

**UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION**

In the Matter of)	
)	
FMC CORPORATION,)	
)	
a corporation,)	Docket No. C-3935
)	COMPLAINT
SOLUTIA INC.,)	
)	
a corporation, and)	
)	
ASTARIS LLC,)	
)	
a limited liability company.)	

The Federal Trade Commission (“Commission”), having reason to believe that FMC Corporation (“FMC”) and Solutia Inc. (“Solutia”) have entered into an agreement to form Astaris LLC (“Astaris”), a phosphates joint venture limited liability company, and that the joint venture, if consummated, would result in a violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45, and Section 7 of the Clayton Act, 15 U.S.C. § 18, and it appearing to the Commission that a proceeding in respect thereof would be in the public interest, hereby issues its complaint, stating its charges as follows:

A. THE RESPONDENTS

1. Respondent FMC is a corporation organized, existing, and doing business under and by virtue of the laws of the State of Delaware, with its principal place of business located at 200 East Randolph Drive, Chicago, Illinois 60601. FMC, among other things, engages in the development, manufacture and sale of elemental phosphorus, pure phosphoric acid, phosphate salts and phosphorus derivatives, primarily in North America and Europe.

2. Respondent Solutia is a corporation organized, existing and doing business under and by virtue of the laws of the State of Delaware, with its principal place of business located at 575 Maryville Centre Drive, St. Louis, Missouri 63141. Solutia, among other things, engages in the development, manufacture and sale of elemental phosphorus, pure phosphoric acid, phosphate salts and phosphorus derivatives, primarily in North America.

3. Respondent Astaris is a corporation organized and existing under and by virtue of the laws of the State of Delaware, with its principal place of business located at 575 Maryville Centre Drive, St. Louis, Missouri 63141.

4. At all times relevant herein, Respondents FMC and Solutia have been and are now engaged in commerce, as “commerce” is defined in Section 1 of the Clayton Act, 15 U.S.C. § 12, and are corporations whose business is in or affecting commerce as “commerce” is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

B. THE PROPOSED JOINT VENTURE

5. On April 29, 1999, FMC and Solutia executed an agreement to combine most of their respective phosphates and phosphorus derivatives businesses into a joint venture company. The joint venture, which FMC and Solutia have named Astaris, would be owned equally by each company. According to FMC and Solutia, the joint venture company would have combined sales of approximately \$600 million.

C. RELEVANT MARKETS

6. One relevant line of commerce in which to analyze the effects of the proposed joint venture between FMC and Solutia is the manufacture, marketing and sale of pure phosphoric acid. Pure phosphoric acid is a syrupy tribasic acid that is used in disparate applications. It is used in food applications, such as cola beverages and pet food, and in technical applications, such as cleaning compounds, metal surface treatments, and water treatment products. Pure phosphoric acid is sold directly to end-users, and also is reacted with inorganic chemicals to create phosphate salts, such as sodium tripolyphosphate.

7. There are no economic substitutes for pure phosphoric acid. A small but significant and non-transitory price increase would not affect the current level of consumption of pure phosphoric acid in any of the significant end-use applications.

8. Another relevant line of commerce in which to analyze the effects of the proposed joint venture is the manufacture, marketing and sale of phosphorus pentasulfide. Phosphorus pentasulfide, which is typically sold in a solid, flake form to customers, is used primarily in the manufacture of chemical additives for engine lubricating oils, and also is used to a smaller extent in the manufacture of different types of insecticides.

9. There are no economic substitutes for phosphorus pentasulfide, due to the fact that other products would not be nearly as effective as phosphorus pentasulfide in its major applications. Moreover, even attempting to find alternative products to substitute for this product would require lengthy product development efforts followed by extensive product testing. For these reasons, a small but significant and non-transitory price increase would not affect the current level of consumption of phosphorus pentasulfide in any of the significant end-use applications.

10. The relevant geographic market in which to analyze the effects of the proposed joint venture in pure phosphoric acid is the United States. The level of imports of pure phosphoric acid has been low compared to the overall market, and has not been highly responsive to changes in United States prices. Producers in the United States recognize that prices in the United States have historically been much higher than prices in other parts of the world.

11. There are several reasons why imports of pure phosphoric acid into the United States have been limited. One reason is that many of the overseas producers employ the older, higher-cost thermal process to produce pure phosphoric acid. In addition, transportation costs account for a significant portion of the delivered cost of phosphoric acid. Other reasons why imports have been limited include access to distribution, and the cost of terminal storage for product imported from overseas.

