

***Case No COMP/M.3213 -
UMICORE / OMG
PRECIOUS METAL
GROUP***

Only the English text is available and authentic.

**REGULATION (EEC) No 4064/89
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 29/07/2003

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 29/07/2003

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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EEC) No 4064/89 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

**MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION**

To the notifying party

Dear Madam and Sirs,

**Subject: Case No COMP/M.3213 – Umicore/OMG Precious Metals Group
Notification of 26.06.2003 pursuant to Article 4 of Council Regulation
No 4064/89¹**

1. On 26.06.2003, the Commission received a notification of a proposed concentration by which N.V. Umicore S.A. (“Umicore”, Belgium) acquires within the meaning of Article 3(1)(b) of Council Regulation No 4064/89 (“the Merger Regulation”), control of parts of the undertaking OM Group, Inc. (“OMG”, USA) by way of purchase of assets.
2. After examining the notification, the Commission has concluded that the notified operation falls within the scope of the Merger Regulation and that it does not raise serious doubts as to its compatibility with the common market.

I THE PARTIES

3. Umicore is an international metals and materials group whose activities include the production of high purity metals, alloys, cobalt compounds and germanium products, the production and supply of copper, and the provision of precious metals recycling services.
4. OMG is an international producer and marketer of value-added, metal-based speciality chemicals and functional materials. It comprises two functional business units: the

¹ OJ L 395, 30.12.1989 p. 1; corrigendum OJ L 257 of 21.9.1990, p. 13; Regulation as last amended by Regulation (EC) No 1310/97 (OJ L 180, 9. 7. 1997, p. 1, corrigendum OJ L 40, 13.2.1998, p. 17).

Base Metals Group and the Precious Metals Group. Only the latter is the subject of this transaction. The Precious Metal Group business unit produces added value products based on precious metals, in particular automotive catalysts. It is also active as a supplier of precious metals recycling services.

II. THE OPERATION

5. The proposed transaction involves the acquisition by Umicore of certain stock and assets of OMG relating to OMG's Precious Metal Group business unit ("PMG"). Under the terms of the purchase agreement dated 02.06.2003, Umicore has agreed to acquire PMG for € 643 million.

III. CONCENTRATION

6. Umicore will acquire the exclusive control of PMG. The operation is therefore an acquisition of sole control of PMG by Umicore within the meaning of Article 3(1)(b) of the Merger Regulation.

IV. COMMUNITY DIMENSION

7. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 billion² (€ 3,172 million for Umicore and € [...] million for PMG). Each of Umicore and PMG have a Community-wide turnover in excess of EUR 250 million (€ [...] million for Umicore and € [...] million for PMG), and they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.

V. RELEVANT PRODUCT MARKETS

8. Both parties are active in the precious metals recycling business. More specifically, both Umicore and PMG recover Platinum, palladium and rhodium (together the Platinum Group Metals, "PGMs"³) from automotive and chemical catalysts⁴. They also both recover gold and silver from various categories of raw materials. In addition, PMG is active in the manufacturing and sale of a wide range of added value products based on precious metals, in particular automotive and chemical catalysts.

² Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p25). To the extent that figures include turnover for the period before 1.1.1999, they are calculated on the basis of average ECU exchange rates and translated into EUR on a one-for-one basis.

³ The Platinum Group Metals also encompasses osmium, iridium and ruthenium. Platinum, palladium and, to a less extent, rhodium are the predominant recovered PGMs and are the only ones recovered by both Umicore and PMG.

⁴ A catalyst is a substance which triggers a chemical reaction but is chemically unchanged at the end of the reaction. Catalysts are integrated into exhaust pipes of automobiles to reduce pollution ("automotive catalysts") and also frequently applied in the petrochemical industry to facilitate crude oil processing ("chemical catalysts"). It is characteristic for catalysts that only small quantities are needed to induce a chemical reaction and that they can be used repeatedly before they eventually lose their catalytic properties.

