is possible to identify one (or more) "primary" products, which is the principal material produced.

¹ OJ L 114, 27.4.2006, p. 9-21.

² The definitions do not represent a legal interpretation of the European Commission and are not destined to be used outside of the context of this Communication.

- Production residue – a material that is not deliberately produced in a production process but may or may not be a waste.
- By-product – a production residue that is not a waste.

As announced in the Thematic Strategy on the prevention and recycling of waste, the effectiveness of the guidelines proposed in the Communication will be reviewed in 2010, in the context of the review of the strategy. At the same occasion, there will be a review whether further jurisprudence from the ECJ has made a revision of the guidelines necessary.

2. BACKGROUND TO THE COMMUNICATION

2.1. Scope of the Communication

The scope of this Communication is the distinction between waste and non-waste in a production process context. It is not relevant to other waste such as municipal waste or other similar waste streams, or to consumption residues. It does not deal with the issue of when a product may become a waste, or when a waste ceases to be a waste. It does not deal with waste that is excluded from the scope of the Waste Framework Directive.

2.2. Context of the Communication

Article 8(2)(iv) of Decision 1600/2002/EC of the European Parliament and of the Council of 22 July 2002³, laying down the Sixth Community Environment Action Programme, called for a clarification of the distinction between waste and non-waste. In the Communication towards the Thematic Strategy on the prevention and recycling of waste of 27 May 2003⁴, the Commission outlined the situation on the definition of waste, called for a wide, evidence backed debate on the issue and asked stakeholders with better alternatives to the existing definition of waste to come forward with them. The majority of the comments asked rather for the basic definition of waste to be kept and for certain specific aspects to be made clearer.

In the light of this consensus, the Commission committed itself in the Thematic Strategy on the prevention and recycling of waste, adopted on 21 December 2005⁵, to come forward with a “Communication containing guidelines, based on the jurisprudence of the European Court of Justice and addressing the issues of by-products in relevant industry sectors, on when by-products should or should not be considered as waste in order to clarify the legal situation for economic operators and competent authorities.” This document now carries out that commitment.

2.2.1. Why are guidelines needed?

The evolving jurisprudence and relative absence of legal clarity has made in some cases the application of the definition of waste on this issue difficult for competent authorities and economic operators alike. There is some evidence of differing case by case solutions on similar facts by competent authorities in different Member States – this leads to inequalities in the treatment of economic operators and obstacles in the internal market. An excessively wide

³ OJ L 242, 10.9.2002, p. 1.

⁴ COM(2003)301 Final.

⁵ COM(2005)666 Final.

interpretation of the definition of waste imposes unnecessary costs on the businesses concerned, and can reduce the attractiveness of materials that would otherwise be returned into the economy. An excessively narrow interpretation could lead to environmental damage, and undermine Community waste law and common standards for waste in the EU.

The Commission considers that guidelines are better suited to delivering legal clarity than a definition of by-products in the Waste Framework Directive. Notably, a distinction between waste and by-product that is based on whether the material is destined for recovery or disposal, or based on whether or not the material has a positive economic value, would not seem to offer the necessary guarantees for the protection of the environment. Alternatively, the direct translation in the text of the Directive of some of the language used by the ECJ, outside of its context, may simply result in creating new uncertainties. Other options, including any list type approach, appear to be impractical in operational terms and in terms of legal enforcement. Within the legally binding criteria set out by the ECJ, guidelines represent a flexible tool, adaptable to new evidence and technologies.

2.2.2. Industrial context

There are a wide variety of different types of materials that are produced in industrial processes and could be concerned by this Communication. In business vocabulary, these may be identified as by-products, co-products, intermediate products, non-core products or sub-products. None of these terms have any meaning in Community environmental law, i.e. products and by-products have the same status: materials are simply waste or not.

Industrial production processes are often complex and can generate several different materials with different economic values, environmental impacts and waste/non-waste statuses. In addition to this the consequences of waste/non-waste status can vary from sector to sector. In some sectors, materials that are sold whilst being classified as wastes are traded freely amongst businesses throughout the internal market. In other sectors, such as the food and drink sector, a clear distinction between waste and product is crucial to the economic exploitation of the material concerned. The technical situation is evolving continuously, with rapid changes in technology, both in production processes and the waste treatments available.

