

Anticipated joint venture between Kemira GrowHow Oyj and Terra Industries Inc., involving their UK fertiliser and process chemicals businesses

The OFT's decision on reference under section 33(1) given on 26 January 2007. Full text of decision published 7 February 2007.

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**Please note that square brackets indicate text or figures which have been deleted or replaced with a range at the request of the parties and third parties for reasons of commercial confidentiality and clarity.**

## **PARTIES**

1. **Kemira GrowHow Oyj** (KGH Oyj) is listed on the Helsinki Stock Exchange and has its headquarters in Helsinki. The business was wholly owned by Kemira Oyj until October 2004, when it was demerged and listed. KGH Oyj operates through two business units – Crop Cultivation and Industrial Solutions - and has manufacturing facilities in Belgium, Finland, France, Hungary, Lithuania and the UK. KGH Oyj's UK plant at Ince, Cheshire, is active in the manufacture of fertilisers and a number of process chemicals (nitric acid, anhydrous ammonia, aqueous ammonia, liquid carbon dioxide and ammonium nitrate (AN) for non-agricultural applications). It also imports limited volumes of fertiliser from KGH Oyj. In addition, it supplies certain utilities (steam and electricity).
2. **Terra Industries Inc.** is listed on the New York Stock Exchange and its business involves the manufacture of nitrogen-based fertilisers (and related products) and the manufacture of methanol. It has manufacturing facilities in the US, Canada, Trinidad and the UK. Its UK plants at Billingham and Severnside are active in the manufacture of AN, which is sold primarily for use as a fertiliser but also for other uses, as well as a number of process chemicals (nitric acid, anhydrous ammonia, aqueous ammonia, liquid

carbon dioxide and AN for non-agricultural applications). In addition, it supplies certain utilities (water, steam and electricity) from its plants.

## TRANSACTION

3. The proposed transaction is a joint venture between KGH Oyj and Terra Industries Inc., combining their UK and Republic of Ireland (RoI) fertiliser and process chemicals businesses. The joint venture will be a full-function entity and is expected to run on a [ ] basis. Both parties will contribute the entirety of their UK operations to the joint venture (the RoI businesses are supplied via exports from the UK).
4. The parties submitted that neither of them is currently making, or projected to make, acceptable levels of return from their UK fertiliser businesses. The rationale for the proposed joint venture, therefore, is to establish a viable long term UK-based manufacturer of nitrogen fertilisers by creating a larger business with a lower cost base than either party is currently able to achieve independently. They further submitted that UK customers will benefit from the continued existence of a UK based manufacturer although not necessarily from a reduction in prices given the constraint that imports impose.<sup>1</sup> The parties did not provide any firm evidence to satisfy the OFT's failing firm defence criteria, including evidence that either party is in such a parlous situation that without the transaction it and its assets would exit the market in the near future.<sup>2</sup>
5. Process chemicals and utilities are - in most cases - inputs and/or by-products of the fertiliser production process. The parties' utilities customers and a large proportion of process chemicals customers are captive (that is, supplied by long term pipeline arrangements). The OFT does not consider that any merger effects arise in relation to captive customers and they are not considered any further. However, the effects of the transaction in relation to the parties' merchant process chemicals businesses are considered in the assessment below.

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<sup>1</sup> In this context, the OFT notes that efficiencies that increase rivalry can be assessed as an integral part of the substantial lessening of competition analysis. However, for the OFT to take account of such efficiencies, there must be compelling evidence that these are likely to be passed on to customers (Mergers: Substantive Assessment Guidance, paragraphs 4.32 to 4.35). The parties indicated that the latter is not necessarily the case here.

<sup>2</sup> See *Ibid* paragraphs 4.36 to 4.39.

6. The parties submitted a satisfactory notification on 14 November 2006. The administrative deadline is 26 January 2007.

## **JURISDICTION**

7. As a result of this transaction Terra Nitrogen (UK) Limited (Terra UK) and Kemira GrowHow Holdings Limited, Kemira GrowHow UK Limited and Kemira GrowHow Ireland Limited (together referred to as Kemira GrowHow UK) will cease to be distinct. Both parties will contribute to the joint venture a business with over £70 million of annual UK turnover (£[ ] million in the case of Terra UK and £[ ] million in the case of Kemira GrowHow UK), so the turnover test in section 23(1)(b) of the Enterprise Act 2002 (the Act) is satisfied. The OFT therefore believes that it is or may be the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

## **FERTILISERS**

### Market definition

8. The parties overlap in the production and supply of straight nitrogen fertilisers<sup>3</sup> (that is, AN, urea, calcium ammonium nitrate (CAN), urea ammonium nitrate (UAN) and ammonium nitrate with sulphur) and complex fertilisers<sup>4</sup>.
9. The parties submitted that all straight nitrogen fertilisers form part of the same product frame of reference because they all serve the basic purpose of providing farmers with a straight source of nitrogen. This has been confirmed by many third parties who considered all straight nitrogen fertilisers to be substitutable and in particular, considered urea (an alternative source of nitrogen) to be a substitute for AN.
10. However some third parties suggested that customers may face costs when switching between liquid (i.e. UAN) and solid fertilisers, in particular

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<sup>3</sup> 'Straight' nitrogen fertilisers provide one main nutrient, nitrogen.