A. Recycling activities

9. Umicore is of the opinion that the precious metals recycling business could be segmented according to the following criteria:
- (i) The different stages of the recycling process : collection of the raw materials, pre-smelting, smelting, and refining ;
 - (ii) The recovered metals: PGMs, gold, silver, etc. ;
 - (iii) The materials to be recycled: by-products from non-ferrous industries (e.g. drosses, mattes, anode slimes), as opposed to various consumer and industrial recyclable products (mainly electronic scrap (PCs, cell phones, etc.), and automotive and chemical catalysts).
10. The parties' activities overlap primarily in pre-smelting, smelting and refining of PGMs gold and silver bearing materials. Umicore is not active at the collection stage of the European recycling business, while PMG is only indirectly active at this stage through a 50/50 joint venture with Rhodia, Cycleon, a collector of automotive catalysts which carries out its activities in the EEA. Collectors are mainly dealing with electronic scrap and automotive catalysts⁵. Usually, they also provide some initial separation and sorting services, as for example dismantling of used PCs to recover the electronic circuit boards, or de-canning of automotive catalysts to remove the catalysts from their housing. None of the parties provide such services.
11. The notifying party explains that pre-smelting, smelting and refining correspond each to a distinct level of the recycling process, requiring different technologies and facilities. This would be true for each category of precious metals to be recovered and for each category of precious metals bearing materials. Pre-smelting (or preparation) consists in the homogenisation of the raw materials, usually by milling, mixing or shredding, and then sampling and assaying to determine the precious metals content. Smelting (or concentration) consist in dissolving the precious metals bearing materials which have been previously homogenised in another metal, usually copper or nickel, in order to bring up the precious metals concentration level and separate any impurities into slag. At the end of the smelting process, the material has been transformed into bullion. Finally, refining (or purification) consists in extracting the precious metals from the bullion obtained at the latter stage through various procedures and then treat it to produce saleable metals, i.e. with a degree of purity usually ranging from 99.5% to 99.95%.
12. The respondents to the Commission investigation have widely confirmed that the segmentation of the recycling process proposed by Umicore is accurate and correspond to industry practices. Some respondents have also explained that certain raw materials with high concentration of precious metals (high grade materials), such as certain chemical catalysts, may be directly refined, without being smelted beforehand. However, they do not put into question the accuracy of the segmentation proposed by Umicore.

⁵ Chemical catalysts and industrial by-products are usually not collected by independent contractors as the batch sizes are typically so that a contract is directly concluded with the recycler within the framework of so-called "closed loop" arrangements, whereby the precious metals recovered are used to produce a new material that is returned to the customer.

13. Since Umicore and PGM both recover PGMs and gold and silver, it is first necessary for the purposes of this case to establish whether there are separate relevant product markets for the recovery of these various categories of precious metals. The notifying party is of the opinion that PGM recycling services, on the one hand, and gold and silver recycling services, on the other, constitute separate markets. In substance, it explains that the actual recycling process for gold and silver is not identical to that for PGMs. First, at the pre-smelting stage, the determination of the content in precious metals of a given raw materials require different sets of analytical equipment for gold and silver and for PGMs. Second, at the smelting stage, while it might be technically possible to use the same facility to handle PGMs or gold and silver bearing materials, it would not be economic rationale to do so, because the metal return and/or the processing costs would not be competitive. Indeed, while smelting of gold and silver raw materials is relatively easy, and could therefore be done by using well-known and relatively cheap electrolysis processes, smelting of PGMs raw materials involve more sophisticated and expensive chemical separation processes. Finally, at the refining stage, the final purification step is metal specific. The notifying party is also of the opinion that no further distinction should be done within the Platinum Group Metals or between gold and silver.
14. The Commission's investigation has widely confirmed the views of the notifying party in this respect. In particular, almost all respondents have confirmed that at the final refining stage, different technologies are required to recover PGMs, on the one hand, and gold and silver, on the other. Most of the respondents have also indicated that usually the same facilities and technologies could be used to smelt materials which contain gold, silver and PGMs, for example electronic circuit board. However, these respondents have also explained that it is only done for those specific materials and that, for economic reasons, PGMs bearing materials and gold and silver bearing materials are not handled in the same smelting facilities. Furthermore, no respondent was of the opinion that further distinctions should be done within the Platinum Metals Group or between gold and silver.
15. Therefore, it can be concluded that the provision recycling services for PGM bearing materials, on the one hand, and the provision of such services for gold and silver bearing materials, on the other, constitute separate product markets.
16. As indicated above, a further segmentation of the precious metals recycling business could be made between the various categories of precious metals bearing materials. Amongst these products, a major distinction could be made between by-products from non-ferrous industries and consumer and industrial recyclable materials.
17. With regard to PGMs, PMG only recovers these precious metals from automotive or chemical catalysts, whereas Umicore recovers them from a wide range of raw materials.
18. It is therefore necessary to determine whether there are separate relevant products markets for the provision of PGMs recycling services for catalysts (automotive catalysts and/or chemical catalysts) or whether the relevant product markets also encompasses the provision of such services in order to recover PGMs from other categories of raw materials (industrial by-products, and/or other consumer and industrial scraps).

