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Case No COMP/M.3625 – Blackstone/Acetex

Only the English text is authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 8 (1)
Date: 13/07/2005



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 13.07.2005

SG-Greffe(2005) D/203625

PUBLIC VERSION

COMMISSION DECISION

of 13.07.2005

**declaring a concentration to be compatible with the common market
and the functioning of the EEA Agreement**

(Case No COMP/M.3625 – Blackstone/Acetex)

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(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings¹, and in particular Article 8(1) thereof,

Having regard to the Commission's decision of 10 March 2005 to initiate proceedings in this case,

After consulting the Advisory Committee on Concentrations²,

Having regard to the final report of the Hearing Officer in this case³,

WHEREAS:

- (1) On 20 January 2005, the Commission received a notification pursuant to Article 4 of Regulation (EC) No 139/2004 (“the Merger Regulation”) of a proposed concentration whereby the undertaking Celanese Corporation (“Celanese”), US, controlled by Blackstone Crystal Holdings Capital Partners (“Blackstone”), Cayman Islands, acquires within the meaning of Article 3(1)(b) of the Merger Regulation the whole of the undertaking Acetex Corporation (“Acetex”), Canada, by way of purchase of shares.

¹ OJ L 24, 29.1.2004, p. 1

² OJ C200. , p....

³ OJ C200. , p....

- (2) On 17 February 2005, the parties submitted undertakings. The proposed undertakings involved a commitment to continue the operation of Acetex' Pardies plant in France and to seek to maintain average annual production of [350-450]* ktonnes⁴ of acetic acid and [100-200] ktonnes of vinyl acetate monomer ("VAM") for five years after the acquisition date. That commitment did not eliminate the serious doubts identified by the Commission at that time as to the merger's possible unilateral and coordinated anticompetitive effects. It was clear that such commitment would merely maintain the situation which gave rise to the Commission's concerns, without doing anything to eliminate or alleviate them.
- (3) On 10 March 2005, having examined the notification, the Commission concluded that the notified operation fell within the scope of the Merger Regulation, that it raised serious doubts as to its compatibility with the common market and with the EEA Agreement, and that the commitments submitted by the parties did not remove such serious doubts. The Commission therefore initiated proceedings in accordance with Article 6(1)(c) of the Merger Regulation.
- (4) The Advisory Committee on Concentrations discussed the draft of this Decision on 22 June 2005.

I. THE PARTIES

- (5) Blackstone is a US private merchant-banking company. It is mainly active in financial advisory services, private equity investment and property investment. As described below (recitals 6 and 7) one of the companies controlled by Blackstone, Celanese, is active on the same product markets as Acetex.
- (6) Celanese is a chemicals company active globally in four main sectors: chemical products, acetate products, technical polymers and food ingredients. In the chemical products sector, Celanese manufactures basic chemicals such as acetic acid, acetic anhydride and VAM, performance chemicals such as polyvinyl alcohol ("PVOH") and emulsions, and specialty chemicals including carboxylic acids, alcohols, amines and esters.
- (7) Acetex is active in the acetyls and plastic business. The principal products of Acetex' acetyls business are acetic acid and VAM, which together represented more than 70% of Acetex' acetyls sales in 2003. Acetex' acetyls products also include the following acetic acid derivatives: acetic anhydride, PVOH and polyvinyl acetate ("PVAc"). Through its recent acquisition of AT Plastics Inc in 2003, Acetex develops and manufactures specialty plastic resins ("specialty polymers") and film products.

II. THE CONCENTRATION

- (8) Celanese and Acetex have signed an Arrangement Agreement pursuant to which Blackstone and its affiliated funds, through Celanese, will indirectly acquire all of

* Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets.

⁴ A ktonne is one thousand tonnes

the issued and outstanding common shares of Acetex. Closing of the transaction is conditional upon the approval of two-thirds of the votes cast by holders of Acetex' shares, options and warrants.

- (9) Thus, the operation constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

III. COMMUNITY DIMENSION

- (10) The parties have a combined aggregate worldwide turnover of more than EUR 2.5 billion⁵ ([...] for Blackstone and [...] for Acetex). Both Blackstone and Acetex have aggregate Community wide turnover exceeding EUR 100 million. The combined aggregate turnover exceeds EUR 100 million in each of France, Germany, Italy, Spain and the United Kingdom. In each of those Member States both Blackstone and Acetex have turnovers of more than EUR 25 million each. The concentration therefore has a Community dimension within the meaning of Article 1(3) of the Merger Regulation.

IV. COMPETITIVE ASSESSMENT

- (11) The proposed transaction gives rise to a number of horizontal overlaps and vertical issues. The parties' activities overlap in four products, namely acetic acid, VAM, acetic anhydride and PVOH.

Relevant Product Markets

- (12) According to the market investigation, the four products concerned constitute basic building blocks for downstream products and cannot be substituted.

Acetic Acid

- (13) Acetic acid is an intermediate chemical product used in the production of various other chemicals including VAM, PVOH, acetic anhydride, acetate esters and monochloroacetic acid. Pure acetic acid is a colourless, corrosive, flammable liquid that freezes at 16.6 degrees centigrade. Acetic acid has an ability to react with alcohols and amines to produce esters and amides. It can also react with alkenes to produce acetate esters. When heated above 400 degrees centigrade, it decomposes to produce either carbon dioxide and methane or ketene and water.
- (14) Acetic acid can be obtained using two methods: acetaldehyde oxidation or methanol carbonylation. The most widely used technology is methanol carbonylation , accounting for approximately 65% of the acetic acid produced.
- (15) Acetic acid is a bulk-commodity product which is sold in varying concentrations. When used in foodstuff or pharmaceuticals, it requires additional certification attesting to the fact that supply-chain management was handled according to the regulatory requirements. Acetic acid sold for these applications is not chemically different from acetic acid sold for industrial use. The main customers include Clariant, DuPont, Dow and BASF.

⁵ In the last financial year 2003.

- (16) The Commission has in a previous case suggested that the market for acetic acid could constitute a separate relevant product market⁶. However, in that case the question of whether acetic acid forms a separate product market was left open.
- (17) The results of the market investigation in this case showed that acetic acid constitutes a separate product market as there are no substitutable products available on the market. This finding is consistent with the parties' submission. Therefore, for the purposes of this case, acetic acid is considered to constitute a separate relevant product market.

VAM

- (18) VAM is a commodity chemical derived from acetic acid. VAM can be produced in several ways: (i) by adding acetic acid to acetylene; (ii) by adding acetic acid to ethylene; (iii) by reaction of acetic anhydride with acetaldehyde. Today, the most commonly used method is the oxidative addition of acetic acid to ethylene.
- (19) An important characteristic of VAM is its chemical instability. Hydroquinone or diphenylamine inhibitors are added in order to stabilise VAM. The level of those inhibitors can vary depending on the quality of VAM, its end use or location of the customer. VAM is a main component of polyvinyl acetate and PVOH. Presently, approximately 70-80% of the world production of VAM is used as an input into those two downstream products. The main customers include Air Products, Kuraray, Polimeri and BASF.
- (20) The Commission has previously examined the question whether VAM constitutes a separate relevant product market, but left the question open⁷. According to the parties, for certain applications, customers can easily switch between different input monomers. The parties consider 60% of the VAM produced worldwide to be substitutable. This is not supported by the market investigation. Some customers even suggest that the product market should be more narrowly defined because they use VAM of a certain quality with a low level of inhibitors. However, the majority of customers who express a view on this issue (85%) consider VAM to be a separate product market that is not further fragmented. Therefore, it can be concluded that for the purposes of this decision, VAM constitutes a separate relevant product market.

Acetic Anhydride

- (21) Acetic anhydride is a basic chemical used primarily (approximately 75%) for the production of cellulose acetate flake, which in turn is used as raw material for acetate tow (used to make cigarette filters, yarn and some engineering plastics). Other uses of acetic anhydride include the manufacture of pharmaceuticals and detergents. Main customers include Clariant, Unichemica, BASF, Rhodia and Sabanci.
- (22) Today, the two primary technologies used in the production of acetic anhydride are (i) the ketene-based process, and (ii) methyl acetate carbonylation. There are no

⁶ COMP/M.3435 – *Lyondell / Millennium*

⁷ COMP/M. 1097- *Wacker / Air Products*; COMP/M. 3001 - *Celanese / Clariant Emulsions Business*.

varying grades of acetic anhydride. Like acetic acid, some acetic anhydride is sold for applications in the food industry, which requires additional certification.

- (23) The Commission has not previously examined the market for acetic anhydride. The market investigation conducted in this case showed that acetic anhydride should be considered as a separate product market given the fact that there are no substitutes for acetic anhydride. This is in accordance with the data submitted by the parties. Therefore, for the purpose of this decision, acetic anhydride constitutes a separate relevant product market.

PVOH

- (24) PVOH is a water-soluble synthetic polymer belonging to a broader group of High Barrier Polymers. PVOH is obtained from polymerized VAM. It is characterized by resistance to oil, grease and solvents with a high tensile strength and flexibility and a high oxygen barrier. PVOH is supplied in two forms: fully hydrolyzed and partially hydrolyzed. Fully hydrolyzed PVOH is essentially used in paper coating, in textile warp sizing of hydrophilic fibres, such as cotton and rayon staple yarns, as well as in laminating film in safety glass. Partially hydrolyzed grades are used in protective colloids in emulsions, in remoistenable adhesives, in textile warp sizing for rayon filaments and polyester fibres as well as in printing plates. All producers can make fully hydrolyzed grades. Partially hydrolyzed PVOH is produced in small batches.
- (25) The market investigation has shown that there are no substitutable products available. This view was not contested by the parties. Therefore, for the purpose of this decision, PVOH constitutes a separate relevant product market.