<sup>4</sup> 'Complex' fertilisers provide a combination of the nutrients nitrogen (N), phosphorous (P) and potassium (K) and in some cases other nutrients as well. Complex fertilisers are produced in one of two ways: (i) by 'compounding' (that is, by combining the nutrients N, P and K in a single granule by means of a chemical reaction); or (ii) by 'blending' (that is, by mixing mechanically different granules containing either N, P or K to form a desired composite of N, P and K).

relating to storage and spraying equipment. However evidence submitted to the OFT indicates that most farmers will already have liquid spreading equipment which is used to spread pesticides and that leasing liquid storage tanks is relatively inexpensive.

11. In addition, some customers considered prilled/granulated urea to be a less efficient source of nitrogen than other straight nitrogen fertilisers. Research by DEFRA<sup>5</sup> has shown that urea can cause a variety of problems in certain crops including crop damage, delays in the rate of maturation, reductions in yields and changes in size distribution.
12. Even if it is the case that there is a lower degree of substitutability between the different types of straight nitrogen fertiliser for a small proportion of customers, the OFT does not consider that the parties would be able to price discriminate effectively against these customers, particularly since a significant proportion of sales are made via intermediaries. Therefore, on the balance of evidence before it, the OFT considers all straight nitrogen fertilisers to comprise a distinct product frame of reference.
13. Within complex fertilisers, it may be possible to distinguish between blends and compounds (see footnote 4 above). The evidence before the OFT indicates that compound fertilisers are generally regarded as superior to blended fertilisers and command a slightly higher price. However, the majority of third parties commented that they regard compound and blended fertilisers as close substitutes. Therefore the OFT has considered both types of complex fertilisers together.
14. The parties submitted that the supply of straight nitrogen fertilisers and the supply of complex fertilisers (compound and blended) fall into separate market segments. Third party responses in relation to this point were mixed: some agreed with this delineation, although others commented that they would consider switching from straight nitrogen to complex fertiliser in response to a five per cent to ten per cent increase in the price of straight fertiliser and vice versa.
15. Therefore, the OFT has taken a cautious approach and has considered straight and complex fertilisers separately in its competitive assessment.

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<sup>5</sup> Evaluation of Urea based fertilisers, a report for DEFRA Projects NT2601 and NT2602: A Bhogal, P Dampney, K Goulding, October 2003.

16. The parties submitted that the primary production/supply of straight nitrogen fertilisers is international in scope. In particular, they noted the high level of straight nitrogen fertiliser imports into the UK. In reaching its conclusion on the relevant geographic frame of reference in relation to straight and complex fertiliser, the OFT has relied on the factors discussed in more detail in the horizontal assessment below, in particular, the extent to which the price of UK-manufactured fertiliser is constrained by imports rather than solely by competition between the parties.

Horizontal issues

17. As the proposed joint venture will result in a reduction from two to one UK fertiliser manufacturers, the price, reliability and availability of imported fertiliser to UK customers are of particular relevance to this case. Post-merger, imports will be the only source of competitive constraint on the merged entity.

18. In relation to straight nitrogen fertiliser, although they are the only two UK producers, the parties estimate that they will have the following shares of supply<sup>6</sup> post-merger:

	Great Britain (GB) <sup>7</sup>	EU
Kemira GrowHow UK	[10 per cent-20 per cent]	[0 per cent-10 per cent]
Terra UK	[25 per cent-35 per cent]	[0 per cent-10 per cent]
Joint Venture (post-merger)	[40 per cent-50 per cent]	[0 per cent-10 per cent]

Source: the parties

19. According to data from the Office of National Statistics (ONS), imports over the nine years 1996 to 2005 have varied between 28 per cent and 53 per cent, with imports accounting for 44 per cent of the total supply in 2005 (the most recent year for which figures are available). Imports of AN

<sup>6</sup> All information relating to share of supply and value of the market is based on best estimates supplied by the parties (unless otherwise stated).