19. The notifying party is of the opinion that there are distinct product markets for PGMs pre-smelting and smelting services for industrial by-products (such as slimes), on the one hand, and for consumer and industrial recyclable materials (such as automotive catalysts), on the other. In particular, it explains that the technologies and the facilities involved at each of these two stages of the recycling process are different for these two main categories of raw materials. At the pre-smelting stage, the appropriate homogenisation and sampling method vary depending on the consistency of the raw materials. For some of these materials (automotive catalysts), homogenisation is done via the use of a “ball mill”, producing a powder, subsequently mixed in a blender, from which a sample is taken for assaying purposes. Other materials (slimes), which are usually delivered in a liquid form, will be sampled via the use of a hollow spear that extracts a raw sample from the slimes (automatic spear sampling). The raw sample will subsequently be homogenised in a special mixer after which a mixed primary sample is prepared. At the smelting stage, recyclers willing to handle industrial by-products need facilities and technologies to deal with residues (usually referred to as impurities) that are released in the course of the process, such as selenium, tellurium, arsenic, cadmium and mercury. As a result, recyclers willing to handle industrial by-products will need to comply with stringent environmental regulations, as these products are potentially hazardous waste.
20. However, the notifying party explains that at the refining stage - which involves the recovering of the precious metals from a standard bullion - no distinction has to be made based on the precious metals bearing materials used at the start of the recycling process.
21. The Commission’s investigation has largely confirmed Umicore’s view in this respect. In particular, the respondents have explained that the PGMs content of industrial by-products and of consumer and industrial recyclable materials are very different (by-products are usually high-grade products, whereas consumer and industrial recyclable materials are low grade), and that their impurity contents are also very different. It derives from this that the technologies and facilities used to pre-smelt and smelt these two categories of raw materials in order to recover PGMs are very different. All respondents to Commission’s investigation have confirmed that at the final refining stage, no distinction should be made based on the raw materials used at the start of the recycling process.
22. Within the consumer and industrial recyclable materials category, the notifying party explains that different technologies and facilities are necessary to handle the various categories of raw materials at the pre-smelting and smelting stages. At the pre-smelting stage, the way the different raw materials are homogenised is different : while certain products (e.g. automotive and chemical catalysts) are milled into powder, some (e.g. spent printed circuit boards, which are the major part of electronic scrap) are shredded in pieces. At the smelting stage, different technologies and facilities are also necessary to handle different categories of consumer and industrial recyclable products. In particular, smelting electronic scraps implies the installation of specific technical equipment to deal with the toxic fumes (e.g. dioxins) that are released in the course of the smelting process. Similarly, equipment specific to the various categories of industrial and consumer recyclable materials are required to deal with the various metals (e.g. copper, lead, iron, bismuth) released in the course of their smelting. As mentioned above, at the refining stage - which involves the recovering of the precious

metals from a standard bullion - no distinction is made based on the consumer and industrial recyclable materials used at the start of the recycling process.

23. A large majority of respondents to the Commission's market investigation have confirmed Umicore's view in this respect. In particular, these respondents have outlined that the various categories of consumer and industrial recyclable materials contain different kinds and/or grade of impurities which require different and specific technologies and facilities or equipment at both the pre-smelting and smelting stages. Again, all of these respondents have confirmed that at the final refining stage, the same technologies and facilities can be used to recover PGMs regardless of the raw materials involved at the start of the process.
24. Finally, a last question is whether pre-smelting and smelting of automotive catalysts and of chemical catalysts should be considered as belonging to separate product markets. The notifying party is of the opinion that due to differences of consistency and precious metal content (chemical catalysts are usually high grade materials whereas automotive catalysts are typically low grade), different technologies are used to pre-smelt automotive and chemical catalysts. At the smelting stage, Umicore explains that the same technologies and facilities could be used to handle automotive and chemical catalysts - although smelting chemical catalysts require certain additional equipment that are not necessary for smelting automotive catalysts. In any case, these equipment only involve relatively small investment (from € 100.000 to € 2 million), so that their acquisition and installation would not constitute a real barriers to entry.
25. A large number of respondents to Commission's investigation have confirmed that pre-smelting chemical and automotive chemical require different technologies and facilities. Regarding the smelting stage, these respondents have confirmed that handling chemical catalysts requires additional equipment than those necessary to handle automotive catalysts. In particular, it would be necessary to invest in an incineration facility and in associated waste disposal equipment. It remains unclear whether the costs and the time that would be necessary to install such facilities and equipment would constitute a real barrier to entry, so that supply-side substitutability would be limited.
26. It can therefore be concluded that pre-smelting services for automotive and chemical catalysts constitute two distinct product markets. As far as smelting is concerned, it is sufficient, for the purposes of this case, to envisage two alternative market definitions : a general market definition that would encompasses the provision of smelting services for both categories of catalysts (automotive and chemical), and a narrower market definition that would only consists of the provision of smelting services for chemical catalysts.
27. For the purposes of this case, it can therefore be concluded that there are separate relevant product market for the provision of PGMs pre-smelting services for automotive catalysts, PGMs pre-smelting services for chemical catalysts and PGMs refining services. As far as PGMs smelting services are concerned, two alternative market definitions will be envisaged : a general market for automotive and chemical catalysts and a narrower market for chemical catalysts.
28. Both parties also provide recycling services (pre-smelting, smelting, and refining) for the recovery of gold and silver. The supply comes from what the industry terms "secondary sources" which typically are dental and jewellery scrap, electronic scrap,

and other by-products from photographic and jewellery industry. Umicore explains that both parties are not active in the same product market as far as pre-smelting and smelting are concerned. Indeed, whilst PMG recovers gold and silver from high-grade bearing materials (upwards of 400,000 parts per million of gold or silver), Umicore recovers these precious metals from low-grade bearing materials (between 5 to 20,000 parts per million). According to the notifying party, recycling raw materials containing low concentration of gold and silver (typically electronic scrap and industrial by-products) implies to handle large volumes, whereas the recovery of these precious metal from high grade raw materials (mainly dental and jewellery scrap and by-products from photographic industry) imply to deal with small volumes.