12. The overseas producers that have been most active in making sales of pure phosphoric acid in the United States have been those that employ the low-cost solvent extraction process. Nevertheless, the level of United States sales even by these companies has been low. These overseas producers of pure phosphoric acid have faced significant countervailing and antidumping duties that have limited their ability to sell pure phosphoric acid in the United States. These duties have increased costs for the overseas producers, and also chilled sales by the overseas producers in the United States. In addition, agreements between producers in the United States and various overseas producers have had the effect of limiting the level of competition from these overseas producers.

13. The relevant geographic market in which to assess the effects of the proposed joint venture between FMC and Solutia in phosphorus pentasulfide is the United States. Imports of phosphorus pentasulfide into the United States are virtually non-existent, and are limited by difficulties in handling this material in ocean shipping. Phosphorus pentasulfide is a hazardous material which emits deadly gases when exposed to moisture, and therefore requires specialized and expensive containers even for inland transportation. Furthermore, FMC's documents indicate that overseas producers have higher production costs than producers in the United States.

D. MARKET STRUCTURE

14. The United States market for pure phosphoric acid is highly concentrated. Four manufacturers, including Rhodia, Albright & Wilson, FMC and Solutia, currently account for approximately 95% of the local production capacity that can supply United States customers, and 95% of sales of pure phosphoric acid. FMC's share of current net sales (which includes sales among producers of pure phosphoric acid, and also excludes purchases of the product by producers) is over 20%, and Solutia's share is close to 11%. The proposed joint venture would increase the Herfindahl-Hirschman Index for United States sales by over 450 points, from over 2070 to over 2500.

15. FMC produces pure phosphoric acid via the thermal process in the United States at plants in Lawrence, Kansas and Carteret, New Jersey. FMC has also announced that it is in the process of building a plant in Idaho that will produce pure phosphoric acid via the solvent-

extraction process. FMC also produces phosphate salts at the Lawrence and Carteret plants, and also at a plant in Green River, Wyoming.

16. FMC sells pure phosphoric acid directly to end-customers, and also uses it in the manufacture of phosphate salts. FMC's sales of phosphate salts included products such as sodium tripolyphosphate, sodium hexametaphosphate, sodium acid pyrophosphate, and tetrapotassium phosphate.

17. Solutia produces pure phosphoric acid via the thermal process at plants in Carondolet, Missouri and Trenton, Michigan. Solutia also has a pure phosphoric acid plant in Augusta, Georgia, but is not currently operating the plant. The plant has been mothballed since the beginning of 1998. Solutia also produces phosphate salts at its plants in Carondolet, Trenton and Augusta.

18. Solutia sells pure phosphoric acid directly to end-customers, and also uses it internally in the production of phosphate salts. Solutia's sales of phosphate salts included products such as sodium tripolyphosphate, sodium hexametaphosphate, sodium acid pyrophosphate, dicalcium phosphate and tetrapotassium phosphate.

19. FMC and Solutia manufacture and sell pure phosphoric acid in direct competition with each other, and also manufacture and sell phosphate salts in direct competition with each other.

20. Besides FMC, Solutia, Rhodia, and Albright & Wilson, two other companies that produce pure phosphoric acid in North America for sale in the United States are Earth Sciences and Simplot. Earth Sciences and Simplot have each been producing pure phosphoric acid for the last two to three years, using processes to manufacture pure phosphoric acid different from the other North American producers. Both of these companies have very limited production capacity and sales compared to the other four producers, and are unlikely to grow their sales substantially in the foreseeable future.

21. The United States market for phosphorus pentasulfide is highly concentrated. Three manufacturers, FMC, Solutia and Rhodia, currently account for all of the sales of this product in the United States. FMC produces phosphorus pentasulfide at its plant in Lawrence, Kansas, and Solutia produces phosphorus pentasulfide at its plant in Sauget, Illinois. Rhodia, the smallest producer, has announced that it is exiting the phosphorus pentasulfide market, and is in the process of closing the facility in Morrisville, Pennsylvania where it manufactured this product.

22. FMC and Solutia together accounted for over 85% of United States sales of phosphorus pentasulfide in 1998. Solutia had a share of over 67% of sales and FMC had a share of close to 18% of sales. As measured by 1998 sales, the proposed joint venture would increase the Herfindahl-Hirschman Index for United States sales by over 2500 points, from approximately 5100 to over 7600. With Rhodia's announced exit, moreover, the proposed joint venture would establish a monopoly in this product.

E. CONDITIONS OF ENTRY

23. *De novo* entry or fringe expansion into the pure phosphoric acid market would require a substantial sunk investment and a significant period of time, such that new entry would be neither timely, likely, nor sufficient.