2.2.3. Environmental situation

It is clear that both products and wastes can contain toxic materials and be a risk to human health and the environment if badly handled or controlled. Additionally, industrial and extraction wastes often have characteristics that mean that they may pose particular risks for the environment, when compared with products. These are linked to the fact that whereas the content of products is generally specifically designed and controlled, the composition of wastes may be less clear.

This means that from an environmental point of view, it is extremely important that materials are correctly classified as wastes or not. Waste law protects the environment from the consequences of industrial waste in a number of ways, and notably through permitting and shipment procedures, and specific standards for the incineration of waste. If a material is not a waste, this does not mean that it falls completely out of the system of environmental protection set down in Community law. Product based regulation, and other legislation such as the proposed REACH Regulation aim at protecting human health and the environment from the potential environmental impacts of products and other materials that are not wastes.

3. THE APPLICATION OF THE EUROPEAN COURT OF JUSTICE CASE LAW

3.1. General notions around the definition of waste

The ECJ has consistently stated that the definition of waste must be interpreted widely, in order to be consistent with the aim of Directive 2006/12/EC, and with Article 174(2) of the EC Treaty which provides that Community policy on the environment is to aim at a high level of protection. The definition of waste in Directive 2006/12/EC makes reference to its Annex 1, and to the European Waste List in Commission Decision 2000/532/EC⁶. However, as both of these sources are indicative, the definition of waste essentially turns on the notion of ‘discard’.

The court has stressed on several occasions that whether a material is a waste or not depends on the specific factual circumstances, and that therefore the decision must be taken by the competent authority on a case by case basis.

Finally, it is important to note that even where a particular material satisfies the tests set out by the ECJ (and described in sections 3.3) in order to be considered as a non-waste, if it is in practice discarded, it must clearly be considered and treated as a waste.

3.2. Is the material concerned a production residue or a product?

In *Palin Granit*⁷, the ECJ stated that a production residue is something that is not the end product that the manufacturing process directly seeks to produce. In *Saetti*,⁸ the ECJ noted that where the production of the material concerned was “the result of a technical choice” (to deliberately produce such a material) it could not be a production residue.

Therefore, the first question to be asked when determining whether a material is waste or not is did the manufacturer deliberately choose to produce the material in question.

If the manufacturer could have produced the primary product without producing the material concerned but chose to do so, then this is evidence that the material concerned is not a production residue. Other evidence that the production of the material concerned was a technical choice could include a modification of the production process in order to give the material concerned specific technical characteristics.

The case of petroleum coke

In the case of *Saetti and Frediani*, the ECJ was asked to give an opinion on whether petroleum coke, a carbon based material produced in the refining of crude oil, was a waste or not. The court held that petroleum coke could not be classified as a production residue as the production of coke is the result of a technical choice, specifically intended for use as a fuel. They also held that even if petroleum coke was an automatic result of the refining process, if it was certain that the coke production in its entirety would be used, mainly for the same purposes as other substances (produced in the refining process), then petroleum coke was also a petroleum product, manufactured as such, and not a production residue.

⁶ As last amended by Council Decision 2001/573/EC, OJ L 203 28.7.2001 p. 18.

⁷ Case C-9/00 *Palin Granit Oy* (2002) ECR I-3533.

⁸ C-235/02, *Saetti* Order, 15th January 2004.

3.3. Conditions where a production residue would not be waste

Even where a material is considered to be a production residue, the Court has indicated that it is not necessarily a waste. The characteristics of the material in terms of its readiness for further use in the economy can mean that it should not be considered to be a waste.

In recent jurisprudence, (*Palin Granit* and following cases) the ECJ has set out a three part test that a production residue must meet in order to be considered as a by-product. The court stated that where the further use of the material was not a mere possibility but a certainty, without any further processing prior to reuse and as part of a continuing process of production, then the material would not be a waste. This test is cumulative – all three parts must be met. In addition to this test, the ECJ has noted that the use for which the by-product is destined must also be lawful - in other words that the by-product is not something that the manufacturer is obliged to discard or for which the intended use is forbidden under EU or national law (see Decision tree in Annex II).

3.3.1. *Is the further use of the material a certainty not a mere possibility?*

If there is a possibility that the material is in fact not useable, does not meet the technical specifications that would be required for it to be useable, or there is no market for that material, then it should continue to be considered as a waste. The waste status protects the environment from the potential consequences of this uncertainty. If it subsequently turns out that the waste can in fact serve a useful purpose, then the material will lose its waste status when it is ready for use as a recovered product (see *Mayer Parry*⁹).