<sup>7</sup> Neither party supplies agricultural AN in Northern Ireland because its use is prohibited by law (it is banned for security reasons).

and urea into the UK have been sourced from the EEA, Russia and South America. The parties' own data estimates imports as constituting [50-60] per cent of supply in the UK in 2005/6. In particular, the parties submitted that the production of urea (an imported straight nitrogen fertiliser) has been increasing and is expected to increase even further as new plants in the Middle East begin operating. The International Fertiliser Association has estimated that future increases in the supply of urea will outstrip increases in demand, resulting in a worldwide surplus of 20,500,000 tonnes by 2010. This compares to a total UK demand for urea (for agricultural purposes) of 212,000.<sup>8</sup>

20. Both parties price domestically produced fertiliser at a slight premium (approximately [ ]) to imports, but benchmark their prices according to the international price of urea, which acts as an international benchmark for all fertiliser. The parties provided the OFT with price correlation data that demonstrate a clear correlation between the domestic and import prices of straight nitrogen fertiliser. These data indicate strong correlations between domestic AN prices and imported urea prices, between domestic AN prices and imported AN prices and between domestic AN prices and a variety of domestic CAN prices in other European countries. On their own, these high correlations may not be sufficient to demonstrate that domestic and import prices constrain each other, since they might be due to changes in common input costs (in this case the cost of gas). However, when viewed alongside the significant volume of imports over the previous nine years, they provide useful evidence that domestic prices are constrained by imports.
21. The OFT tested the proposition that imports are a sufficiently strong constraint at all times and found that:
  - Most third party responses have indicated that customers are willing to pay a small premium (approximately one per cent to three per cent) for domestically produced fertiliser over imported fertiliser. Some third parties commented that this is reflective of the higher quality product that the parties offer. The parties submitted that they price against imported product at all times, and consider this to be a market with a range of product offerings in competition with each other, with purchasing decisions being based on the normal price and quality considerations. In addition, they submitted that even if some customers

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<sup>8</sup> This is according to the consultant group FertEcon.

are willing to pay a premium, they would be unable to identify these customers and discriminate against them, particularly since the parties predominantly supply farmers via distributors, merchants and buying groups.

- Both parties offer discounts to customers who buy fertiliser early in the fertiliser year (which runs from June to May), which may indicate that they possess a degree of market power. However, the evidence before the OFT is consistent with the parties' submissions that importers face the same issue as that faced by the parties in persuading customers to make early season purchases in order to overcome manufacturing and distributional capacity constraints during the peak fertiliser application season. Furthermore, the parties provided evidence to demonstrate that their share of supply decreases as their discounts are reduced throughout the year. In addition, the parties submitted that the practice of offering discounts is necessary because in order to remain efficient their plants must be operated at full capacity throughout the year and storing large volumes of fertiliser in order to balance demand and supply would be expensive.
- The Monopolies and Mergers Commission (MMC) considered a merger between these two businesses in 1991.<sup>9</sup> In its report, the MMC concluded that the merger would leave import levels at between 25 per cent and 40 per cent. The report questioned whether this level would be sustainable in the future. However, it is now clear that import levels have not fallen in the manner contemplated by the MMC. In addition, the evidence before the OFT indicates that the competitive environment has changed significantly since the MMC report. Among the changes since 1991 are: the increasing cost advantages of producers in low cost countries; the large number of foreign producers dedicated to exporting that have emerged since 1991; and the closure of the Yara GB plant in 2000, which reduced GB/UK production capacity and increased the need for imports. In addition, the parties submitted that since 1991 there has been an increase in the quality and reliability of imports, an increased level of price sensitivity among farmers and a material contraction in the wholesale base (that is, a reduction in the number of national merchants and blenders) which has resulted in larger, more

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<sup>9</sup> Kemira Ojy and Imperial Chemical Industries plc: A report on the proposed merger, 1 January 1991 (Cm 1406).

sophisticated buyers (for example, farmer buying groups and farm management companies).

22. The OFT considers that the high price correlation between domestic and imported fertiliser, coupled with the consistently high level of imports over the past nine years offer evidence that domestic AN prices are constrained by the prices of imported AN and urea. This supports the proposition that the relevant geographic frame of reference is wider than GB. On the balance of evidence before it, the OFT considers that customers would be willing and able to increase their volumes of imported produce in response to a five per cent to ten per cent price increase (and probably a lower price increase) by the joint venture, and that imports will therefore continue to constrain the parties' behaviour post-merger. Therefore, the OFT does not consider that any competition concerns arise in relation to the supply of straight nitrogen fertilisers.
23. In relation to complex fertilisers, post-merger the parties will have a combined share of supply of [20-30] per cent (with an increment of [0-5] per cent) in GB. Terra UK is a relatively small producer of complex fertilisers. The parties submitted that Kemira GrowHow UK faces significant competition for the supply of complex fertilisers from Yara, which supplies (through imports) approximately [15-25] per cent of the complex fertiliser consumed in GB, as well as from blenders (the three largest accounting for approximately [10-20] per cent, [10-20] per cent and [0-10] per cent of this segment). As in the case of straight fertilisers, the OFT considers that the relevant geographic frame of reference may be wider than GB, however this is not critical to the assessment. In the light of Terra UK's limited share of supply and the existence of established rivals, including Yara as an importer, the OFT does not consider that any competition concerns arise in relation to complex fertiliser.
24. The majority of third parties who responded to the OFT's investigation were unconcerned about the effects of this merger in relation to the UK supply of fertilisers. Any competition concerns that were raised about the merger have been addressed in the economic assessment above.
25. Therefore the OFT does not consider that the merger gives rise to competition concerns in relation to the supply of straight nitrogen fertilisers or complex fertilisers to customers in the UK.