Relevant Geographic Markets

- (26) The parties argue that the respective geographic markets for acetic acid, VAM and acetic anhydride are worldwide and base their view on five main points:
- (a) imports satisfy more than 20% of Western European demand;
 - (b) transport costs, import duties and national regulations do not inhibit trade on a global level;
 - (c) major global producers supply Western Europe solely through imports;
 - (d) the global trade flows seem to shift freely among Asia, Eastern Europe, Western Europe and North America in response to changes in local supply and demand;
 - (e) prices appear to be highly correlated across geographic regions worldwide.
- (27) For PVOH the parties base their view of a global market on the Commission's decision in Case COMP/M.1469 *Solvay / BASF*⁸.

Acetic Acid

- (28) The Commission has not previously defined the geographic market for acetic acid. In its decision in *Lyondell/Millennium*⁹ the Commission considered the geographic market for acetic acid to be at least EEA-wide.

⁸ Recital 15, where the Commission stated: "the relevant geographic market could thus be considered as worldwide".

- (29) As shown in Table 1 below, imports into Western Europe during the period from 2001 to 2003 have, on average, satisfied 20% of Western European demand.

Table 1: Acetic Acid Imports into Western Europe

	2001	2002	2003	3-year average
Total imports (ktonnes)	262.1	328.1	303.7	298.0
% of total demand	19%	23%	20%	20%

Source: Tecnon Orbichem¹⁰, Global Trade Information Service (hereafter “GTIS”) Import Data

- (30) According to the parties, Western Europe’s reliance on imported acetic acid is expected to rise over the long term, which would further establish the existence of a worldwide market. Despite the fact that Western Europe already relies on imports for 20% of its acetic acid demand and the fact that demand is forecast to increase in Western Europe (according to Tecnon) as well as worldwide, no new acetic acid plants are planned in Western Europe to meet the increase in demand. As explained in more detail in recitals 88 to 90 below, new plants are being built or projected in the Middle East and Asia to benefit from access to raw materials and/or markets. The acetic acid produced in these new plants would compete with existing European capacity.
- (31) The Commission’s investigation confirms that major global acetic acid producers supply Western Europe solely through imports from other regions. Since 2000, Celanese has met the demands of all of its customers worldwide from plants in the US and Asia. BP has confirmed that it will close one of its EEA based plants by early 2007. Other acetic acid producers supplying the EEA from other regions are Millennium, with plants in North America, as well as Eurochem (Russia), MSK (Serbia) and Azot Severodonetsk (Ukraine).
- (32) There are significant global trade flows between Asia, Eastern Europe, Western Europe and North America. In 2003, of total imports into Western Europe (essentially the EEA), 60% came from North America, 23% from Eastern Europe and 14% from Asia¹¹. Moreover, Table 2 shows that the trade flows between the different regions have been subject to significant fluctuations during the past few years. For example, the proportion of North American imports to Asia has fluctuated over between 64% in 1999, 45% in 2001 and 85% in 2003. Similarly, exports from Asia to Western Europe also varied over that period (less than 1% in 1999, 22% in 2001 and 14% in 2003).

⁹ Case No. COMP/M.3435 – *Lyondell / Millennium*.

¹⁰ Study of 2003 by Tecnon OrbiChem (“Tecnon”): ‘Acetic Acid and Vinyl Acetate’ (“Tecnon Study”). Tecnon Orbichem carried out this study independently of this case and of the parties. Its data have been relied on by the parties as well as the Commission. The Tecnon Study was updated in 2005.

¹¹ Source: GTIS Import Data, p. 33 of the Form CO.

Table 2: Acetic Acid Trade Flows

Destinati on Region	Origin Region	1999		2000		2001		2002		2003	
		Total tonnes	%								
North America	W. Europe	13,892	99%	515	50%	300	2%	276	31%	164	37%
	Asia	49	<1%	159	16%	15,415	96%	270	30%	200	45%
	E. Europe	0	0	0	0	0	0	0	0	2	<1%
	Other	161	1%	352	34%	290	2%	355	40%	76	17%
	Total	14,102	100%	1,026	100%	16,004	100%	900	100%	443	100%
Western Europe	N. America	145,956	91%	159,050	84%	159,143	61%	229,226	70%	182,774	60%
	E. Europe	14,798	9%	25,705	14%	41,693	16%	32,906	10%	70,149	23%
	Asia	4	<1%	66	<1%	56,432	22%	59,837	18%	41,061	14%
	Other	55	<1%	5,440	3%	4,818	2%	6,156	2%	9,732	3%
	Total	160,813	100%	190,261	100%	262,086	100%	328,125	100%	303,716	100%
Asia	N. America	305,616	64%	278,177	74%	60,607	45%	124,796	52%	209,126	85%
	W. Europe	153,700	32%	71,867	19%	62,168	46%	87,861	36%	24,932	10%
	E. Europe	2,759	<1%	18,129	5%	1,578	1%	19,587	8%	5,069	2%
	Other	13,856	3%	5,691	2%	9,826	7%	8,889	4%	6,204	3%
	Total	475,930	100%	373,865	100%	134,179	100%	241,132	100%	245,331	100%

SOURCE: GTIS Import Data

- (33) These fluctuations provide indications that the market for acetic acid is global, with supplies moving easily across regions to satisfy changes in demand, regardless of location.
- (34) According to the parties, the ease with which acetic acid moves across regions disciplines prices on a global level. To support their claim that prices of acetic acid are highly correlated across regions worldwide, the parties submitted a price correlation analysis¹². LECG, the economic consulting firm retained by the parties, compared regional product prices of acetic acid. According to the parties, the study shows a significant correlation supporting the hypothesis of a global market for acetic acid.
- (35) The Commission was able to replicate the results. However, it considered that the correlation might be spurious¹³ due to the presence of common factors that were not included in the parties' analysis. In response, LECG submitted a second study¹⁴ that contained cointegration and Granger causality analyses using prices of acetic acid in different regions of the world. The study shows that regional prices for acetic acid are cointegrated, i.e. there is a long term relationship between the prices in the different world regions. This is supported and reinforced by the results of the Granger causality tests. However, the Commission found that the basic model was mis-specified, and that this type of evidence tends to show co-movement between prices but fails to identify the source of the competitive constraint. The results of those two studies are therefore inconclusive. On the one hand, they do not seem to

¹² James Langenfeld, Mary Coleman (2005): *Price correlation analyses and geographic market definition: acetic acid, VAM and acetic anhydride*.

¹³ A correlation may be spurious if a high degree of correlation between the price series may be due to other reasons, like common costs or common demand trend.

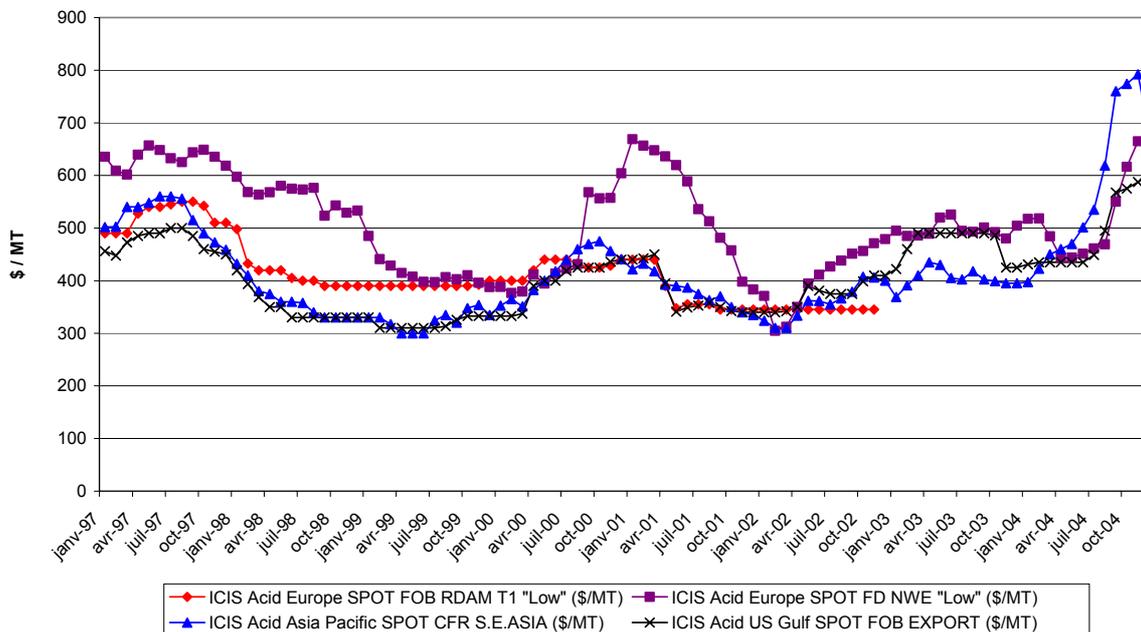
¹⁴ James Langenfeld, Mary Coleman, James Nieberding (2005): *Price tests for geographic market definition: Cointegration analysis and Granger causality applied to VAM and acetic acid prices*.

provide evidence for a global market, on the other they cast doubts on the existence of narrower markets for acetic acid.

- (36) The parties submitted an additional econometric study¹⁵ conducted by Professor Jerry Hausman (MIT) and LECG. That study examines the effect of unexpected plant outages (losses of production due to breakdowns or shortages of raw materials etc.) on acetic acid prices. According to the parties, the study shows conclusively that unexpected plant outages in a geographic region affect prices in other regions and, as such, provides persuasive evidence for the existence of a global market. The study shows that unexpected outages in Asia have had an impact on prices in Western Europe. Although the parties interpreted this result as strong evidence that Western Europe and Asia are geographically integrated markets, the Commission considered this evidence to be inconclusive. This view is mainly due to the fact that outages in Europe were not found to have a significant impact on Asian prices.
- (37) The Commission replicated the study and performed additional statistical tests to determine the extent of the price effect. The list of unexpected outages was established on the basis of the Tecnon data (used and supplied by the parties), supplemented by more accurate information regarding the duration and effect of the outages available to the Commission from competitors' replies to its questionnaires. Unlike the parties, the Commission focused on unexpected outages that occurred in Western Europe to determine whether this region constitutes a separate relevant market. The results show that, for acetic acid, the impact of unexpected outages in Western Europe has not been statistically significant anywhere in the world. However, this result might be explained by the small number of outages identified.

