

IN THE MATTER OF

THE DOW CHEMICAL COMPANY

CONSENT ORDER, ETC., IN REGARD TO ALLEGED VIOLATION OF
SEC. 7 OF THE CLAYTON ACT AND SEC. 5 OF THE
FEDERAL TRADE COMMISSION ACT

Docket C-3785. Complaint, Feb. 20, 1998--Decision, Feb. 20, 1998

This consent order requires, among other things, the Michigan-based chemical company to divest, simultaneously with its acquisition of Sentrachem, Limited, a South African chemical company, the Hampshire Chemical Company's chelant business to Akzo Nobel N.V., which imports small volumes of chelants into the United States.

Appearances

For the Commission: *Morris Bloom, Joseph Krauss, Howard Morse and William Baer.*

For the respondent: *Robert Schlossberg and Peter Halle, Morgan, Lewis & Bockius, Washington, D.C. and Scott R. Pennock, in-house counsel, Midland, MI.*

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act and the Clayton Act, and by virtue of the authority vested in it by said Acts, the Federal Trade Commission, having reason to believe that the Dow Chemical Company's proposed acquisition of the South African company, Sentrachem Limited ("Sentrachem"), including its U.S. subsidiary, Hampshire Chemical Corporation ("Hampshire"), would violate Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. 45, and would violate Section 7 of the Clayton Act, as amended, 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:

I. THE RESPONDENT

The Dow Chemical Company

1. Respondent Dow is a corporation organized, existing and doing business under and by virtue of the laws of Delaware, with its office

and principal place of business located at 2030 Dow Center, Midland, Michigan. In 1996 Dow had worldwide sales of approximately \$20 billion.

2. Dow produces chemicals, plastics, and agricultural and consumer products. Through its Chemical Division, it is the leading producer in the U.S. of aminopolycarboxylic chelating agents, also known as chelants.

3. At all times relevant herein, Dow has been, and is now, a corporation as "corporation" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. 44; and at all times relevant herein, Dow has been, and is now, engaged in commerce as "commerce" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. 44, and Section 1 of the Clayton Act, 15 U.S.C. 12.

II. THE ACQUIRED COMPANY

4. Sentrachem, a South African company, develops, manufactures, and markets a number of different commodity and specialty chemical products. In 1996 Sentrachem had worldwide sales of approximately \$1 billion. Sentrachem competes in the U.S. chelant market through its U.S. subsidiary, Hampshire, a Delaware corporation, with its principal place of business in Lexington, Massachusetts. In 1996, Hampshire's sales were approximately \$200 million.

III. THE ACQUISITION

5. On or about August 5, 1997, Dow announced a cash tender offer to acquire all of the shares of Sentrachem for approximately \$425 million.

IV. THE RELEVANT MARKET

6. One relevant line of commerce in which to analyze the proposed acquisition is the research, development, manufacture, and sale of chelants, which are chemicals used to inactivate iron, calcium, copper, magnesium and other metal ions in water solutions. Chelants are used in cleaners, pulp and paper, water treatment, photography, agriculture, and food and pharmaceutical applications. Chelant customers use chelants because they are high quality metal ion control chemicals that are cost effective across a wide variety of applications. Chelants are an extremely small part of the customer's overall product or processing costs. Because of the time and cost associated with researching and qualifying an alternative to chelants,

customers do not reformulate away from chelants. There are no economic substitutes for chelants to which customers would switch in response to a price increase in chelants.

7. The United States is one relevant geographic area within which to analyze the likely effect of the proposed acquisition on competition in the chelant market. Chelants produced overseas are not economic substitutes for most chelants sold in the United States, particularly those diluted in water, because shipping costs are high and there are too many uncertainties and delays inherent in long distance shipping. Imports of chelants are less than 4 percent of U.S. consumption.

V. CONCENTRATION

8. Based on 1996 dollar sales, Dow and Hampshire are the two leading of only three producers of chelants in the United States, with a combined market share of over 70 percent. The U.S. chelant market is highly concentrated as measured by the Herfindahl-Hirschmann Index ("HHI"). The proposed acquisition would increase the HHI by more than 2,800 points to more than 6,100 points.