## NITRIC ACID

26. Nitric acid is a very powerful oxidising agent and is widely used in the chemical industry. Typical uses are in the manufacture of fertiliser (such as AN), dyestuffs and explosives. Nitric acid is produced and supplied in different concentrations.
27. Terra UK manufactures nitric acid at the following concentrations – 59 per cent, 60 per cent, 69 per cent and 70 per cent. It also distributes (but does not produce) 98 per cent nitric acid.
28. Kemira GrowHow UK manufactures 58 per cent and 60 per cent concentration nitric acid and supplies small quantities of 70 per cent and 98 per cent concentration nitric acid which it purchases from KGH Oyj for on-sale within GB. KGH Oyj supplies 98 per cent concentration nitric acid to customers within GB.
29. The parties submitted that they only overlap in the manufacture and supply of 'approximately 60 per cent' concentration nitric acid (that is, 58 per cent, 59 per cent and 60 per cent concentration nitric acid) which they contended are broadly equivalent to one another and can be employed in the same end uses.
30. Third party responses indicate that in general, significantly different concentrations of nitric acid (that is, concentrations differing by more than one per cent or two per cent) are not readily substitutable either on the demand or the supply side. In relation to 69 per cent and 70 per cent concentration nitric acid, a number of third parties commented that they considered these to be substitutable. The parties made the point, however, that regulations treat 70 per cent concentration nitric acid in the same way as 98 per cent concentration nitric acid; however, since Kemira GrowHow UK does not produce either 69 per cent or 70 per cent concentration nitric acid, this point is irrelevant for the assessment. Therefore, the OFT has considered the supply of approximately 60 per cent concentration nitric acid, the supply of 69 per cent to 70 per cent concentration nitric acid and the supply of 98 per cent concentration nitric acid to be three distinct product frames of reference.

31. The parties submitted that the relevant geographic frame of reference in relation to 58 per cent to 60 per cent concentration nitric acid is likely to be no wider than the UK. The OFT's investigation has found this to be the case because transport costs are a considerable proportion of the total costs that would be involved in supplying imported product in the UK. This has been confirmed by a third party.
32. However, both 70 per cent and 98 per cent concentration nitric acid are imported into the UK from KGH Oyj's plant in Belgium (although imported volumes of 70 per cent concentration nitric acid are very small and the product is only supplied to [ ]). On the other hand, one third party commented that transport costs for importing these products are high – amounting to approximately 40 per cent of the total cost of the products in the case of 98 per cent concentration nitric acid. The OFT has taken a cautious approach and has considered the competitive effects of the merger in relation to 70 per cent and 98 per cent concentration nitric acid both on the basis of a UK frame of reference and also on the basis that the relevant frame of reference may be wider than the UK. However no conclusion need be drawn as no concerns arise on either basis.

#### 98 per cent concentration nitric acid

33. Terra UK does not produce 98 per cent nitric acid itself. Instead Terra UK obtains supplies of this product from a customer of its 69 per cent concentration nitric acid. This customer produces 98 per cent concentration nitric acid from the 69 per cent concentration nitric acid supplied by Terra UK. Terra UK then sells this 98 per cent concentration to [ ] in the RoI. Kemira GrowHow UK has a share of supply of [0-10] per cent (that is supplied by KGH Oyj) and the remaining [90-100] per cent is accounted for by KGH Oyj direct.
34. The OFT considered whether Terra UK could be viewed as a potential competitor to Kemira GrowHow UK within the UK market for 98 per cent concentration nitric acid. However, Terra UK submitted that it has only sold this concentration of nitric acid [ ] in the last five years to [ ] UK customer. It further submitted that it would not consider supplying UK customers again because it is not economic for it to do so (due to high transport costs). Therefore, in light of Kemira GrowHow UK's small share of supply in this segment and the limited potential of Terra UK as a competitor, the

OFT does not consider that the proposed merger raises any unilateral effects in this segment.

35. As a supplier of 98 per cent concentration nitric acid, the OFT has considered whether Terra UK could be regarded as a potential competitor to KGH Oyj and Kemira GrowHow UK in the UK and therefore whether the merger raises any concerns in relation to co-ordinated effects. However, for the reasons set out above, the OFT does not believe that Terra UK is a realistic entrant to the UK market for 98 per cent concentration nitric acid. Therefore, the merger will not increase the scope for co-ordinated effects in this market.
36. Therefore the OFT does not consider that the merger gives rise to competition concerns in relation to the supply of 98 per cent concentration nitric acid in the UK.