¹⁵ Mary Coleman, James Langenfeld, Jerry Hausman (2005): *Econometric analysis of market definition in VAM and acetic acid using "natural experiments"*.

Figure 1: Acetic Acid Spot Prices
Comparison of Acetic Acid Price Trends Across Regions
ICIS Spot Price Data
1997-2004



- (38) The data in Figure 1 (submitted by the parties) show that acetic acid prices in the different regions broadly move together. The data cover seven years and indicate that while regional pricing may vary over the short term, there appears to be a long-term equilibrium. Regional prices have crossed over around this equilibrium level, as trade flows shifted to compensate for changes in regional supply or demand conditions and there is no reason they will not continue to do so. Indeed, as specifically noted by Akzo Nobel in its response to the Commission’s questionnaire “currently prices in Asia are higher but can easily change.”
- (39) The parties delivered an additional econometric study¹⁶ analysing the impact of unexpected plant outages on trade flows between regions for acetic acid. According to the parties, the study concludes that the market for acetic acid is global. As capacity largely exceeds demand in North America, the parties argued that local producers re-direct their exports from one region of the world to another depending on profit opportunities. In the Commission’s view, the figures in Table 2 confirm the important role of North American producers. However, it could be argued that the study does not allow the Commission to conclude that the relevant geographic market is global since it cannot clearly establish that Asian producers exert a competitive pressure on the EEA market. Nevertheless it highlights the potential competitive constraint exerted on other regions by producers located in North America.
- (40) The Commission conducted its own study¹⁷ on the impact of unexpected plant outages on acetic acid trade flows. In order to test the robustness of the parties’

¹⁶ Jerry Hausman, Mary Coleman, James Langenfeld (2005): *Natural experiment analysis of trade flows*.

¹⁷ The Commission’s Chief Economist Team (2005): *The extended analysis carried out by the CET*.

studies, the Commission used a different econometric specification from that of the parties. The Commission's study establishes that unexpected outages in Western Europe have had a positive and statistically significant impact on imports from North America for acetic acid. However, there are insufficient data to determine the extent of the impact of these outages on imports from Asia into Western Europe.

- (41) The econometric study conducted by the Commission establishes that the EEA in itself is not a separate geographic market for acetic acid. Unexpected outages in the EEA seem to have caused a surge in imports from North America. On the basis of that study, the relevant geographic market for acetic acid must include at least the EEA and North America. However, the data available for the study were insufficient to draw conclusions as to the impact of these outages on exports from Asia to the EEA.
- (42) In the light of the trade flows, the Commission also examined the transaction costs involved in interregional trade. Transaction costs are constituted mainly by transport costs, storage costs and duties and are important for the assessment of global trade flows of acetic acid. The storage costs are low and are similar in all regions, and in many cases are incurred even when the material is moved within a given region. They therefore have a limited effect on prices. According to the parties, acetic acid is sold solely on a 'CIF' basis in Asia, and mainly on a 'delivered' basis in Western Europe and in North America¹⁸. In the US, import duties on acetic acid are less than 2%¹⁹, while duties in the EEA and Asia are 5.5% or less²⁰.
- (43) According to data provided by the parties, which have been confirmed during the market investigation, the average price charged in 2004 in Europe was [350-450] EUR/tonne. The results of the market investigation also show that the average price charged in 2004 in Asia was [375-475] EUR/tonne, and in North America [375-475] EUR/tonne. The average price on a global level in 2004 was therefore slightly higher than [350-450] EUR/tonne.
- (44) A detailed examination of invoices received during the Commission's market investigation shows that, for exports from North America to the EEA, this price included transport costs of [20-30] EUR/tonne in 2004. Thus, [1-10] % of the delivered price was due to transport costs. For exports from Asia, the transport costs were [35-45] EUR/tonne in 2004, accounting for [5-15] % of the delivered price. On the basis of an average price of [350-450] EUR/tonne, the maximum average storage cost in all regions is around [15-25] EUR/tonne and the average duty in the EEA and Asia is less than [15-25] EUR/tonne²¹.
- (45) The market investigation shows that production costs appear to be similar in all regions. Excluding smaller plants with an annual capacity of less than 250 ktonnes,

¹⁸ CIF is the price as delivered to the main port. Customers purchasing CIF have to pay additional costs, including for tanks, duty and freight to their own plant.

¹⁹ According to GTIS, imports into North America have fluctuated during the last few years and in 2003 amounted to 443 tonnes.

²⁰ According to information provided by the parties, import duties for acetic acid into the EEA will fall to 4.6% during the next two years to comply with WTO rules.

²¹ See information provided by the parties in reply to the Commission's request for information of 8 February 2005.

the average production costs in 2004 were around [150-250] EUR/tonne. On the basis of an average price across regions of around [350-450] EUR/tonne, this indicates that gross margins are sufficient to enable trade flows between regions.

- (46) Although transport costs, storage costs and duties are not negligible for acetic acid, in comparison with sales prices, the transaction costs for acetic acid do not present significant material barriers to trade flows among the world regions.
- (47) In their replies to the Commission's questionnaires, 63% of competitors and 61% of customers considered the relevant geographic market to be global. The reasons put forward to support this view include the fact that acetic acid is a commodity product which is easily transported. Trade between the various continents is considered to be effective, and regional shortages are usually covered by imports from other regions. Moreover, these replies also indicated that prices are generally convergent between the different regions.
- (48) Finally, it should be noted that the planned capacity developments, which will be realised essentially in the Middle East and East Asia tend to support the conclusions that the relevant geographic market for acetic acid is global. Indeed, the Tecnon Study forecasts that in North America, the Middle East and in East Asia, local supply will significantly exceed local demand in the period to 2009. The EEA, already a deficit region, seems likely to absorb further imports from these other regions. Substantial adverse changes in transaction costs are unlikely.
- (49) On the basis of all of the above considerations, including a more thorough examination, in the light of the latest evidence, of the factors taken into account in the decision to initiate proceedings, and in spite of the inconclusiveness of some of the studies mentioned, the balance of evidence now available clearly points to the conclusion that the geographic market for acetic acid should be defined as global for the purposes of this decision.

VAM

- (50) Without defining the geographic market for VAM, the Commission considered in its decision *Celanese/Clariant Emulsion Business*²² that the geographic market for monomers, such as VAM, was at least EEA-wide.
- (51) Between 2001 and 2003, imports of VAM into Western Europe satisfied, on average, 20% of demand in this region.

Table 3: Imports of VAM into Western Europe

	2001	2002	2003	3-year average
Total imports (ktonnes)	163.4	146.1	203.6	171.0
% of total demand	20%	16%	22%	20%

Source: Tecnon, GTIS Import Data

²² Case No. COMP/M.3001 – *Celanese / Clariant Emulsion Business*.

- (52) According to the parties, Western Europe's reliance on imported VAM is expected to rise over the long term, which would further establish the existence of a worldwide market. Despite the fact that Western Europe already relies on imports for 20% of its VAM demand and the fact that demand is forecast to increase in Western Europe as well as worldwide, no new VAM plants are planned to be built in Western Europe to meet the increase in demand. As explained in more detail in recitals 109 to 100 below, new plants are being built or projected in the Middle East and Asia to benefit from access to raw materials and/or markets. The VAM produced in these new plants will be able to compete with existing European capacity.
- (53) The market investigation shows that major global VAM producers supply Western Europe solely through imports from other regions. While Celanese manufactures VAM in the EEA, several other VAM producers supply customers in the EEA solely from plants located outside the EEA, including Millennium (USA), Dairen (Taiwan), Dow (USA, Brazil, Korea), Showa Denko (Japan) and Azot Severdonetsk (Ukraine).
- (54) There are significant global trade flows between Asia, Eastern Europe, Western Europe and North America. In 2003, of total imports into Western Europe (essentially the EEA), 74% came from North America, 8% from Eastern Europe and 7% from Asia²³. Moreover, Table 4 shows that the trade flows between the different regions have been subject to significant fluctuations during the past few years. For example, the proportion of Asian imports into Western Europe has been 3% in 1999, 16% in 2001 and 7% in 2003. Similarly, imports into Asia from Western Europe were 13% in 1999, 18% in 2001 and 8% in 2003 of total imports. During the period 1999 to 2003 total imports in volume have increased in North America and Western Europe but decreased in Asia.

²³ Source: GTIS Import Data, p. 40 of the Form CO.