In some cases, there may be the potential for a certain proportion of the material to be used, with the rest needing to be disposed of. If, in the case by case judgment of the competent authority, certain use cannot be guaranteed for all the material concerned then the material should start as a waste. However, the existence of long term contracts between the material holder and its subsequent users can be an indication that the material covered by the contract will be used and therefore that certainty of use is present.

Similarly, if the material is going to be stored for an indefinite amount of time, prior to a potential but not certain re-use, then it should be considered as a waste while it is being stored (*Palin Granit*).

3.3.1.1. Further use will bring a financial advantage to the waste holder

Where a manufacturer can sell the material concerned for a profit, this can indicate that it is more likely that such a material will certainly be used. (*Palin Granit*) However, this alone is not definitive – see previous case law confirming that waste can have an economic value. (*Vessoso and Zanetti*¹⁰, *Tombesi*¹¹). The Commission considers that it is also important to weigh up the costs of treatment of waste when considering this test, as there is a risk that a token price could be offered to have the material classified as non-waste, and therefore allow it to be treated outside of proper waste treatment facilities. However, a high price, in line with or above current market prices for the material, may indicate that the material is not waste.

⁹ C-444/00 *Mayer Parry* (2003) ECR I-6163.

¹⁰ Cases C-206/88 and 207/88, *Vessoso and Zanetti* (1990) ECR 1461.

¹¹ Joined cases C-304/94, C-330/94, C-342/94 & C-224/95 *Tombesi* (1997) ECR I-3561.

The Spanish Manure cases

In the joined cases of *Commission v Spain* (C-416/02 and C-121/03), the court held that manure will not be waste where it is used as soil fertiliser as part of a lawful practice of spreading on clearly identified parcels (regardless of whether the parcels are within or outside the agricultural holding that generated the effluent) and if its storage is limited to the needs of those spreading operations.

3.3.2. *Can the material be used again without any further processing?*

In some cases, this can be a difficult test to apply. Often, in the value chain of a by-product there is a chain of tasks that must be undertaken as part of the further use of the material: The material is produced, it may then be washed, dried, refined or homogenised, characteristics or other materials that are necessary for its further use may be added, its quality will be controlled and so on. Some tasks will be carried out on the production site of the manufacturer, some on the site of the next user, and some by intermediaries. To the extent that these tasks are an integral part of the production process (see next section), they do not prevent the material from being considered as a by-product.

The Court has found that if an additional recovery process is required before further use, even if such subsequent use is certain, this is evidence that the material is a waste until the process has been completed (*Avesta Polarit*¹²).

3.3.3. *As part of the continuing process of production?*

If, however, the material is made ready for a further use as an integral part of the continuing process of production, and is then effectively sent for such a further use, then it is a by-product, according to the test set down by the ECJ.

In this situation, the competent authority will need to decide whether the tasks described in the section above are **an integral part of the continuing process of production**. In doing so the Commission considers that they will need to make a distinction based on all the facts: the degree of readiness of the material for further use, the nature and extent of the tasks needed to prepare the material before further use, the integration of these tasks into the main production process and whether the tasks are being carried out by someone other than the manufacturer, could all be relevant. BREF documents could also be taken into consideration by the competent authority as guidance when deciding whether the tasks are an integral part of the continuing process of production. It should be noted that the approach set out by the Court in the *Palin Granit*, *Niselli*¹³ and *Spanish manure* cases indicates a narrow rather than a broad approach to the notion of production process.

If the material leaves the site or factory where it has been produced in order to undergo further processing then this may be evidence that such tasks are no longer a part of the same production process. However, with the increasing specialisation of industrial processes, this cannot be taken as definitive evidence. Next users and intermediated companies may be involved in preparing the material for further use, through carrying out the type of tasks described above in 3.3.2.

¹² Case C-114/01 *AvestaPolarit Chrome Oy* judgment 11 September 2003.

¹³ C-457/02, *Niselli*, order of 11th November 2004.

If the material is needed as part of the primary activity of the manufacturer then this is evidence that the material concerned is not a waste.

The case of the leftover rocks

In the cases of Avesta Polarit and Palin Granit, the Court was asked to settle in what circumstances leftover rock from mining and quarrying should be considered as a waste. The Court stated that where the rocks were being stored prior to a possible future use or a future waste treatment obligation, they would be waste. Where certain residues that could be physically identified were being stored prior to a potential but not certain re-use, without being processed, in order to fill in underground galleries for stability purposes as required for the principal activity of the mine (extraction of ore), they would not be waste.