69 per cent to 70 per cent concentration nitric acid

37. In relation to 69 per cent to 70 per cent concentration nitric acid, the OFT considers that there is no significant overlap between the parties pre-merger. Terra UK currently holds a [90-100] per cent share of supply in this segment and Kemira GrowHow UK supplies the remaining [0-10] per cent. Kemira GrowHow UK does not produce nitric acid at this concentration, but purchases it from KGH Oyj for onward supply to [ ]. Kemira GrowHow UK submitted that it would not be commercially viable for it to begin producing nitric acid at this concentration.
38. [ ]
39. The OFT considered whether Kemira GrowHow UK could be considered to provide a competitive constraint on Terra UK. However, in the light of the lack of competition between the parties pre-merger and the significant transport costs that would be involved which would not be offset by profits, the OFT does not consider Kemira GrowHow UK currently to provide a competitive constraint on Terra UK.
40. For similar reasons, the OFT does not consider that the merger raises any concerns in relation to co-ordinated effects through the removal of KGH Oyj as a potential competitor to Terra UK.

41. Therefore, the OFT does not consider that the merger raises any competition concerns in relation to 69 per cent to 70 per cent concentration nitric acid.

Approximately 60 per cent concentration nitric acid

42. In relation to approximately 60 per cent concentration nitric acid, post-merger the parties will have a 100 per cent share of supply in the UK (with an increment of [25-30] per cent). The merger will therefore result in a reduction from two to one in the manufacture of nitric acid in the UK. The value of merchant sales in this segment is approximately [less than £5 million].
43. The OFT has not received any evidence in this case to indicate that entry in this segment is expected to be sufficient in time, scope or likelihood to deter or defeat attempts by the merged entity to exploit the reduction in rivalry flowing from the merger. The parties have not contested this view. Furthermore, all third parties who responded to the OFT's investigation raised concerns about the effects of the merger in this segment.
44. In the absence of any countervailing factors, the OFT therefore considers that there is a realistic prospect of a substantial lessening of competition in relation to the supply of approximately 60 per cent concentration nitric acid to customers in the UK.

## **ANHYDROUS AMMONIA**

45. Ammonia is a compound of nitrogen and hydrogen. Anhydrous ammonia is used only commercially and is produced by compressing ammonia gas to form a liquid. It is classified as toxic and dangerous to the environment. Anhydrous ammonia is supplied in two low temperature liquid grades in the UK: standard and premium. The parties submitted that these grades are used in different applications, and that customers would not regard these grades as being ready and economic substitutes for one another. In relation to supply-side substitutability, however, both standard and premium grade anhydrous ammonia can be produced using generally the same equipment.
46. A number of third parties who responded to the OFT's investigation either contested the delineation between different grades of anhydrous ammonia

or were simply confused by the distinction. In addition, based on the evidence available to it in this case, the OFT considers supply-side substitutability to be relatively easy. Therefore, in this case the OFT has considered both grades to form part of the same product frame of reference.

47. The parties submitted that the relevant geographic frame of reference in relation to anhydrous ammonia is no wider than the UK. Third party responses confirmed that imports of anhydrous ammonia are unlikely. Therefore the OFT considers the relevant geographic frame of reference to be national in scope.
48. Post-merger the parties will have a 100 per cent share of supply in the UK (increment [35-40] per cent). The merger will therefore result in a reduction from two to one in the manufacture of anhydrous ammonia in the UK. The value of merchant sales in this segment is approximately [less than £5 million].
49. The OFT has not received any evidence in this case to indicate that entry in this segment is expected to be sufficient in time, scope or likelihood to deter or defeat attempts by the merged entity to exploit the reduction in rivalry flowing from the merger. The parties have not contested this view. Furthermore, third parties who responded to the OFT's investigation raised concerns about the effects of the merger in this segment.
50. In the absence of any countervailing factors, the OFT therefore considers that there is a realistic prospect of a substantial lessening of competition in relation to the supply of anhydrous ammonia to customers in the UK.

## **AQUEOUS AMMONIA**

51. Aqueous ammonia (or ammonia solution) is produced by dissolving ammonia in water and is used in a wide range of applications at different concentrations. The parties produce aqueous ammonia at the strongest concentration level, that is, 33 per cent to 34 per cent. In addition, Kemira GrowHow UK produces small quantities of 25 per cent concentration aqueous ammonia.