29. For these reasons (differences in the features of the raw materials and in the volumes to be handled), the technologies and facilities involved in these processes would be different, so that they should be considered as distinct product markets. In particular, Umicore explains that the raw materials being handled by PMG do not need to be smelted, because smelting is only necessary to bring up the concentration of precious metal in raw materials. Therefore, PMG do not have significant smelting activities or capacity.
30. Finally, the notifying party explains that the customer base of recyclers dealing with high grade and that of recyclers dealing with low-grade raw materials are different. Whilst PMG's customer base mainly consists of small customers, like jewellery manufacturers, Umicore's customers primarily consists of large industrial companies or investment banks.
31. The Commission's investigation has confirmed that gold and silver high-grade raw materials do not need to be smelted, since their content in precious metal is sufficient as to allow them to be directly refined. As far as pre-smelting and refining are concerned, a large majority of respondents to the Commission's investigation are of the opinion that grades of silver and gold do not have a significant influence on the technologies and facilities that can be used to handle raw materials at these two stages.
32. However, the precise delineation of the gold and silver recycling services can be left open for the purposes of this case, since under any possible market definition, the proposed transaction does not raise serious doubts as to its compatibility with the common market.

B. Catalysts

33. PMG derives [an important part] of its revenue from the manufacture and sale of automotive catalysts for passenger cars, motorcycles and light and heavy-duty vehicles. PMG primarily supplies the catalysts to automotive OEM's. It is one of the largest suppliers world-wide. PMG also manufactures chemical catalysts. Umicore does not manufacture automotive catalysts or chemical catalysts.
34. Only the market for the production of automotive catalysts is vertically affected by the proposed transaction. The notifying party contends that there is one relevant product market for automotive catalysts, which encompasses all automotive catalysts irrespective of the type of engines vehicle (petrol or diesel). According to Umicore although automotive catalysts intended for different type of engines are not substitutable to each other, there is a high supply-side substitutability since the same production processes, know-how and facilities are used to manufacture both types of

automotive catalysts. The Commission's investigation has largely confirmed that point. However, for the purpose of this case, the precise definition of the market for automotive catalysts can be left open, because in any conceivable market delineation the proposed transaction does not raise competitive concerns.

35. The market for the supply of automotive catalysts is vertically affected for two reasons. First, both parties supply the precious metals (platinum, palladium and rhodium) which are used in the production of automotive catalysts⁶. Indeed, Umicore and PMG are suppliers of precious metal, either on their own account (when they happen to be the owners of the precious metal recovered from the recycling process) or on behalf of their recycling services customers, (when these customers ask them to sell the recovered metals on the market on their behalf). Second both Umicore and PMG provide recycling services for automotive catalysts, which might arguably give them an advantage in the sale of automotive catalysts.

VI. RELEVANT GEOGRAPHIC MARKETS

A. Recycling services

36. Umicore is of the opinion that the markets for the provision of precious metals recycling services are EEA-wide, if not world-wide. Umicore's statement is based on the fact that a large number of companies active in this business operate on an EEA-wide or even on a world-wide basis, and that competition amongst them takes place on an international scale. This is because from a customer's point of view, the choice of a supplier of precious metals recycling services depends on three key elements : return time, precious metal return rate and charges of the services. According to the notifying party, transportation costs (which typically represent no more than 10% of the value of the metal to be recovered) and possible delay in the return of the precious metals could easily be outweighed by possible differences in the precious metals return rate and charges of the services amongst suppliers located in different geographic areas.
37. As regards possible impediments to international movement of the raw materials (in particular outside the EEA) resulting from environmental law⁷, Umicore explains that most precious metals bearing materials, including automotive catalysts, are usually not considered as hazardous and therefore their transport within, into and out the EU is not restricted. As regards chemical catalysts, the notifying party contends that most of them belong to the so-called "green list", and are therefore not subject to restrictions. Only those that have been contaminated by hazardous substances might fall in the so-called "amber" or "red" categories of waste. This means that companies that possess such chemical catalysts in an OECD country may have to obtain prior regulatory approval to transport these materials and cannot ship them for recycling purposes to a non-OECD country. However, [...] Umicore explains that it is possible for the owners of such

⁶ The main metal used for diesel catalysts is platinum, while platinum, palladium and rhodium are used for petrol catalysts.