3.4. Other factors used by the court to distinguish between waste and by-product

In *Arco Chemie*¹⁴, and in other similar jurisprudence, the ECJ lists a whole range of factors that may indicate that a material is a waste. None of these elements are necessarily conclusive, but some may be helpful in some circumstances.

3.4.1. *No other use than disposal can be envisaged, or the use has a high environmental impact or requires special protection measures*

As the ECJ noted, if a given material has no possible use, and therefore will have to be disposed of, it would seem normal that such a material would be considered waste from the moment of production. In some cases further use of the material is prohibited, or the material must be disposed of or recovered as a waste in an obligatory procedure. This could occur for environmental, safety or public health reasons. One example of EU legislation that could lead to it being obligatory to dispose of a given material or to treat it as waste is Directive 96/59 on PCBs/PCTs¹⁵. Equally, if the material does not meet product legislation standards for its potential use, then it should be treated as a waste until it is ready to meet such standards.

The issue of the potential for environmental damage from a given material, and the need for special environmental protection measures to be taken in order for the material to be used is more complex. A number of primary products also have a high potential for environmental damage, and require careful use in order not to damage the environment. However, following the ECJ position on interpreting the waste definition, if a by-product has a higher environmental impact than an alternative material or product that it replaces, this may affect the boundaries of the waste/non-waste decision in situations where a comparison is possible and relevant.

The contrary situation, the absence of a clear risk to the environment from a material, does not prove that it is not a waste. In *Palin Granit*, the ECJ considered that even if it was proven that the material in question does not pose any real risk to human health and environment; this was not a relevant criterion in order to consider that a material was not waste. This is logical – inert industrial waste dumped in an inappropriate area may pose no risk to human health or to the environment. However, it undoubtedly constitutes a nuisance and should be covered by the scope of the waste definition. Following on from this, the fact that a substance can be

¹⁴ Joined Cases C-418/97 & C-419/97 *ARCO Chemie* (2000) ECR I-4475.

¹⁵ O J L 243, 24.9.1996 P. 31-35.

recovered as a fuel in an environmentally responsible manner and without substantial treatment does not mean that the substance is not a waste (*Arco Chemie*). The waste definition exists to ensure that this environmentally responsible treatment is indeed carried out on wastes.

In the same case, the ECJ stated that neither the place of storage of a material or the composition of a material was relevant to whether the material was waste or not. In some cases – marble quarrying, for example – waste production residues such as off cuts can indeed be composed of exactly the same material as the primary product. However, if they are destined to be discarded, then they will still be waste.

3.4.2. The treatment method for the material in question is a standard waste treatment method

In some circumstances, the destination of the material can give a strong hint as to the status of that material. The ECJ has, however, also held that whether the operation that will be applied to the material is or is not a waste treatment operation listed in Annex IIA or IIB cannot provide the definitive answer on whether the material is waste or not (*Niselli*). This is inevitable, as several methods of treatment or disposal listed in the Annex could also be perfectly validly applied to a product, and vice versa. Notably, there is no way of distinguishing between the combustion of a fuel as a product and the combustion of a waste based on the treatment method.

3.4.3. The undertaking perceives the material as waste

In *Arco Chemie* the Court has noted that the perception of the material as waste could be a factor that could indicate that the material concerned was waste. However, the Commission considers that this test could encourage a negligent approach to waste law, by giving an advantage to businesses that are not aware of their legal obligations or who seek to avoid compliance with these obligations. In addition, as the notion is extremely subjective, it could lead to the concept of waste varying from one Member State to another.

3.4.4. The undertaking seeks to limit the quantity of material produced

Again in *Palin Granit*, the ECJ noted that if the undertaking seeks to limit the quantity of material produced this could be an indicator that the material is a waste. This is not definitive, as it is possible to seek to vary the quantities produced of a given material for factors related to cost, price and markets, rather than as a desire to minimise the quantities of a material that is to be discarded. Further, applying this criterion in a rigorous manner could dissuade companies from adopting waste prevention policies in some circumstances.

Annex 1 – examples of wastes and non-wastes

These examples are designed to illustrate some cases in which materials may be classified as wastes or not. They are taken from a number of different sectors, but are neither definitive nor comprehensive. There are many other examples that could have been used, and even the examples here may vary across the EU in some circumstances, notably if there is no certainty of use for a given by-product, or on the contrary, if use is certain for a material in a region or Member State, where this is not the case across the whole EU.