52. On the evidence available to it in this case, the OFT considers supply-side substitutability between different strengths of aqueous ammonia to be relatively easy as they all originate from the 33 per cent to 34 per cent concentration. Therefore, in this case the OFT has considered all concentrations of aqueous ammonia to form part of the same product frame of reference.
53. The parties submitted that aqueous ammonia is easier to handle than ammonia gas, and is thus more readily transportable. However third parties commented that imports of aqueous ammonia are not feasible due to high transport costs. Therefore the OFT considers the relevant geographic frame of reference to be national in scope.
54. Post-merger the parties will have a 100 per cent share of production in the UK (increment [30-35] per cent). The merger will therefore result in a reduction from two to one in the manufacture of aqueous ammonia in the UK. The value of merchant sales in this segment is approximately [less than £5 million].
55. The OFT has not received any evidence in this case to indicate that entry in this segment is expected to be sufficient in time, scope or likelihood to deter or defeat attempts by the merged entity to exploit the reduction in rivalry flowing from the merger. The parties have not contested this view. Furthermore, all third parties who responded to the OFT's investigation raised concerns about the effects of the merger in this segment.
56. In the absence of any countervailing factors, the OFT therefore considers that there is a realistic prospect of a substantial lessening of competition in relation to the supply of aqueous ammonia to customers in the UK.

## **AMMONIUM NITRATE FOR NON-AGRICULTURAL APPLICATIONS**

57. In addition to its use for agricultural purposes, AN is also used in the production of explosives and fireworks (so-called 'technical' or 'non agricultural' applications). The parties submitted that it is not meaningful to assess the supply of AN for non-agricultural applications separately from the bulk of the AN market, which consists mainly of use in fertiliser. This is because the AN sold for agricultural and non-agricultural applications has

the same basic make-up, is produced on exactly the same equipment, and in exactly the same format; all that is different is the branding.<sup>10</sup>

58. AN used by technical customers is typically sold at a premium (typically [ ] per cent) to agricultural AN, which the parties submitted is justified by a higher service level and the fact that technical customers tend to purchase in smaller quantities.
59. On the supply side, the parties submitted that the production and supply process is the same irrespective of the end use. AN for agricultural and non-agricultural applications is produced at the same plant during the same production run and either sold in bulk or bagged. The parties further submitted that domestic and imported agricultural AN prices are explicitly taken into account in price negotiations with technical customers. In addition, the parties provided evidence to demonstrate that the correlation between Kemira GrowHow UK's average price of agricultural AN sold to technical customers and Terra UK's average price of AN intended for agricultural use was the same as the correlation between Kemira GrowHow UK's and Terra UK's average prices of AN intended for agricultural use. The parties submitted that although technical customers cannot obtain AN from agricultural merchants due to FIAS<sup>11</sup> regulations on the traceability of AN in the supply chain, they can obtain AN directly from other producers or suppliers within and outside of the UK and also from traders. This would tend to suggest that the supply of AN for agricultural and non-agricultural applications should form part of the same product frame of reference.
60. However some customer responses received by the OFT in this investigation indicate that not all agricultural AN is identical. For example, two third parties referred to an anti-caking agent that is mixed into imported agricultural AN which makes this particular product unsuitable for certain technical applications. Third parties have also pointed to high costs, security problems and strict rules on traceability as factors that make imports of AN for non-agricultural applications difficult (in contrast to AN for agricultural applications). Most technical customers commented that they would not switch from domestic supply to imports in response to a five per cent to ten per cent increase in price. In addition, there are only a small number of customers who use AN for non-agricultural applications

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<sup>10</sup> The parties noted that porous AN (or low density AN) is sometimes referred to as technical grade AN, however neither of the parties produce this in the UK.

and these tend to source directly from the parties due to regulatory restrictions (for example, the FIAS regulations mentioned above) relating to the sources from which AN for non-agricultural applications may be purchased. The OFT considers that technical customers are easily identifiable and this would enable the parties to price discriminate between them and other customers. Therefore, the OFT has considered the supply of AN for non-agricultural applications separately from the supply of AN for agricultural applications.

61. Post-merger the parties will have a 100 per cent share of supply in the UK (increment [15-20] per cent). The merger will therefore result in a reduction from two to one manufacturers in the UK. All third parties that responded to the OFT's investigation raised concerns about the effects of the merger in relation to this segment.
62. Therefore, on the basis of the evidence currently before it, the OFT cannot be confident that the loss of direct competition arising from the merger would be adequately compensated by the constraints imposed by imports. The OFT therefore concludes that there is a realistic prospect of a substantial lessening of competition in relation to the supply of AN for non-agricultural applications in the UK.

## **LIQUID CARBON DIOXIDE**

63. The evidence before the OFT in this case indicates that there are no realistic substitutes for liquid carbon dioxide in those segments where it is utilised. Therefore the OFT considers this to comprise a distinct frame of reference.
64. The parties submitted that the relevant geographic frame of reference for liquid carbon dioxide is wider than the UK. This is because liquid carbon dioxide is currently imported into the UK by a third party. The OFT's investigation has confirmed that one third party imports liquid carbon dioxide from Norway and the Netherlands, which indicates that the frame of reference may be as wide as the EEA. On the other hand, the OFT considers that there are significant barriers to entry for importers, mainly due to the cost of creating the necessary infrastructure, including that of an import terminal as well as access to specialised ships. Therefore, the

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<sup>11</sup> Fertiliser Industry Assurance Scheme.