⁷ In particular Basel Convention on the "Control of Transboundary Movements of Hazardous Wastes and their Disposal" of March 1989, OECD Decision C 92/39 and Council Regulation (EEC) No 259/93 of 01.02.1993 on the supervision and control of shipments of waste within, into and out of the European Community, OJ L 030 , 06/02/1993 p.1.

chemical catalysts to apply a pre-treatment removing any hazardous components. In any event, according to the notifying party, the percentage of chemical catalysts that would fall under the “amber” or “red” list constitute the clear minority, although it is not in a position to give a precise estimate.

38. A very large majority of the respondents to the Commission investigation has confirmed that in their view, these markets are world-wide. With regard to the legal impediments to cross-border movement, the respondents have confirmed that the Basel Convention constitutes a restriction to the provision of recycling services on a world-wide basis. However, most of these respondents are of the opinion that it does not constitute a significant one since only a small proportion of the precious metals bearing materials fall under the lists of products subject to restrictions as to their transport. In addition, it also appears that at the end of the smelting stage, the possible hazardous components have been removed from the raw material (which has been transformed into bullion), so that there is no legal impediments to their cross-border transport. No respondents have claimed that these markets are smaller than EEA-wide.
39. It can therefore be concluded that the markets for PGM, gold and silver refining services are world-wide. With regard to the markets for the other recycling services (PGM pre-smelting for catalysts, PGM smelting for catalysts, gold and silver pre-smelting, and gold and silver smelting), the question whether they are EEA-wide or world-wide can be left open for the purposes of this case, since in any of these alternative geographic market definitions, the proposed transaction does not raise serious competition concerns.

B. Automotive catalysts

40. Umicore is of the opinion that the market for automotive catalysts is world-wide, mainly because the same automotive catalysts are used in vehicles throughout the world, import duties and transportation costs are low, and customers source their requirements via central purchasing.
41. The Commission’s investigation has largely confirmed that point. No respondent has claimed that the market for automotive catalysts would be smaller than EEA.
42. However, for the purposes of this case, the question whether the market for automotive catalysts is EEA-wide or world-wide could be left open, since in any of these alternative market definitions, the proposed transaction does not raise competition concerns.

VII. ASSESSMENT

A. Precious metals recycling services

• Pre-smelting, smelting and refining of gold and silver bearing materials

43. The parties' combined market share⁸ (based on volumes of gold and silver recovered) is estimated to amount to [15-25]% (PMG: [10-20]% and Umicore: [5-10]%) at each stage of the recycling process world-wide. For reasons mentioned above, the parties' activities do not significantly overlap with regard to smelting.
44. Because it is almost impossible for the notifying party to determine where its competitors source the volumes of gold and silver bearing materials they handle, it is only in a position to give its best estimate of the total size of the EEA market and, consequently, of the shares of the main competitors in the market thereof. According to Umicore, the parties will have a combined EU-market share of approx. [25-35]% (Umicore : [10-20]% and PMG : [15-25]%) for gold and silver pre-smelting and smelting services (refining is a world-wide market). Other main competitors in the EEA include Metalor ([15-25]%), Johnson Matthey ([15-25]%) and Norddeutsche Affinerie ([15-25]%) At least the two latter competitors are large companies active world-wide.
45. In view of the above market situation, where at least four main players will remain post-merger, the Commission considers that it is very unlikely that the proposed transaction would result in higher prices or otherwise deteriorated market conditions. This view is shared by the respondents to the Commission's investigation. No customers or competitors have expressed any concerns about the effects of the proposed transaction on either their own business or the competitive structure of the market.
46. It can therefore be concluded that the proposed transaction does not raise serious doubts as to its compatibility with the common market with regard to the markets for the provision of pre-smelting, smelting and refining services of gold and silver bearing materials.

• PGMs pre-smelting services for automotive and chemical catalysts :

47. The parties' combined share (based on volumes) of the market for the provision of PGMs pre-smelting services for catalysts (automotive and chemical catalysts) is less than 15% on a world-wide basis (Umicore: [<10]% and PMG: [<10]%). Their world-wide combined share remains in the same range if automotive and chemical catalysts are considered separately ([5-15]% and [5-15]% respectively). Other main competitors include US-based undertakings A-1 (market share of approx. [25-35]%), Techemet

⁸ All the parties' market shares include captive sales, i.e. recovery of precious metals for their own account. [...]. The notifying party is unable to provide free market data since it has no reliable estimates of competitors captive business. Therefore, all the market shares mentioned in this decision may include captive sales. However, these figures are representative of the relative position of the competitors in the affected markets for recycling services, since a large number of these competitors, especially the largest ones, manufacture added value products based on precious metals and recover these metals for their own needs.