Table 4: VAM Trade Flows

Destination Region	Origin Region	1999		2000		2001		2002		2003	
		Total (tonnes)	%								
North America	W. Europe	0	0	0	100%	0	0	1	0	40	<1%
	Asia	23	100%	0	0	6,283	99%	17,093	100%	20,922	99%
	E. Europe	0	0	0	0	0	0	0	0	22	<1%
	Other	0	0	0	0	42	1%	0	0	0	0
	Total	23	100%	0	100%	6,326	100%	17,093	100%	20,984	100%
Western Europe	N. America	97,183	85%	132,055	84%	125,386	77%	125,089	86%	151,101	74%
	E. Europe	3,077	3%	966	1%	800	<1%	4,474	3%	16,679	8%
	Asia	3,635	3%	18,972	12%	26,611	16%	3,113	2%	14,513	7%
	Other	10,049	9%	5,752	4%	10,641	7%	13,425	9%	21,259	10%
	Total	113,944	100%	157,745	100%	163,438	100%	146,101	100%	203,552	100%
Asia	N. America	100,029	86%	109,958	85%	59,317	81%	40,361	89%	33,161	82%
	W. Europe	14,586	13%	18,798	15%	13,035	18%	4,781	11%	3,288	8%
	E. Europe	671	<1%	100	<1%	0	0	0	0	4,003	10%
	Other	1,085	1%	0	0	440	1%	164	<1%	19	<1%
	Total	116,370	100%	128,856	100%	72,792	100%	45,306	100%	40,470	100%

Source: GTIS Import Data

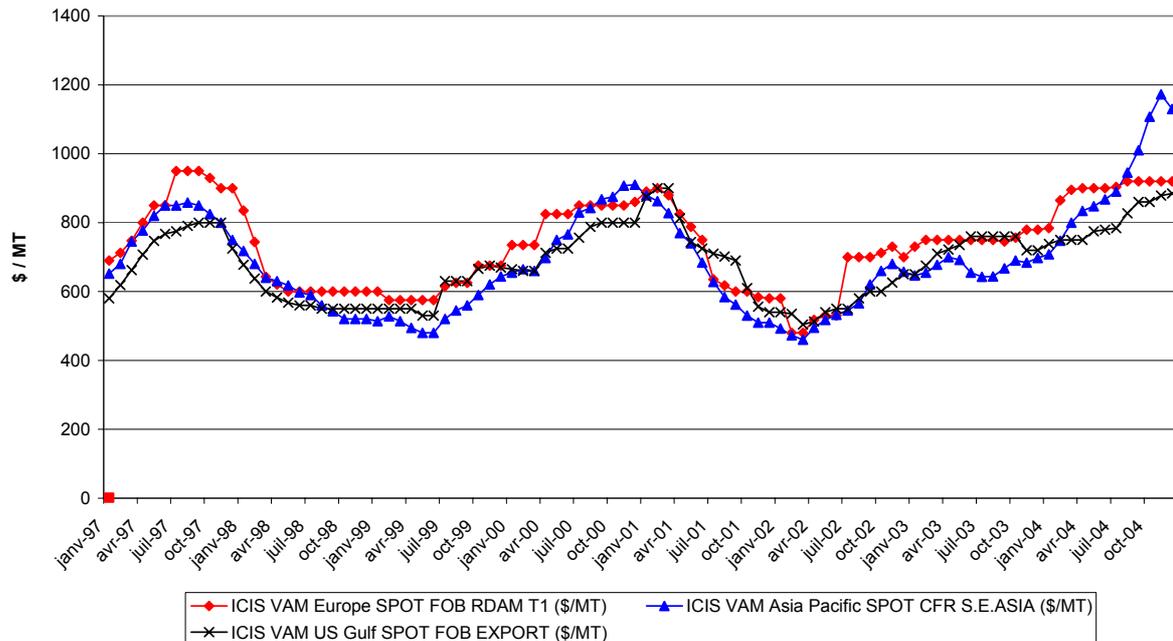
- (55) The fluctuations in trade flows shown in Table 4 above provide indications that the market for VAM is worldwide, with supplies moving easily across regions to satisfy customer demand.
- (56) According to the parties, the ease with which VAM moves across regions disciplines world prices. To support their claim that prices are highly correlated across geographic regions worldwide, the parties submitted a correlation analysis²⁴. LECG compared regional product prices of VAM. According to the parties, the study shows a significant correlation, on the basis of which they conclude that the VAM market is global.
- (57) The Commission was able to replicate the results both of the correlation study and of the subsequent cointegration and Granger causality analyses²⁵ on the price data for

²⁴ James Langenfeld, Mary Coleman (2005) of LECG: *Price correlation analyses and geographic market definition: acetic acid, VAM and acetic anhydride*.

²⁵ James Langenfeld, Mary Coleman, James Nieberding (2005) of LECG: *Price tests for geographic market definition: Cointegration analysis and Granger causality applied to VAM and acetic acid prices*.

VAM. However, the Commission found that the basic model was mis-specified and that this type of evidence tends to show co-movement between prices but fails to identify the source of the competitive constraint, which is at the core of market definition. The results of these two studies are therefore inconclusive. On the one hand, they provide no evidence for a global market, on the other, they do not demonstrate narrower markets for VAM.

Figure 2: VAM Spot Prices
Comparison of VAM Price Trends Across Regions
ICIS Spot Price Data
1997-2004



- (58) The data in Figure 2 (submitted by the parties) show that VAM prices in the different regions broadly move together. The data cover seven years and show that while regional pricing may vary over the short term, there appears to be a long-term equilibrium. Regional prices have crossed over around this equilibrium in response to local supply/demand conditions. For example, after the Asian financial shock in September 1998, the Asian VAM price decreased below the European and the US VAM prices, but by October 1999 Asian prices had increased back to approximately equal levels. In more recent periods, Asian VAM prices have been higher than European or US prices, due to the unexpected continuing high growth in China, although the prices have begun to move closer in recent months. Increasing Asian demand has therefore created a short-term variance between Asian prices and those in other regions. However, this situation is not expected to endure as new Asian and Middle Eastern capacity comes online.
- (59) The parties submitted a study²⁶ by Professor Jerry Hausman and LECG which examined the effect of unexpected plant outages (losses of production due to

²⁶ Mary Coleman, James Langenfeld, Jerry Hausman (2005): *Econometric analysis of market definition in VAM and acetic acid using “natural experiments”*.

breakdowns or shortages of raw materials etc.) on VAM prices. According to the parties, the study shows that unexpected plant outages in a geographic region affect prices in other regions and thus provides strong evidence of the existence of global markets.

- (60) As for acetic acid, the Commission replicated the study and performed additional statistical tests to determine the extent of the price effect. The test results show that unexpected outages in Western Europe have had a significant and positive impact on VAM prices in Western Europe and in North America, but these outages have had no statistically significant effect in Asia. This tends to indicate that producers in North America responded to output shortages in Western Europe.
- (61) The parties delivered an additional econometric study²⁷ analysing the impact of unexpected plant outages on trade flows between regions. According to the parties, the study concludes that the VAM market is global. As capacity largely exceeds demand, the parties argued that producers in North America re-direct their exports from one region of the world to another depending on profit opportunities.
- (62) The Commission conducted its own study²⁸ on the impact of unexpected plant outages on VAM trade flows on the basis of the Tecnon data, supplemented by more accurate information regarding the duration and effect of the outages gathered from competitors during the market investigation. The study establishes that unexpected outages in Western Europe have had a positive and statistically significant impact on VAM imports from North America. However, there are insufficient data to determine the extent of the impact of these outages on imports from Asia into Western Europe. In sum, the econometric study conducted by the Commission establishes that the EEA in itself is not a separate geographic market for VAM. The relevant geographic market for VAM must include at least the EEA and North America.
- (63) In the light of the trade flows discussed above (recitals 53 and 54), the Commission examined the transaction costs involved in interregional trade. Transaction costs are constituted mainly by transport costs, storage costs and duties and are important for the assessment of global trade flows of VAM. The storage costs are low and are similar in all regions and in many cases are incurred even when the material is moved within a given region. They therefore have a limited effect on prices. According to the parties, VAM is sold solely on a 'CIF' basis in Asia, and mainly on a 'delivered' basis in Western Europe and in North America. In the US, import duties on VAM are less than 2%, while duties in the EEA and Asia are 5.5% or less²⁹.
- (64) According to data provided by the parties, which have been confirmed during the market investigation, the average price charged in 2004 in the EEA was around [600-700] EUR/tonne. The results of the market investigation also show that the average price charged in 2004 in Asia was [650-750] EUR/tonne, and in North

²⁷ Jerry Hausman, Mary Coleman, James Langenfeld (2005): *Natural experiment analysis of trade flows*.

²⁸ The Commission's Chief Economist Team (2005): *The extended analysis carried out by the CET*.

²⁹ According to information provided by the parties, import duties for VAM into the EEA will fall to 4.6% during the next two years to comply with WTO rules.

America [650-750] EUR/tonne. The average price on a global level in 2004 was therefore around [650-750] EUR/tonne.

- (65) A detailed examination of invoices received during the Commission's market investigation shows that, for transport from North America to the EEA, this price included transport costs of [30-40] EUR/tonne. Therefore, [1-10] % of the delivered price was due to transport costs. For imports from Asia, the transport costs were [45-55] EUR/tonne, accounting for [1-10] % of the delivered price. The maximum average storage cost in all regions is around [15-25] EUR/tonne and the average duty in the EEA and Asia is less than [35-45] EUR/tonne³⁰.
- (66) The market investigation shows that production costs appear to be similar in all regions. Excluding smaller plants with an annual capacity of 150 ktonnes and less, the average production costs in 2004 were around [400-500] EUR/tonne. On the basis of an average price across regions of around [650-750] EUR/tonne, this indicates that gross margins are sufficient to enable trade flows between regions.
- (67) As transport costs, storage costs and duties are low for VAM in comparison with sales prices, transaction costs for VAM do not present significant material barriers to trade flows among the world regions.
- (68) In their replies to the Commission's market investigation, 50% of the competitors and 64% of the customers considered the relevant geographic market for VAM to be global. VAM is easily transported from one region to another. It is also submitted that short-term and long-term outages within the EEA market are easily supplied from other regions. Certain customers have indicated that they rely only on non-EEA producers for the supply of their EEA plants.
- (69) Finally, it should be noted that the planned capacity developments as discussed in section on Assessment, which will be realised essentially in the Middle East and East Asia tend to support the conclusions that the relevant geographic market for VAM is global. Indeed, the Tecnon Study forecasts that in North America, the Middle East and in East Asia local supply will significantly exceed local demand in the period until 2009. The EEA, already a deficit region, seems likely to absorb further imports from these other regions. Substantial adverse changes in transaction costs are unlikely.
- (70) On the basis of all of the above considerations, including a more thorough examination, in the light of the latest evidence, of the factors taken into account in the decision to initiate proceedings, and in spite of the inconclusiveness of some of the studies mentioned, the balance of evidence now available clearly points to the conclusion that the geographic market for VAM should be defined as global for the purposes of this decision.