OFT considers that the immediate competitive constraints on the parties include other domestic suppliers of liquid carbon dioxide and also those EEA suppliers that have the necessary infrastructure to supply the UK.

65. Terra UK has a UK share of production of [50-60] per cent which it sells to three distributors – [ ]. Air Liquide is also a major supplier of liquid carbon dioxide representing some [25-35] per cent of UK supply from three plants. The remaining [10-20] per cent of UK supply is accounted for by imports.<sup>12</sup> Kemira GrowHow UK currently manufactures liquid carbon dioxide for Air Liquide at Air Liquide's largest UK liquefaction plant, which is located on and tied to Kemira GrowHow UK's site at Ince, Cheshire. [ ]
66. The OFT's investigation identified a number of concerns about the possible unilateral and co-ordinated effects arising from this transaction in this segment. The OFT considers that post-merger the joint venture may have an incentive to restrict or reduce the volumes supplied to Air Liquide within the terms of the existing contract at Ince. Third party responses have commented that imports are capacity constrained and although Air Liquide produces carbon dioxide at other plants, Ince is clearly its largest source of supply, so such a volume reduction may be profitable in raising prices generally.
67. In addition, the OFT has not been able to discount the risk that post-merger, the joint venture and Air Liquide may have the incentive and ability to co-ordinate output. In particular, the joint venture may have access to information relating to Air Liquide's input costs and output volumes at Ince; this increased transparency may facilitate price increases in the downstream markets for liquid carbon dioxide.
68. Furthermore, the joint venture and Air Liquide may have an incentive to re-negotiate the terms of the agreement in order to allow the joint venture to take a share of the profits from the sales of liquid carbon dioxide produced at Ince and to allow both the joint venture and Air Liquide to benefit from any price increases, which would be profitable due to capacity constraints facing competitors.
69. In addition, the evidence before the OFT indicates that post-merger, the joint venture may also have an incentive to terminate the agreement with

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<sup>12</sup> These figures are based on the parties' estimates.

Air Liquide [ ] thus creating a risk that supply to the market will be reduced. However the parties submitted that even if post-merger the joint venture were to terminate its agreement with Air Liquide, there would continue to be other sources of liquid carbon dioxide through other UK producers and imports. Furthermore, the parties submitted that there was scope for new entry in this segment. However, as mentioned above, the evidence before the OFT in this case indicates that importers are capacity constrained and although new sources of liquid carbon dioxide may be available in the future (e.g. due to new bio-fuels plants), it is not clear when this would be offered or how much extra capacity would become available.

70. Given the concerns expressed above, the OFT believes that the merger may alter the incentives of the parties such that the joint venture may act unilaterally (and reduce or restrict the volumes supplied to Air Liquide, or terminate the agreement with Air Liquide) or act together with Air Liquide in a manner which would lead to an increase in prices. In addition, third parties who responded to the OFT's investigation raised concerns about the effects of the merger in this segment. The OFT, therefore, believes that it may be the case that the merger may be expected to lead to a substantial lessening of competition in the UK supply of liquid carbon dioxide.

## **ASSESSMENT**

71. This transaction concerns an anticipated joint venture between KGH Oyj and Terra Industries Inc., involving their UK and Rol fertiliser and process chemicals businesses. The joint venture's main business will be the manufacture and supply of fertilisers (straights and complex). Although the merger will represent a reduction from two to one producers of straight fertilisers in the UK, the weight of evidence before the OFT in this case supports a finding that the relevant geographic frame of reference is wider than GB. In particular, the OFT considers that imports will continue to act as a sufficient constraint on the parties post-merger. Therefore the OFT does not consider that any competition concerns arise in relation to this segment. Similarly, in complex fertilisers the parties will continue to face competition from imports (primarily through Yara) and some substantial blenders. Again, the OFT does not consider that any competition concerns will arise in this sector.

72. Process chemicals are - in most cases - inputs and/or by-products of the fertiliser production process and constitute a much smaller proportion of the overall value of the proposed transaction. In relation to approximately 60 per cent concentration nitric acid, anhydrous ammonia and aqueous ammonia, the parties will have a 100 per cent share of production in the UK post-merger. The merger will therefore result in a reduction from two to one manufacturers in the UK. The OFT has not received any evidence to indicate that entry in these segments is expected to be sufficient in time, scope or likelihood. Furthermore, the majority of third parties who responded to the OFT's investigation raised concerns about the effects of the merger in these segments.
73. Therefore, the OFT believes that it is or may be the case that the merger may give rise to a substantial lessening of competition in relation to the supply of approximately 60 per cent concentration nitric acid, anhydrous ammonia and aqueous ammonia to customers in the UK.
74. In relation to the supply of AN for non-agricultural applications, again, post-merger the parties will have a 100 per cent share of supply of in the UK (increment [15-20] per cent). The merger will therefore result in a reduction from two to one UK manufacturers. While the parties contended that AN for non-agricultural applications is exactly the same as that for agricultural purposes and that technical customers could source through imports, all third parties that responded to the OFT's investigation raised concerns about the effects of the merger in relation to this segment. Therefore, in the light of these unresolved concerns, the OFT believes that it is or may be the case that the merger may give rise to a substantial lessening of competition in relation to the supply of AN for non-agricultural applications in the UK.
75. In relation to liquid carbon dioxide, the OFT's investigation raised a number of concerns about the possible unilateral and co-ordinated effects of this transaction in this segment. The OFT believes that the change in incentives arising from the creation of the joint venture might lead to higher prices. Therefore, the OFT believes that it is or may be the case that the merger may give rise to a substantial lessening of competition in the supply of liquid carbon dioxide in the UK.