(market share of approx. [10-20]%) and Multimetco (market share of approx. [5-15]%), and German-based company Demet (market share of approx. [<10]%). These figures apply to PGMs pre-smelting services for both automotive and chemical catalysts. Market shares for chemical catalysts and automotive catalysts separately are expected not to differ significantly from those for both categories of catalysts, as it is the case for both PGM and Umicore.

48. Because it is almost impossible for the notifying party to determine where its competitors source the volumes of catalysts they pre-smelt, it is only in a position to give its best estimate of the total size of the EEA market and, consequently, of the shares of the main competitors in the market thereof. Based on Umicore's best estimates, the combined share of the parties of the EEA market for PGMs pre-smelting services for catalysts would be of approx. [30-40]% (Umicore: [15-25]% and PMG: [10-20]%). If chemical and automotive catalysts are considered separately, their combined market shares remain in the same range ([30-40]% and [35-45]% respectively).
49. The main competitors in the EEA are Demet ([20-30]%) and A-1 ([15-25]%), which are large companies active world-wide. Other competitors include Engelhardt ([<10]%) and Techemet ([<10]%), who are both large companies active world-wide, and other companies focusing more on European-based customers, such as, Jacomij (The Netherlands), and Remetal (Spain), with market shares of [<10]% for each of them, and smaller companies, such as Cecilor (France), Moxba (The Netherlands) and PMI (USA, but with facilities in Europe). These figures apply to PGMs pre-smelting services for both automotive and chemical catalysts. Shares of competitors of the EEA-markets for chemical catalysts and automotive catalysts separately are expected not to differ significantly from those of the EEA-market for both categories of catalysts, as it is the case for both PGM and Umicore.
50. The respondents to Commission's investigation have confirmed that it is difficult to estimate the size (in terms of volumes or value) of the European market for pre-smelting services for catalysts, and consequently the shares of the different players in this market. The Commission received only received estimates from two companies. The first refers to PGM pre-smelting services (in volumes) provided to customers located in the EEA for all categories of raw materials. The other estimate refers to all PGM recycling services (pre-smelting, smelting and refining) for automotive catalysts on a world-wide basis (i.e. for all customers, regardless of their location). It is therefore impossible to confront these data to those provided by Umicore.
51. In view of the above market situation in the EEA, where at least four main players will remain post-merger, the Commission considers that it is very unlikely that the proposed transaction would result in higher prices or otherwise deteriorated market conditions. This view is shared by the respondents to the Commission's investigation. No customers or competitors, except one small collector of spent catalysts active only in one Member State, have expressed any concerns about the effects of the proposed transaction on either their own business or the competitive structure of the market. As regards the objections raised by this customer, they consist mainly in the statement that there would be no alternative suppliers in the EEA. These objection could be dismissed since, as mentioned above, there are several other suppliers of PGM pre-smelting services for automotive and chemical catalysts active in the EEA, with facilities located either in the EEA or abroad.

52. In addition, it must be underscored that customers of PGM pre-smelting services for automotive and chemical catalysts generally have a significant level of bargaining power vis-à-vis suppliers. Indeed, customers typically have large batches of catalysts to be recycled and/or are large companies themselves. Chemical catalysts are generally owned by large petrochemical companies which operate the plants where such catalysts are used. As already mentioned, these companies usually have large lots of spent chemical catalysts, so that they directly conclude recycling agreements with the suppliers. As regards automotive catalysts, customers are generally independent collectors or OEMs, mainly car manufacturers. Collectors' job consists in regrouping large lots of spent automotive catalysts by buying them from individual scrap yards, in order to obtain better prices and conditions from suppliers than individual companies with small lots would have. Car manufacturers also have large lots of spent automotive catalysts, mainly from used cars trade in. Petrochemical companies, collectors and car manufacturers are sophisticated customers with a sufficient level of bargaining power to take advantage from competition between suppliers for volumes. In this respect, it should be highlighted that the homogenisation part of the pre-smelting industry (i.e. milling, mixing or shredding) is characterised by a high proportion of fixed costs which strongly encourages suppliers to fill their spare capacity.
53. Finally, even if the market for the provision of PGM pre-smelting services for catalysts were considered to be EEA-wide, the Commission's investigation has clearly revealed⁹ that there are no insurmountable obstacles for customers located in the EEA to ship their spent catalysts abroad, and that a large proportion of customers will probably do so, should the price in Europe be significantly above that charged outside the EEA. This statement applies indistinctly for automotive and chemical catalysts. This shows that suppliers located in Europe are subject to at least potential competition from suppliers based outside the EEA.
54. It can therefore be concluded that the proposed transaction does not raise serious doubts as to its compatibility with the common market with regard to the markets for the provision of PGM pre-smelting services for automotive and chemical catalysts.