24. The minimum viable scale of a pure phosphoric acid production facility likely precludes new entry. The prevailing pure phosphoric acid technology demands large-scale production, relative to market size, in order to operate efficiently. This technology has but a single use -- the production of pure phosphoric acid. It cannot economically be shifted toward another use. Therefore, all returns on investment must be derived from pure phosphoric acid sales. Because economic entry would require that a new producer capture a significant market share from existing producers, and because the costs of such entry would be sunk, such entry is inherently risky.

25. *De novo* entry or fringe expansion into the phosphorus pentasulfide market would require a substantial sunk investment and a significant period of time, such that new entry would be neither timely, likely, nor sufficient.

26. The minimum viable scale of a phosphorus pentasulfide production facility likely precludes new entry. A new plant would need to be built at a scale that either would be as large as the entire market, or would account for a large proportion of total market size, in order to operate efficiently. This technology has but a single use -- the production of phosphorus pentasulfide. It cannot economically be shifted toward another use. Therefore, all returns on investment must be derived from sales of phosphorus pentasulfide. Because economic entry would require that a new producer capture a significant market share from existing producers, in a market that is enjoying no growth in demand, and because the costs of such entry would be sunk, such entry is inherently risky.

27. Some firms produce phosphorus pentasulfide for captive use in the manufacture of insecticides. However, these firms have limited available capacity, and would need additional investments, in manufacturing, product development and marketing, in order to compete to make sales against FMC and Solutia. They would also need to establish that their products can meet the end-use requirements of the major customers in lubricant additives. Primarily for these reasons, these firms are unlikely to divert their production to making external sales, even in response to significant price increases.

F. MARKET CHARACTERISTICS WHICH FACILITATE COORDINATED INTERACTION IN PURE PHOSPHORIC ACID

28. The characteristics of the market for pure phosphoric acid facilitate coordinated interaction among producers, to the detriment of the purchasers of this product. Among such characteristics are:

- a. The United States market for pure phosphoric acid is highly concentrated;

- b. Pure phosphoric acid is a highly homogeneous product that is purchased primarily on the basis of price;
- c. Reliable pricing information is available from customers, and from other producers due to the practice of publicly announcing price increases in advance of their implementation;
- d. Producers have made pricing decisions independently of industry operating rates;
- e. Producers undertake retaliation at specific accounts as a means to discipline and deter future competition.

29. An agreement that limits competition is a January 1, 1998 agreement between Solutia and Emaphos, S.A. (“Emaphos”), a Moroccan producer which added a substantial amount of low-cost pure phosphoric acid capacity that came onstream in the beginning of 1998. Under the terms of the contract, Emaphos became a significant supplier of pure phosphoric acid to Solutia, which qualified and used the Emaphos acid in manufacturing different types of phosphate salts.

30. In addition to providing for supply from Emaphos to Solutia, the agreement between Solutia and Emaphos made Solutia the exclusive distributor in the United States for pure phosphoric acid produce by Emaphos, and therefore restricted Emaphos from selling pure phosphoric acid to direct customers in competition with Solutia. The only direct sales Emaphos was allowed to make under the terms of this agreement were sales to the other current large producers of pure phosphoric acid. This provision of the contract reduced Emaphos’ impact as a direct and independent competitor.

G. EFFECTS OF THE PROPOSED JOINT VENTURE

31. The effect of the joint venture may be substantially to lessen competition and to tend to create a monopoly in the relevant markets in violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 45, in the following ways, among others:

- a. It will substantially increase concentration in the market for pure phosphoric acid;
- b. It will significantly enhance the likelihood of coordinated interaction among the competitors in the manufacture and sale of pure phosphoric acid;
- c. It will increase the likelihood that purchasers of pure phosphoric acid in the relevant geographic market will be forced to pay higher prices;
- d. It will substantially increase concentration in the market for phosphorus pentasulfide, leading to a monopoly;

- e. It will significantly enhance the likelihood of a unilateral exercise of market power by the joint venture in phosphorus pentasulfide market;
- f. It will increase the likelihood that purchasers of phosphorus pentasulfide in the relevant geographic market will be forced to pay higher prices.

H. VIOLATIONS CHARGED

32. The joint venture agreement between FMC and Solutia, as described in Paragraph 5, violates Section 5 of the FTC Act, as amended, 15 U.S.C. § 45.

33. The joint venture between FMC and Solutia, if consummated, would violate Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. § 45, and Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18.

WHEREFORE, THE PREMISES CONSIDERED, the Federal Trade Commission on this fifth day of April, 2000, issues its complaint against said Respondents.

By the Commission.

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Donald S. Clark
Secretary