Acetic Anhydride

- (71) The Commission has not previously examined the geographic market for acetic anhydride.

³⁰ See information provided by the parties in reply to the Commission's request for information of 8 February 2005.

- (72) During the period 2001 to 2003, imports have amounted on average to 51% of the demand for acetic anhydride in the EEA. This gives a strong indication that the market for the product is wider than the EEA. On a worldwide level, trade in acetic anhydride represented 10% of overall consumption and 34% of the merchant market sales in 2003.
- (73) North America is the source of almost all imported acetic anhydride. In 2003, North American producers supplied 97% of Western European requirements and 86% of Asian needs. The remainder of Asian requirements was supplied from Europe. As for acetic acid and VAM, a number of producers supply the EEA solely by imports. While it is true that the parties themselves provide 78% of European imports, 20% are made by Eastman.
- (74) According to the parties, in 2003, Celanese charged on average a delivered price of [650-750] EUR/tonne to EEA customers. For exports from North America to the EEA, this price includes freight costs of [25-35] EUR/tonne, duties of [30-40] EUR/tonne (5.5% duty for imports of acetic anhydride into the EEA) and storage costs of [10-20] EUR/tonne. Therefore, in 2003, [5-15] % of the delivered price was due to duties, transport and storage costs. For imports from Asia, transport costs are slightly higher and amount, according to the parties' submission, to approximately [35-45] EUR/tonne. Therefore, for acetic anhydride shipped from Asia to the EEA, more than [5-15] % of the delivered price is due to transaction costs.
- (75) This percentage is broadly in line with the results of the market investigation. According to competitors, transport costs from North America to the EEA amount to 8-10%. Competitors have indicated that transport costs for exports from Asia to the EEA, are between 10%-13% of the delivered price.
- (76) Celanese's production costs for acetic anhydride are around [300-400] EUR/tonne, while Acetex' production costs at its production site in Roussillon (France) amount to [400-500] EUR/tonne. The production costs of their main European and US competitors range from 200 EUR/tonne to 530 EUR/tonne. Production costs of the main Asian competitors are currently between 400 EUR/tonne and 550 EUR/tonne. This indicates that gross margins are sufficient to enable trade flows between regions.
- (77) The parties submitted a simple price correlation analysis³¹ for acetic anhydride. The Commission was able to replicate the results. However, it considered that the correlation might be spurious due to the presence of common factors that were not included in the parties' analysis. Due to a lack of detailed information, it has not been possible to conduct econometric studies of the type carried out for acetic acid and VAM.
- (78) Although North America is the main source of acetic anhydride, the high level of world trade and the high proportion of merchant demand met by imports together with high margins indicate a worldwide market for acetic anhydride. This result was largely confirmed during the market investigation, where 75% of competitors and

³¹ James Langenfeld, Mary Coleman (2005): *Price correlation analyses and geographic market definition: acetic acid, VAM and acetic anhydride*.

80% of customers indicated that the geographic market for acetic anhydride is global.

- (79) The market situation for acetic anhydride is unlikely to change in the coming years. Overall demand has not grown in recent years and is expected to remain at current levels, while no significant additions to capacity are planned. There are therefore no factors in the foreseeable future that would affect this geographic market definition.
- (80) On the basis of all of the above considerations, including a more thorough examination, in the light of the latest evidence, of the factors taken into account in the decision to initiate proceedings, and in spite of inconclusiveness of the study mentioned, the balance of evidence now available clearly points to the conclusion that the geographic market for acetic anhydride should be defined as global for the purposes of this decision.

PVOH

- (81) In its decision *Solvay/BASF*³², the Commission considered that for all types of High Barrier Polymers, including PVOH, the relevant geographic market was worldwide. This has been broadly confirmed by the Commission's market investigation in this case where 60% of the customers and 75% of the competitors considered the relevant geographic market to be global.
- (82) The Commission concludes for the purposes of this decision that the relevant geographic market for PVOH is global.

Assessment

- (83) Acetic acid, VAM, acetic anhydride and PVOH are commodity products, produced to well-defined standards, with no particular variations between the materials offered by the different suppliers. Production capacity and utilisation rates are among the most important parameters to consider when evaluating the competitive position of the players on these markets. The parties have furthermore submitted that for acetic acid and VAM most producers are vertically integrated and a significant proportion of their production is used captively³³ (acetic acid [50-60] %, VAM [45-55] %, acetic anhydride [65-75] % and PVOH [10-20] %). The ability of customers to change their suppliers must also be examined.
- (84) Given the level of concentration in the market it is also necessary to examine the possibility that the proposed operation could give rise to co-ordinated effects. Both the unilateral and the co-ordinated effects are dealt with in detail below (recitals 84 to 138).

Acetic acid

- (85) On the basis of a worldwide geographic market definition, the new entity will become the largest player in terms of capacity, as the operation will combine the second largest actor on the market, Celanese, and the number five player, Acetex.

³² Case No. IV/M.1469 – *Solvay / BASF*.

³³ The parties submit that approximately [50-60] % and [45-55] % of annual worldwide production of acetic acid and VAM respectively are consumed captively (see Form CO, page 60).

Based on 2003 figures, the combined capacity share of the new entity would be [20-30] % (Celanese [20-30] %; Acetex [0-5] %). As a result of the transaction, the HHI³⁴ would be 1328 with an increase of 184³⁵. Regarding merchant sales, the parties combined market share would be [20-30] % (Celanese [15-25] %; Acetex [5-10] %). Following the transaction, the HHI would be 1514 with an increase of 216³⁶.

- (86) The HHI levels mentioned in the previous recital may indicate the absence of competition problems as they are below the levels defined in the Commission's Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings³⁷.
- (87) As shown in Table 5, the combined entity will face competition from the currently largest player on the market, BP, whose market share would be close to the combined entity's market share in terms of capacity ([20-30] %) and higher in terms of merchant sales ([25-35] %). Other strong players are Millennium (capacity [1-10] %; merchant sales [1-10] %), Daicel (capacity [1-10] %; merchant sales [1-10] %) and Eastman (capacity [1-10] %; merchant sales [1-10] %). The remaining capacity is distributed among many smaller competitors with capacity between 1 and 100 ktonnes³⁸.

Table 5: Acetic Acid Worldwide (2003)

	Capacity (ktonnes)	Share of capacity	Captive use & merchant sales (ktonnes)	Merchant sales (ktonnes)	Market shares (merchant sales)
Celanese	[2,000-2,200]	[20-30] %	[1,800-2,000]	[600-700]	[15-25] %
Acetex	[350-450]	[0-5] %	[350-450]	[150-250]	[5-10] %
Parties	[2,400-2,600]	[20-30] %	[2,200-2,400]	[800-900]	[20-30] %
BP	[2,000-2,200]	[20-30] %	[1,900-2,100]	[1,000-1,200]	[25-35] %
Millennium	[500-600]	[1-10] %	[400-500]	[150-250]	[1-10] %
Daicel	[400-500]	[1-10] %	[250-350]	[50-150]	[1-10] %
Eastman	[250-350]	[1-10] %	[200-300]	[25-75]	[1-10] %
Others	[3,300-3,500]	[30-40] %	[2,400-2,600]	[1,100-1,300]	[30-40] %
Total	[9,400-9,600]	100%	[7,700-7,900]	[3,500-3,700]	100%

Source: parties' estimates and Tecnon

³⁴ HHI stands for Herfindahl-Hirschman Index, a measure of market concentration.

³⁵ Source: Tecnon and parties' estimates.

³⁶ Source: Comtrade and parties' estimates.

³⁷ OJ C 31, 5.2.2004, p. 5. According to the guidelines, a post merger HHI above 2000 with an increment above 250 indicates that a merger may raise competition concerns. (see recital 20: "The Commission is also unlikely to identify horizontal competition concerns in a merger with a post-merger HHI between 1 000 and 2 000 and a delta below 250.")

³⁸ There are 75 acetic acid plants worldwide owned by the parties' competitors with a capacity of at least 10 ktonnes and a total capacity of about 7 000 ktonnes.

Unilateral effects

- (88) The Tecnon Study submitted by the parties reviews all the existing acetic acid plants and projects. It gives an overview of the world supply-demand balances, together with the status of capacity expansions or closures. This information shows that the worldwide production capacity is expected to increase by 34% between 2004 and 2009 while the global demand is projected to expand during the same period by 17%. As a result, capacity will continue to exceed demand³⁹.
- (89) Information received from both competitors and customers confirms this prognosis. As a result, effective capacity⁴⁰ utilisation rates for acetic acid are forecast to fall from 85% to 76% between 2005 and 2008. The bulk of the new capacity will be installed in Asia (proximity to customers and raw materials) and the Middle East (proximity to raw materials) through the construction of large scale plants. There are no plans to increase production capacity in the EEA or in North America.
- (90) Production capacity data submitted by the parties (Tecnon) and confirmed by the market investigation show that capacity will increase by 2 050 ktonnes in Asia between 2004 and 2009. This new capacity will result from projects to be realised by the largest players in the market. BP has three projects for expansion of existing plants or new plants representing a total increase of 950 ktonnes that are expected to be completed between 2005 and 2007 in China and Taiwan. Celanese plans to increase its production capacity with a new plant in China which will produce [550-650] ktonnes of acetic acid per year starting in 2006 and to expand the capacity of its existing plant in Singapore in 2009, resulting in a total capacity increase of [750-850] ktonnes per year. Local players, mainly Chinese companies, have plans to increase their acetic acid production by approximately 300 ktonnes per year.
- (91) In the Middle East, additional capacity of around 1 200 ktonnes is planned in greenfield plants mainly in Saudi Arabia. Acetex, through its joint venture with Saudi Arabia's National Petrochemical Industrialization Company, plans the construction of a new acetic acid plant that will produce around 500 ktonnes per year starting in 2008. A local Saudi player, the Saudi International Petrochemical Company (SIPC), also plans to bring online a similar capacity in Saudi Arabia. Since there is little demand for acetic acid in Saudi Arabia, the planned capacity in that region is intended for the merchant market in Europe and the Far East. Respondents to the market investigation also identified projects in Iran and Algeria.
- (92) Moreover, these newly commissioned plants will enjoy competitive cost structures which will enable them to export profitably to other regions. The production cost advantage is particularly significant for the Middle East plants. For example, the projected variable production costs in Acetex' plant in Saudi Arabia will be less than half of the average costs of the parties' European or North American plants.