76. Consequently, the OFT believes that it is or may be the case that the merger may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

## UNDERTAKINGS IN LIEU

77. Where the duty to make a reference under section 33(1) of the Act applies, pursuant to section 73(2) of the Act the OFT may, instead of making such a reference, and for the purpose of remedying, mitigating or preventing the substantial lessening of competition concerned or any adverse effect which has or may have resulted from it or may be expected to result from it, accept from such of the parties concerned undertakings as it considers appropriate.
78. The OFT has therefore considered whether there might be undertakings in lieu of reference which would address the competition concerns outlined above. The OFT's *Mergers Substantive Assessment Guidance* states that, 'undertakings in lieu of reference are appropriate only where the competition concerns raised by the merger and the remedies proposed to address them are clear cut, and those remedies are capable of ready implementation.' (Paragraph 8.3).
79. The OFT recognises that the joint venture's main business will be the manufacture and supply of fertiliser, in respect of which the OFT has concluded that competition concerns do not arise. Furthermore, the OFT accepts that the value of the markets where it has found there to be a realistic prospect of a substantial lessening of competition are small as a proportion of the value of the markets at issue. The OFT has, therefore, considered the parties' undertakings in lieu proposals carefully, in order to assess whether they are clear cut and capable of ready implementation.
80. The parties offered a set of undertakings at the issues meeting on a 'without prejudice' basis. In relation to approximately 60 per cent nitric acid, anhydrous ammonia and aqueous ammonia, the parties proposed to outsource Kemira GrowHow UK's nitric acid and ammonia supply activities in the UK. [See end note 1] [ ]

- [ ]

81. The OFT concluded that this proposal would be insufficient to remedy the competitive harm that would result from the proposed joint venture for the following reasons:

- The remedy would give rise to potential transparency issues as between the joint venture and the purchaser. In particular, the joint venture would have access to information regarding the purchaser's (i.e. its only competitor's) input costs and output volumes. This might facilitate and increase the risk of co-ordination. Hence the remedy might not be effective and in any event it is not clear cut.
- The OFT concluded that the remedy was not clear cut and capable of ready implementation since a detailed cost analysis would need to be carried out to determine the initial transfer price. This would be particularly complex due to the difficulties in calculating the cost of producing the chemicals (given that they are such an integral part of the fertiliser manufacture process).

82. In relation to the supply of AN for non-agricultural applications, the parties offered a commitment to supply these customers on objective terms and prices. [ ]

83. This remedy would seek to replace the current competition between the parties with a price cap [ ]. Such an approach would not be capable of restoring the current competition between the parties and, in particular, a customer's ability to play one party off against the other to obtain the best deal. Moreover, the remedy does not address all the aspects of quality, service, reliability which customers in this sector appear to attach value to. On that basis the OFT believes that even if this remedy was capable of addressing the price aspects of competition, which is not accepted, it does not address the non-price aspects of competition which will be removed by the merger.<sup>13</sup>

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<sup>13</sup> In its decision dated 3 August 2006 to accept a variation to the undertakings given by National Express Group plc when it acquired Prism Rail plc, the OFT noted that the review of undertakings in that case had reinforced the importance of exercising caution in accepting behavioural undertakings that aim to remedy the loss of horizontal competition resulting from a merger by way of price controls. Due to unexpected changes in the market, price links can give rise to unforeseen consumer detriment.

84. In respect of liquid carbon dioxide, the parties have offered to [ ]. However, this remedy does not address the OFT's concerns in relation to the possible co-ordinated effects that result from the increased transparency brought about by the merger situation.

85. In light of these considerations, the OFT is of the view that implementation of the proposed undertakings in lieu would not remedy or prevent the adverse competition effects identified and that they are not sufficiently clear cut and capable of ready implementation.

## **DECISION**

86. This merger will therefore be referred to the Competition Commission under section 33(1) of the Act.

## **END NOTE**

1. The parties wish to clarify that this was one of two proposals they put forward. In the alternative, the parties offered behavioural undertakings in relation to the supply of approximately 60 per cent nitric acid, anhydrous ammonia and aqueous ammonia.