- **PGMs catalysts smelting services**

55. The combined share of the parties (based on volumes) of the market for PGMs smelting services for catalysts (automotive and chemical) is below 15% on a world-wide basis (Umicore: [<10]% and PMG: [<10]%). Other major competitors include Nippon-PGM ([15-25]%), South-African company Impala ([10-20]%), US-based undertakings Techemet ([10-20]%), Gemini ([10-20]%), and Multimetco ([5-15]%).
56. If chemical catalysts were considered separately, the combined share of the parties would not be significantly different (it would be in the range of [<15]%, based on volumes).
57. For the reasons mentioned above, Umicore is only in a position to give its best estimate of the size of the EEA market for PGM smelting services for catalysts and consequently of the shares of the main competitors in the market thereof. Based on the notifying party's best estimate, the combined share of the parties (based on volumes) for PGM services for

⁹ See paragraphs 36-39.

catalysts (automotive and chemical) is in the range of [30-40]% in the EEA (Umicore: [10-20]% and PMG: [15-25]%). Main competitors in the EEA include German company Heraeus ([10-20]%) US-based undertakings Engelhard and Multimetco ([5-15]% each) and UK company Johnson Matthey ([5-15]%). All these competitors are large companies active world-wide.

58. If chemical catalysts are considered separately, the notifying party estimates the parties will have a combined EEA-market share of approx. [25-35]% (Umicore : [15-25]% and PMG: [10-20]%). Umicore also expects that the market shares of its competitors in the EEA-market for chemical catalysts are not significantly different than those in the EEA-market for PGM smelting services for both categories of catalysts (automotive and chemical).
59. The respondents to Commission's investigation have confirmed that it is difficult to estimate the size (in terms of volumes or value) of the European market for smelting services for catalysts, and consequently the shares of the different players in this market. The Commission received only received estimates from two companies. The first refers to PGM pre-smelting services (in volumes) provided to customers located in the EEA for all categories of raw materials. The other estimate refers to all PGM recycling services (pre-smelting, smelting and refining) for automotive catalysts on a world-wide basis (i.e. for all customers, regardless of their location). It is therefore impossible to confront these data to those provided by Umicore.
60. In view of the above market situation in the EEA, where at least four main players will remain post-merger, the Commission considers that it is very unlikely that the proposed transaction would result in higher prices or otherwise deteriorated market conditions. This view is shared by the respondents to the Commission's investigation. No customers or competitors, except one small collector of spent catalysts active only in one Member State, have expressed any concerns about the effects of the proposed transaction on either their own business or the competitive structure of the market. As regards the objections raised by this customer, they consist mainly in the statement that there would be no alternative suppliers in the EEA. These objections could be dismissed since, as mentioned above, there are several other suppliers of PGM smelting services for automotive and chemical catalysts active in the EEA, with facilities located either in the EEA or abroad.
61. In addition, it must be underscored that customers of PGM smelting services for automotive and chemical catalysts generally have a significant level of bargaining power vis-à-vis suppliers. Indeed, customers typically have large batches of catalysts to be recycled and/or are large companies themselves. Chemical catalysts are generally owned by large petrochemical companies which operate the plants where such catalysts are used. As already mentioned, these companies have usually large lots of spent chemical catalysts, so that they directly conclude recycling agreements with the suppliers. As regards automotive catalysts, customers are generally independent collectors, OEMs, mainly car manufacturers, or suppliers of pre-smelting services outsourcing the provision of smelting services. Collectors' job consists in regrouping large lots of spent automotive catalysts by buying them from individual scrap yards, in order to obtain better prices and conditions from suppliers than individual companies with small lots would have. Car manufacturers also have large lots of spent automotive catalysts, mainly from used cars trade in. Suppliers of pre-smelting services often outsource the provision of smelting and refining services. This allow them to offer their clients a "one stop shop" for the supply of all recycling services. Petrochemical

companies, collectors, car manufacturers and pre-smelting suppliers outsourcing the provision of smelting services are all sophisticated customers with a sufficient level of bargaining power to take advantage from competition between suppliers for volumes. In this respect, it should be highlighted that the PGM smelting industry is characterised by a high proportion of fixed costs which strongly encourages suppliers to fill their spare capacity.

62. Finally, even if the market for the provision of PGM smelting services for catalysts were considered to be EEA-wide, the Commission's investigation has clearly revealed¹⁰ that there are no insurmountable obstacles for customers located in the EEA to ship their spent catalysts abroad, and that a large proportion of customers will probably do so, should the price in Europe be significantly above that charged outside the EEA. This statement applies indistinctly for automotive and chemical catalysts. This shows that suppliers located in Europe are subject to at least potential competition from suppliers based outside the EEA.
63. It can therefore be concluded that the proposed transaction does not raise serious doubts as to its compatibility with the common market with regard to the market for the provision of PGM smelting services for automotive and chemical catalysts.