³⁹ In 2004, the worldwide acetic acid production capacity was 9 510 ktonnes, where the total worldwide consumption was 7 581 ktonnes. The gap between capacity and consumption is predicted to increase within the next few years as capacity in 2009 will be 12 726 ktonnes and consumption 8,907 ktonnes (source Tecnon).

⁴⁰ Effective capacity is defined by Tecnon as equivalent to 90% of the total capacity, due to turnarounds and outages. However, based on their own experience the parties estimate, that for VAM, maximum effective capacity is 94%. Accordingly, the parties have based their calculations on the 94% rate.

- (93) Furthermore, the vast majority (66%) of acetic acid customers multi-source. The parties submit that [85-95] % of their customers multi-source and the market investigation has shown that customers contract with an average of three suppliers for their procurement of acetic acid. Those customers who multi-source tend to split their product requirements between the EEA and North American producers as well as traders who acquire their products in all world regions, i.e. the EEA, Eastern Europe, North America, the Middle East and Asia. Around 80% of the customers have indicated that they would consider changing supplier if the parties were to increase their prices by 10%. Furthermore, both the parties and their competitors have indicated significant buyer power. For the parties, their top ten global customers represent [45-55] % of their sales. For the competitors, the top ten global customers represent on average [50-60] % of their sales. These customers include [...].
- (94) The Commission has also examined contracts between the parties and their ten largest and smallest customers in Europe, and noted that these contracts [typically contain contractually provisions that limit the parties' ability to unilaterally raise prices].
- (95) In the light of these considerations, adverse unilateral effects are unlikely because the capacity will increase faster than projected demand and there will therefore be sufficient capacity to defeat a potential price increase. Furthermore, it appears that it is fairly easy for customers to change their suppliers, particularly as a large majority of the customers obtain their supplies from multiple sources.

Co-ordinated effects

- (96) In order to establish whether or not the proposed transaction would lead to or would increase the risk of co-ordination on capacity, the Commission has examined (i) the market structure, (ii) market transparency, (iii) credible retaliation mechanisms, and (iv) the reaction of customers and current and potential competitors.
- (97) Globally, the four largest competitors in acetic acid market will account for [55-65] % of the capacity share (parties [20-30] %, BP [20-30] %, Millennium [1-10] %, Daicel [1-10] %) whereas on the merchant market these figures represent [60-70] % (parties [20-30] %, BP [25-35] %, Millennium [1-10] %, Daicel [1-10] %). The remaining part of the market is highly fragmented (less than [1-10] % per competitor). Within this market structure, the most likely scenario for co-ordination seems to be between BP and the parties. It appears very unlikely that the smaller players would co-ordinate their behaviour with the parties and BP.
- (98) For BP and the parties, different levels of integration can be clearly seen in the difference between capacities and merchant market shares. BP has a [20-30] % share of acetic acid capacity. However, its share of the merchant market is considerably higher ([25-35] %) whereas the parties' share based on capacity exceeds their share of the merchant market. In contrast with the parties, BP is also integrated upstream into petrochemicals, which are key raw materials for the production of acetic acid. BP's only downstream activities are VAM and acetic anhydride whereas Celanese produces a wide range of downstream products including PVOH, emulsions and emulsion powders, cellulose acetate, acetate esters and ethylene vinyl acetate resin copolymers.

- (99) BP and the parties use different technologies and have different plant sizes which results in different cost structures and incentives. The parties, BP and their competitors plan to commission substantial new capacity in the period to 2009. The economies of scale in this industry dictate that these new plants will be comparatively large in relation to the size of the overall market. Acetex' planned new joint venture in Saudi Arabia will have a capacity equivalent to over [1-10] % of the global production in 2003 and nearly [10-20] % of global merchant sales in the same year. As such plants come on stream, their owners will have different incentives from those operating existing plants as they need to find customers to keep the new plant operating.
- (100) In addition, the market investigation has shown that contracts are determined through intense negotiations between producers and customers indicating low market transparency. [The contracts typically contain contractually provisions that limit the parties' ability to unilaterally raise prices]. These characteristics suggest that any agreement on the terms of co-ordination and monitoring would be difficult.
- (101) The respondents to the Commission's market investigation have indicated that acetyls production lines should be run at a constant rate. The observed short term inelasticity of supply in this market would prevent the establishment of an effective retaliation mechanism. In the long run, differences in the timing of the expansion projects by BP and the parties will make retaliation less likely.
- (102) Finally, the majority (66%) of customers multi-source. During the market investigation a majority of customers stated that they would change supplier if the parties and BP increased their prices by 10%. The above mentioned (recitals 95 to 100) findings are in line with the arguments presented by the parties.
- (103) In light of these considerations, co-ordinated anticompetitive effects are unlikely.

Conclusions

- (104) From the above analysis, it can be concluded that it is unlikely that the new entity will be able to act independently of the market forces or to co-ordinate with other market participants to the detriment of competition. Therefore, the proposed operation will not give rise to competitive concerns on the global market for acetic acid.

VAM

- (105) On the basis of a worldwide geographic market definition, the new entity will be the largest player in terms of capacity. The operation will combine the currently largest actor on the market, Celanese, and a much smaller producer, Acetex. Based on 2003 figures, the combined share of capacity of the new entity would be [25-35] % (Celanese [20-30] %; Acetex [0-5] %). As a result of the transaction, the HHI would be 1001 with an increase of 144⁴¹. Regarding merchant sales, the parties combined market shares would have been [35-45] % in 2003 (Celanese [30-40] %; Acetex [5-10] %). Following the transaction, the HHI would be 2117 with an increase of 420⁴².

⁴¹ Source: Tecnon and parties' estimates.

⁴² Source: Comtrade and parties' estimates.

The increment would be [1-10] % for capacity and [1-10] % in terms of merchant sales.

- (106) Moreover, the parties will face competition from more than 30 VAM producers currently active on a worldwide basis. As shown in Table 6, out of these 30 competitors, seven have a production capacity larger than Acetex. The largest players are Dow (capacity [5-15] %; merchant, [5-15] %), Millennium (capacity [5-15] %; merchant [10-20] %), DuPont (capacity [10-20] %), Dairen (capacity [1-10] %; merchant [1-10] %) and BP (capacity [1-10] %; merchant [5-15] %).

Table 6: VAM Worldwide (2003)

	Capacity (ktonnes)	Shares of capacity	Captive use & merchant sales (ktonnes)	Merchant sales (ktonnes)	Market shares (merchant sales)
Celanese	[1,100-1,300]	[20-30] %	[900-1,100]	[750-850]	[30-40] %
Acetex	[100-200]	[0-5] %	[150-250] ⁴³	[100-200]	[5-10] %
Parties	[1,200-1,400]	[25-35] %		[800-1,000]	[35-45] %
Dow	[500-600]	[5-15] %	[400-500]	[200-300]	[5-15] %
Millennium	[350-450]	[5-15] %	[300-400]	[300-400]	[10-20] %
DuPont	[300-400]	[1-10] %	-	-	-
Dairen	[250-350]	[1-10] %	[200-300]	[50-150]	[1-10] %
BP	[200-300]	[1-10] %	[150-250]	[150-250]	[5-15] %
Nippon Goshei	[150-250]	[1-10] %	[100-200]	[1-100]	[1-10] %
Sichuan Vinylon Works	[150-250]	[1-10] %	n.a.	n.a.	n.a.
Others	[1,550-1,650]	[25-35] %	[1,700-1,800]	[400-500]	[15-25] %
Total	[5,000-5,200]	100%	[4,200-4,400]	[2,200-2,400]	100%

Sources: Parties' estimates and Tecnon

Unilateral effects

- (107) The Tecnon Study submitted by the parties reviews all the existing VAM plants and projects. It gives an overview of the world supply-demand balances, together with the status of capacity expansions or closures for VAM. This information shows that the worldwide production capacity is expected to increase by 28% between 2004 and 2009 while the global demand is projected to expand during the same period by 18%. As a result, capacity will continue to exceed demand⁴⁴.

⁴³ As stated by the parties, captive plus merchant sales may occasionally exceed overall production, as this combined figure may include volumes purchased from other suppliers either for captive use or to meet customer demands that a producer could not otherwise meet with its existing installed capacity.

⁴⁴ In 2004, the worldwide VAM production capacity was 5 182 ktonnes, where the total worldwide consumption was 4 549 ktonnes. The gap between capacity and consumption is predicted to increase within the next few years as capacity in 2009 will be 6 624 ktonnes and consumption 5 351 ktonnes (source Tecnon).