1. SLAGS AND DUSTS FROM IRON AND STEEL PRODUCTION

Blast furnace slag is produced in parallel with hot iron in a blast furnace. The production process of the iron is adapted to ensure that the slag has the requisite technical qualities. A technical choice is made at the start of the production process that determines the type of slag that is produced. Moreover, use of the slag is certain in a number of clearly defined end uses, and demand is high. Blast furnace slag can be used directly at the end of the production process, without further processing that is not an integral part of this production process (such as crushing to get the appropriate particle size). This material can therefore be considered to fall outside of the definition of waste.

In contrast, de-sulphurisation slag is produced due to the need to remove sulphur prior to the processing of iron into steel. The resulting slag is rich in sulphur, cannot be used or recycled in the metallurgical circuit and is therefore usually disposed of in a landfill. Another type of example is dust extracted from the steel production process when cleaning the air inside the plant. This is captured in filters via an extraction process. These filters can be cleaned and the metallic content returned to the economic cycle via a recycling operation. Both of these production residues are therefore wastes from the point of production with the iron content extracted from the filters ceasing to be waste once it has been recycled.

2. BY-PRODUCTS FROM THE FOOD AND DRINK INDUSTRY - ANIMAL FEED

A major use for by-products from the food and drink sector is animal feed. The production processes in numerous sectors (e.g. sugar production, oilseed crushing, starch production and malt production) generate materials that are used as feed material either directly by farmers or by the animal compound feed industry. Although not all production residues destined for animal feed are automatically non-wastes¹⁶, the above feed materials are produced deliberately in adapted production processes, or may not be produced deliberately but meet the cumulative by-product criteria of the court as their further use in animal feed is certain, without further processing outside of the production process of that material. In addition, the feed material is governed by legislation such as Regulation 178/2002 on food law¹⁷ and Directive 96/25/EC on the circulation and use of feed material¹⁸. In both cases, this material can therefore be considered to fall outside of the definition of waste.

¹⁶ (as per the position of the Commission before the court in pending case *Commission v Italy*, C-195/05 - the existence of specified technical characteristics and certain re-use is not enough on its own – the three cumulative elements of the ECJ jurisprudence must be applied).

¹⁷ OJ L 100, 8.4.2006, p. 3.

¹⁸ OJ L 123, 23.5.1996, p. 35-58.

3. BY-PRODUCTS FROM COMBUSTION – FLUE GAS DESULPHURISATION GYPSUM

Flue gas desulphurisation facilities remove sulphur from the flue gases that are produced when sulphurous fossil fuels are combusted in power plants, in order to prevent these emissions contributing to air pollution and acid rain. The resulting material, flue gas desulphurisation (FGD) gypsum is used for the range of uses that natural gypsum can be put to and notably the production of plasterboard. The process is modified and controlled to produce FGD gypsum of the required characteristics. In addition, use of the material is certain, without further processing prior to re-use and as part of an integrated production process.

A number of other coal combustion products can have further uses with little or no further processing. Some, however, are in practice regularly landfilled – lignite fly ash, for example. As there is therefore no certainty of use at an EU wide level, they do not fulfil the ECJ criteria across the EU and will therefore often be wastes, although in some local situations an application and therefore certainty of use may exist.

4. OFF CUTS AND OTHER SIMILAR MATERIAL

Sawdust, wood chips and off cuts from untreated wood is generated at saw mills or at secondary operations such as the manufacturing of furniture or pallets and packaging, along with the primary product, cut wood. These elements are then used as the raw material for the production of wood based panels such as chip board or in paper production. Use is certain, as part of an integral production process and without further processing other than being adapted to the appropriate size for being integrated into the final product.

In more general terms, excess material from a primary production process, or material that is deficient only in a cosmetic way but that is materially similar to the primary product, such as rubber compound and vulcanisation mix, cork shavings and pieces, plastic scrap and similar material may be seen as by-products. For this to be the case they must be able to be reused directly either back in the primary production process or in other integrated productions where reuse is also certain. Materials of this type can also be considered to fall outside of the definition of waste.

Where material of this kind requires a full recycling or recovery operation, or contains contaminants that need to be removed before it can be further used or processed, this would indicate that the material is a waste until the recycling or recovery operation is completed.

Annex II – a decision tree for waste versus by-product decisions