- **PGM refining services**

64. The parties combined market share is around [<15] % in terms of capacity on a world-wide basis (Umicore: [5-10]% and PMG: [5-10]%). Main competitors include UK companies Johnson Matthey ([20-30]%) and Inco ([15-25]%), German undertaking Heraeus ([15-25]%) and US company Engelhardt ([5-15]%). Umicore is only in a position to give rough estimates of market shares in terms of volumes. Based on these estimates, the parties combined share would be in the range of [15-25]%, whereas the main competitors would be two South African companies Amplats ([40-50]%) and Impala ([25-35]%).
65. The respondents to Commission's investigation have confirmed that it is difficult to estimate the size (both in terms of volumes and value) of the world-wide market for PGMs refining services, and consequently the shares of the different players in this market. The Commission only received estimate from one respondent concerning the volume it refined over the last year (2002). Based on Umicore's estimate of the total size of the market, it would give this competitor a share of the market slightly higher than that the one put forward by the notifying party.
66. For the reasons stated above, it can be concluded that the proposed transaction does not raise serious doubts as to its compatibility with the common market with regard to the market(s) for the provision of PGM refining services.

B. Automotive catalysts

67. PMG's share of the EEA automotive catalyst market is estimated to be [15-25]% (world-wide) and [25-35]% (in the EEA). Other main competitors include UK

¹⁰ See paragraphs 36-39.

company Johnson Matthey ([30-40]%), and US-based undertakings Engelhard ([20-30]%) and Delphi ([10-20]%).

68. There would appear to be a vertically affected market primarily because Umicore (unlike PMG) is a net supplier of the precious metals, notably palladium, platinum and rhodium, which are used in the production of automotive catalysts. However, the merged entity would be unable to meet PMG's total demand for such metals. In this respect, it should be stressed that both parties are not free, as suppliers of precious metals recycling services, to dispose of all the metals they recover, because they have to return to their customers the main part of it. PMG estimates that, each year, it needs to purchase on the market [...] tons of platinum, [...] tons of palladium and [...] tons of rhodium from the market for the production of its added value metal based products, primarily automotive catalysts. In 2002, Umicore sold on the market on its own account or on behalf of its customers [...] tons of platinum, [...] tons of palladium and [...] tons of rhodium. These figures are representative of the quantities of PGMs at the disposal of Umicore each year.
69. It appears therefore that the merged entity will continue to be a net buyer of PGMs on the market and thus would not be in a position to foreclose or otherwise hinder manufacturers of added value products based on PGMs, in particular manufacturers of automotive catalysts, from being supplied with PGMs, at normal commercial conditions post transaction. In any case, it should be noted that the combined share of the parties of the markets for the sale of platinum, palladium and rhodium is below 15% ([5-10]%, [5-10]% and [10-20]% respectively)¹¹. It should also be recalled that the Commission found in previous decision that these markets are world-wide¹² and the Commission's investigation has confirmed that there are no impediments to the supply of PGMs on a world-wide basis.
70. As far as gold and silver are concerned, the merged entity will represent less than 10% of the markets for the sale of these precious metals ([0-5]% for gold and [5-10]% for silver). Furthermore, Umicore will be unable to meet PMG's needs for silver. Indeed, PMG needs to purchase on the market approx. [...] tons of silver each year for its downstream manufacturing activities. In 2002, Umicore sold on the market [...] tons of silver on its own account or on behalf of its customers. The merged entity will thus remain a net buyer of silver. As regards gold, PMG needs to purchase on the market approx. [...] tons each year for its downstream manufacturing activities. In 2002, Umicore sold on the market [...] tons of gold on its own account or on behalf of its customers. Even though the merged entity will be a net seller of gold, its share of the market for the supply of gold will be very low (less than [0-5]%). It is therefore unlikely that the manufacturers of added value products based on gold and silver will be foreclosed or otherwise hindered from being supplied with these precious metals at normal commercial conditions.
71. The automotive catalysts market is also vertically affected by the proposed transaction because of the merged entity's new position in the market for the provision of automotive catalysts recycling services. It should first be underscored that pre-merger PMG was already active in the automotive catalysts recycling business, and that the

¹¹ Figures for 2002.

¹² Decision M. Case No IV/M.619 - Gencor/Lonrho, point 72.

merger will not change anything in this respect. In addition, a large majority of respondents to the Commission's investigation are of the opinion that it is not necessary to be active in the recycling business in order to be a credible supplier of automotive catalysts. Finally, the merged entity's new position in the automotive recycling business would not confer on the merged entity a significant competitive advantage since the main manufacturers of automotive catalysts, in particular Johnson Matthey and Engelhardt, are also suppliers of such services.

72. For reasons stated above, the Commission concludes that the present transaction is unlikely to create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it.

VIII. CONCLUSION

73. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EEC) No 4064/89.

For the Commission
Mario MONTI
Member of the Commission