- (108) Information received from both competitors and customers confirms this prognosis. Furthermore, the parties submit that effective capacity⁴⁵ utilisation rates for VAM are forecast to decrease from 92% to 86% between 2005 and 2008. The bulk of the new capacity will be installed in Asia (proximity to customers and raw materials) and the Middle East (proximity to raw materials) through the construction of large scale plants, whereas in the EEA some limited expansion plans are expected.
- (109) According to market investigation and data submitted by the parties, there are only some minor plans to increase the current capacity to produce VAM in the EEA, resulting mainly from the parties' expansion projects at their existing plants in Spain and Germany in 2005. These expansion plans should add at most [100-200] ktonnes to the current total EEA capacity production.
- (110) Production capacity data submitted by the parties (Tecnon) and confirmed by the market investigation show that capacity of approximately [400-500] ktonnes will be added in Asia between 2004 and 2009. Most of this new capacity will come online in 2005 with the expansion of Dairen's production capacity in Taiwan. Local players, mainly Chinese companies, plan to increase their VAM production in the period to 2009.
- (111) In the Middle East, approximately 575 ktonnes of new capacity is planned for greenfield plants mainly in Saudi Arabia. Acetex, through its joint venture with Saudi Arabia's National Petrochemical Industrialization Company, has planned the construction of a new VAM plant which will have a capacity production of 275 ktonnes per year. A local Saudi player, the Saudi International Petrochemical Company (SIPC), has also planned to bring online 300 ktonnes per year of VAM in Saudi Arabia. Since there is little demand for VAM in Saudi Arabia, the planned capacity in that region is intended for the merchant market in Europe and the Far East.
- (112) Moreover, these newly commissioned plants in both regions will enjoy low cost structures which will enable them to export profitably to other regions. The production costs advantage is particularly significant for the Middle East plants. Acetex' new plant has projected variable production costs of about 65% of the costs of the parties' existing plants.
- (113) Furthermore, as for acetic acid, the vast majority (88%) of customers of VAM multi-source. The parties submit that [85-95] % of their VAM customers multi-source and the market investigation has shown that customers contract with an average of three suppliers for their procurement of VAM. Those customers who multi-source tend to split their product requirements between the EEA and North American producers as well as traders who acquire their products in all world regions, i.e. the EEA, Eastern Europe, North America, the Middle East and Asia. More than three customers out of four have indicated that they would consider changing supplier if the parties were to increase their prices by 10%. Furthermore, both the parties and their competitors have indicated significant buyer power. For the parties, their top ten global customers represent [50-60] % of their sales. For the competitors, their top ten

⁴⁵ Effective capacity is defined by Tecnon as equivalent to 90% of the total capacity, due to turnarounds and outages. However, based on their own experience, the parties estimate that for VAM, maximum effective capacity is 94%. Accordingly, the parties have based their calculations on the 94% rate.

global customers represent on average [65-75] % of their sales. These customers include [...].

- (114) The Commission has also examined contracts between the parties and their ten largest and smallest customers in EEA, and noted that these contracts [typically contain contractually provisions that limit the parties' ability to unilaterally raise prices].
- (115) In light of these considerations, adverse unilateral effects are unlikely because the capacity will increase faster than projected demand and therefore, there will be sufficient capacity to defeat a potential price increase. Furthermore, it appears that it is easy for customers to change their suppliers, particularly as a large majority of the customers obtain their supplies from multiple sources.

Co-ordinated effects

- (116) In order to establish whether or not the proposed transaction would lead to or would increase the risk of co-ordination on capacity, the Commission has examined (i) the market structure, (ii) market transparency, (iii) credible retaliation mechanisms and (iv) the reaction of customers and current and potential competitors.
- (117) On the world-wide basis, the five largest VAM competitors will account for [45-55] % of the global capacity (parties [20-30] %, Dow [5-15] %, Millennium [5-15] %, DuPont [1-10] %) whereas on the merchant market these figures represent [70-80] % (parties [35-45] %, Millennium [10-20] %, Dow [5-15] %, BP [5-15] %). The remaining part of the market is highly fragmented (less than [1-10] % per competitor).
- (118) The substantial gap between the parties' merchant market shares and the next largest competitor would make possible co-ordination an unlikely scenario. In addition, the different levels of integration and the use of different technologies give rise to different cost structures and incentives for the various parties which further reduce the likelihood of successful co-ordination.
- (119) As in the case of acetic acid, other factors operating against co-ordination include lack of market transparency, multi-sourcing by customers, supply conditions and the incentive of producers commissioning new plant to utilise this capacity.
- (120) In light of these considerations, co-ordinated anticompetitive effects are unlikely.

Conclusions

- (121) From the above analysis, it can be concluded that it is unlikely that the new entity would be able to act independently of the market forces or to co-ordinate with other market participants to the detriment of the competition. Therefore, the proposed operation will not give rise to competitive concerns on the global market for VAM.

Acetic Anhydride

Unilateral effects

- (122) Currently, Celanese holds [15-25] % and Acetex [0-5] % of worldwide capacity while Eastman is the world leader with [25-35] %. Further major competitors are

Daicel ([5-15] %), BP ([1-10] %), Rhodia ([1-10] %) and Jilin ([1-10] %). Considering capacity figures, the post-merger HHI of 1 657 remains below the threshold of 2000 with an increment of only 49⁴⁶.

- (123) If merchant market sales are considered, the merging parties have higher global market shares (Celanese [25-35] %, Acetex [5-10] %). BP, Eastman, Jilin and Daicel, their main competitors on a global scale, have market shares of [15-25] %, [10-20] %, [5-15] % and [1-10] % respectively. After the transaction, the combined entity will have a merchant market share of [30-40] %. This corresponds to an HHI of 2 139, with an increment of 361.
- (124) The merging parties will therefore be constrained by competition from companies like BP, Eastman, and Daicel which currently produce at competitive cost. As margins are sufficient to outweigh transaction costs, trade flows can adapt to changing patterns of demand and limit the room to manoeuvre for price increases by the parties.
- (125) Currently, there is little spare capacity in the market and most companies produce at a capacity utilization rate which is above 90%. However, worldwide merchant and captive sales have been fairly stable over recent years.
- (126) According to the market investigation a large majority of customers (94%) multi-source. There are sufficient alternative suppliers including major producers. Furthermore, it appears that it is fairly easy for customers to change their suppliers, particularly as a large majority of the customers obtain their supplies from multiple sources.

Co-ordinated effects

- (127) In order to establish whether or not the proposed transaction would lead to or would increase the risk of co-ordination of capacity, the Commission has examined (i) the market structure, (ii) market transparency, (iii) credible retaliation mechanisms, and (iv) the reaction of customers and current and potential competitors.
- (128) On the global market for acetic anhydride the three largest competitors will account for [60-70] % of the capacity share (parties [15-25] %, Eastman [25-35] %, Daicel [5-15] %) whereas on the merchant market these figures represent [70-80] % (parties [30-40] %, BP [15-25] %, Eastman [10-20] %). The remaining part of the market is highly fragmented (less than [1-10] % per competitor). The market shares of the largest producers are asymmetrical thus making co-ordination an unlikely event. BP is the only likely partner for co-ordination.
- (129) For BP and the parties, the investigation has shown differences in their respective level of vertical integration. Furthermore, BP and the parties use different

⁴⁶ The Commission's Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings indicates that a merger prima facie is unlikely to raise competition concerns with post merger HHI between 1000 and 2000 and a delta below 250.

technologies and have different plant sizes which results in different cost structure and incentives.

- (130) Different levels of integration can clearly be seen in the differences between capacities and merchant market shares. BP has a [15-25] % share of acetic anhydride merchant sales. However, its share of capacity is only [1-10] %. The parties' share of capacity is [15-25] %, whilst their share of merchant sales is [30-40] %. In contrast with the parties, BP is also integrated upstream into petrochemicals and is not integrated downstream of acetic anhydride.
- (131) In addition, the market investigation has shown that contracts are determined through intense negotiations between producers and customers indicating low transparency of the market. [These contracts typically contain contractually provisions that restrict price knowledge among competitors]. These characteristics suggest that any agreement on the terms of co-ordination and monitoring would be difficult.
- (132) The respondents to the Commission's market investigation have indicated that acetyls production lines should be run at a constant rate. The observed short term inelasticity of supply in this market would prevent the establishment of an effective retaliation mechanism.
- (133) Finally, as indicated above (recitals 126 to 131), the majority of customers (94%) multi-source. During the market investigation a prevailing number of customers stated that they would change supplier in the short term if that supplier were to raise its prices by 10%. The above mentioned findings are in line with the arguments presented by the parties.
- (134) In light of these considerations, co-ordinated anti-competitive effects are unlikely.

Conclusions

- (135) From the above analysis, it can be concluded that it is unlikely that the new entity will be able to act independently of the market forces or to co-ordinate with other market participants to the detriment of competition. Therefore, the proposed operation will not give rise to competitive concerns on the global market for acetic anhydride.

PVOH

Unilateral effects

- (136) In the PVOH world merchant market, many operators are active: Kuraray, with a [10-20] % share, Nippon Gohsei, [5-15] %, Chang Chun Gohsei, [5-15] %, Celanese, [5-10] %, DuPont, [5-15] %, Shinetsu/Untika, [1-10] %, OCI, [1-10] %, and Acetex, [0-5] %. As regards capacity, the parties will have [5-15] %, Kuraray [10-20] %, Chang Chung [5-15] % and Nippon Gohsei [5-15] %.

- (137) After the transaction, the combined entity will have a merchant market share of [5-15] % and will face competition from numerous operators with similar market positions. There will be a low HHI of 756, with an increment of only 43⁴⁷.
- (138) Considering the level of competition that the combined entity will face after the merger and the limited change in the competitive structure of the global PVOH market brought about by the merger, it is therefore concluded that the notified operation will not significantly impede effective competition on the global PVOH market.

Co-ordinated effects

- (139) As the parties' combined merchant market share for PVOH will be only [5-15] %, there appears to be no possibility that the operation will give rise to co-ordinated effects for those products.

Conclusions

- (140) From the above analysis, it can be concluded that it is unlikely that the new entity will be able to act independently of the market forces or to co-ordinate with other market participants to the detriment of competition. Therefore, the proposed operation will not give rise to competitive concerns on the global market for PVOH.

Vertically affected markets

- (141) Both Celanese and Acetex are vertically integrated companies in the sense that they use acetic acid to produce both acetic anhydride and VAM, and VAM to produce PVOH. Celanese is active on the downstream markets for emulsions and emulsion powders, cellulose acetate and acetate esters. Acetex is a consumer of ethylene vinyl acetate resin copolymers and PVAc resins.

Emulsions and Emulsion Powders

- (142) Emulsions and emulsion powders are a group of a wide range of performance chemicals produced using VAM and PVOH as raw materials. In its decision *Celanese/Clariant Emulsions Business*, the Commission examined whether both emulsions and emulsion powders are part of one product market for "all emulsions." The Commission further examined the scope of the geographic market, and suggested that it be EEA-wide⁴⁸. However, both the definition of the product market and the geographic market were left open.
- (143) On the basis of an EEA wide market for all emulsions, Celanese currently has a market share of [5-10] %. The Vinamul⁴⁹ transaction will increase Celanese's share to about [15-25] % in the EEA. Celanese's share of emulsion powders sales, which will not be affected by the Vinamul operation, does not exceed [5-15] %. Should the

⁴⁷ The Commission's Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings indicates that a merger prima facie is unlikely to raise competition concerns with post merger HHI below 1000.

⁴⁸ *Celanese/Clariant Emulsions Business*, Case No. COMP/M.3001 (December 16, 2002) at recital 21.

⁴⁹ On 23 November, 2004, Celanese signed an agreement to purchase Vinamul Polymers, the North American and European emulsion polymer business of the National Starch and Chemical Company, a subsidiary of Imperial Chemicals Industries PLC ("ICI"). Source: Form CO p. 47.

Vinamul transaction be completed, the parties' share of the all emulsions market would be [5-15] %.

- (144) The operation is unlikely to affect competing suppliers of VAM and PVOH as Celanese's share of the emulsions market is modest and other emulsion manufacturers account for over [75-85] % of the market. Despite the fact that the parties' combined market share is [35-45] %, given the relatively small increment brought about by the transaction on the upstream VAM market (only [5-10] %) and the fact that the parties are increasing capacity for VAM, they would be unlikely to attempt to foreclose supplies of VAM to competing manufacturers. In relation to PVOH, the parties' combined market share is only [5-15] % so that any attempt to foreclose supplies to downstream competitors would be doomed to failure. In the light of the above, the transaction will not give rise to competitive concerns on these markets.

Cellulose Acetate

- (145) Acetic anhydride is used as a main raw material for the production of acetate products, notably acetate flake which is then used to produce acetate tow, acetate filament, cut fibre and acetate film.
- (146) The parties' combined share of global acetic anhydride capacity is [15-25] % and only [5-10] % in the EEA. Acetex is not active on the acetate flake market and Celanese has only [0-5] % of global merchant sales and [20-30] % of world capacity. In acetate tow, Celanese has approximately [15-25] % of world capacity and [15-25] % of EEA capacity.
- (147) Independently of whether the geographic market is defined as EEA-wide or global, the parties' market shares would only be [15-25] % on the upstream acetic anhydride market and less than [20-30] % on the cellulose acetate market. Therefore, the parties would not be in a position to foreclose the access of cellulose acetate producers to acetic anhydride or to impede the sales of competing acetic anhydride suppliers.

Acetate Esters

- (148) Acetic acid constitutes a main raw material for the fabrication of various esters, in particular ethyl acetate, butyl acetate, n-propyl acetate, iso-propyl acetate and iso-butyl acetate. The parties' combined global market share in acetic acid capacity is [20-30] % with a relatively small overlap of [0-5] %. The parties' global merchant sales share in acetic acid is [20-30] % with an overlap of [5-10] %.
- (149) The geographic market for ethyl acetate is considered to be worldwide due to active trade flows. Celanese's share of worldwide merchant sales is [10-20] % and its share of EEA merchant sales is [15-25] %.
- (150) As the remaining four esters are normally produced in the same equipment, different acetates are substitutable for some applications, and n-butyl acetate accounts for over [75-85] % of their common global and EEA capacity and sales, the four esters are analyzed together. On this basis, Celanese's share of global sales of these esters is [15-25] % and its share of EEA sales is [20-30] %.

- (151) Given the fact that the increment brought about by the transaction on the upstream acetic acid market will not significantly affect the structure of the market ([5-10] %), and the fact that the parties are increasing capacity for acetic acid (Saudi Arabia project), they would be unlikely to attempt to foreclose supplies of acetic acid to competing manufacturers. In the light of the above, the transaction will not give rise to competitive concerns on these markets.

Ethylene Vinyl Acetate Resin Copolymers

- (152) Acetex is active on the market for ethylene vinyl acetate resin copolymers through its subsidiary AT Plastics Inc.. VAM is used as a main raw material for the fabrication of ethylene acetates. AT Plastics Inc.'s total demand is less than [0-5] % of global production of VAM, all of which is historically purchased from Celanese. Therefore, the transaction will not result in a significant change of the competitive situation on this market.

PVAc Resin

- (153) Acetex uses VAM as a main raw material for the fabrication of PVAc resins. Given the insignificance of its market share (Acetex' production in 2003 was only approximately [1-10] ktonnes, representing less than [10-20] % on the EEA market, and less than [5-10] % on the global market), PVAc does not constitute an affected market.

Overall Conclusion

- (154) For the reasons set out above it must be concluded that the proposed concentration will not significantly impede effective competition in the common market or in a substantial part of it. The concentration is therefore to be declared compatible with the common market and the EEA Agreement, in accordance with Article 8(1) of the Merger Regulation and Article 57 of the EEA Agreement.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Celanese Corporation [controlled by Blackstone Crystal Holdings Capital Partners] acquires sole control of Acetex Corporation within the meaning of Article 3(1)(b) of the Regulation (EC) No 139/2004 is hereby declared compatible with the common market and the functioning of the EEA Agreement.

Article 2

This decision is addressed to:

Blackstone Capital Partners (Cayman) IV L.P. "BCP IV"
345 Park Avenue
10154 New York, NY
United States of America

Done at Brussels, 13.07.2005

For the Commission, signed,
Neelie KROES
Member of the Commission



OPINION

of the ADVISORY COMMITTEE on CONCENTRATIONS

given at its 132nd meeting on 22 June 2005

concerning a draft decision relating to

Case COMP/M.3625 – Blackstone/Acetex

1. The Advisory Committee agrees with the Commission that the notified operation constitutes a concentration with a Community dimension within the meaning of Article 1(3) and Article 3(1)(b) of the EC Merger Regulation, and that it also constitutes a case of cooperation under the EEA Agreement.
2. The Advisory Committee agrees with the Commission's definitions of the relevant product markets as stated in the draft decision, namely:
 - acetic acid
 - VAM,
 - acetic anhydride
 - PVOH.
3. The Advisory Committee agrees with the Commission's definitions of the relevant geographic markets as stated in the draft decision, notably with regard to
 - acetic acid
 - VAM,
 - acetic anhydride
 - PVOH;as being of worldwide dimension instead of limited to the EEA.
4. The Advisory Committee agrees with the Commission that the concentration as notified does not significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position, and thus that the concentration should be declared compatible with the Common Market and with the functioning of the EEA Agreement in accordance with Articles 2(2) and 8 (1) of the Merger Regulation and Article 57 of the EEA Agreement.

5. The Advisory Committee asks the Commission to take into account all the other points raised during the discussion.

<u>BELGIË/BELGIOUE</u>	<u>ČESKÁ REPUBLIKA</u>	<u>DANMARK</u>	<u>DEUTSCHLAND</u>	<u>EESTI</u>
J. MUTAMBA	---	---	A. BUBMANN	---
<u>ELLADA</u>	<u>ESPAÑA</u>	<u>FRANCE</u>	<u>IRELAND</u>	<u>ITALIA</u>
---	E. LECERTUA AIZPURUA	R. de SERESIN	---	A. CARUSO
<u>KYPROS/KIBRIS</u>	<u>LATVIJA</u>	<u>LIETUVA</u>	<u>LUXEMBOURG</u>	<u>MAGYARORSZÁG</u>
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<u>MALTA</u>	<u>NEDERLAND</u>	<u>ÖSTERREICH</u>	<u>POLSKA</u>	<u>PORTUGAL</u>
---	P. GOUDSMIT-HOPSTAKEN	E. MÜLLER	---	---
<u>SLOVENIJA</u>	<u>SLOVENSKO</u>	<u>SUOMI-FINLAND</u>	<u>SVERIGE</u>	<u>UNITED KINGDOM</u>
---	---	V. HAAPAJÄRVI	C. BERGER	R. NIETO



EUROPEAN COMMISSION

The Hearing Officer

FINAL REPORT OF THE HEARING OFFICER

IN THE CASE COMP /M.3625 – BLACKSTONE/ACETEX

(pursuant to Articles 15 and 16 of Commission Decision 2001/462/EC, ECSC of 23 May 2001 on the terms of reference of Hearing Officers in certain competition proceedings - OJ L 162, 19.6.2001)

On 20 January 2005, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004⁵⁰ by which the undertaking Celanese Corporation (“Celanese”) controlled by Blackstone Crystal Holdings Capital Partners, Cayman Islands (“Blackstone”) acquires control within the meaning of Article 3(1)(b) of the Council Regulation of the whole of the undertaking Acetex Corporation, Canada (“Acetex”) by way of purchase of shares.

Having examined the information submitted by the parties to the proposed merger and conducted an initial market investigation, the Commission concluded that the notified operation raised serious doubts as to its compatibility with the common market and with the EEA Agreement. On 10 March 2005, the Commission therefore initiated proceedings in accordance with Article 6(1)(c) of the Merger Regulation.

Following a detailed market investigation, the Commission services concluded that the proposed concentration did not significantly impede effective competition on the markets concerned by the case. Accordingly, no statement of objections was sent to the parties.

In the course of the market investigation, the parties were granted access to key documents under section 7.2 of DG Competition’s best practices on the conduct of merger control proceedings.

The case does not call for any particular comments as regards rights to be heard.

Brussels, 29 June 2005.

(signed)
Karen WILLIAMS

⁵⁰ OJ L 24, 29.1.2004 p. 1