VI. ENTRY CONDITIONS

9. Entry into the chelant market would not be timely, likely, or sufficient to deter or offset the adverse effects of the proposed acquisition on competition. A new entrant would have to build both a chelant production plant and a plant to produce hydrogen cyanide ("HCN"), a key input in the production of chelants, which would take over two years and entail large fixed, and mostly sunk, costs. In addition to the time to construct these facilities, a new firm must secure the environmental permits to produce HCN, a toxic substance. In order to recoup its investment, a new entrant would need to obtain a market share at least as large as that held by any of the current domestic producers, which would be difficult because of the significant amount of chelant sales that are subject to long term supply agreements. All these factors make entry into the U.S. chelant market unlikely.

VII. EFFECT OF THE PROPOSED MERGER ON COMPETITION

10. The proposed acquisition would substantially lessen competition or tend to create a monopoly in the U.S. chelant market, because, among other things:

- a. It increases concentration substantially in a highly concentrated market;
- b. It eliminates actual, direct, and substantial, competition between Dow and Hampshire;
- c. It facilitates the unilateral exercise of market power by the merged firm; and
- d. It will likely result in increased prices for chelants.

VIII. VIOLATIONS CHARGED

11. The proposed acquisition by Dow of all the shares of Sentrachem, described in paragraph five, 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.

Commissioner Azcuenaga and Commissioner Thompson not participating.

DECISION AND ORDER

The Federal Trade Commission ("the Commission"), having initiated an investigation of the proposed acquisition by The Dow Chemical Company ("Dow"), through its wholly-owned subsidiary, Dow South Africa Holdings (Pty) Ltd., of the entire issued share capital of Sentrachem Limited ("Sentrachem"), which in turn owns Hampshire Chemical Corporation ("Hampshire"), and having been furnished thereafter with a copy of a draft of complaint which the Bureau of Competition proposed to present to the Commission for its consideration and which, if issued by the Commission, would charge respondent with a violation of Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. 45, and a violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. 18; and

The respondent, its attorneys, and counsel for the Commission having thereafter executed an agreement containing a consent order, an admission by the respondent of all the jurisdictional facts set forth in the aforesaid draft of complaint, a statement that the signing of said agreement is for settlement purposes only and does not constitute an admission by respondent that the law has been violated as alleged in such complaint, and waivers and other provisions as required by the Commission's Rules; and

The Commission, having thereafter considered the matter and having determined that it had reason to believe that the respondent has violated the said Acts, and that a complaint should issue stating its charges in that respect, and having thereupon accepted the executed consent agreement and placed such agreement on the public record for a period of sixty (60) days, now in further conformity with the procedure prescribed in Section 2.34 of its Rules, the Commission hereby issues its complaint, makes the following jurisdictional findings and enters the following order:

1. Respondent Dow is a corporation organized, existing and doing business under and by virtue of the laws of the state of Delaware, with its office and principal place of business located at 2030 Dow Center, Midland, Michigan.

2. The Federal Trade Commission has jurisdiction of the subject matter of this proceeding and of the respondent, and the proceeding is in the public interest.

ORDER

I.

It is ordered, That, as used in this order, the following definitions shall apply:

A. "*Commission*" means the Federal Trade Commission.

B. "*Respondent*" or "*Dow*" means The Dow Chemical Company, its directors, officers, employees, agents and representatives, its predecessors, successors, and assigns; subsidiaries, divisions, and groups and affiliates controlled by Dow, and the respective directors, officers, employees, agents, representatives, successors and assigns of each.

C. "*Sentrachem*" means Sentrachem Limited, a South African company, with its principal place of business at 5 Protea Place Sandown 2196, 2146 Sandton, Republic of South Africa.

D. "*Hampshire*" means Hampshire Chemical Corporation, a wholly-owned subsidiary of Sentrachem Limited, with its principal place of business at 55 Hayden Avenue, Lexington, Massachusetts.

E. "*Akzo*" means Akzo Nobel N.V., a company located in The Netherlands, with its principal place of business at Velperweg 76, 6800 SB Arnhem, The Netherlands, and its subsidiary Akzo Nobel Chemicals Inc.

F. "*Acquisition*" means the acquisition by Dow, through its subsidiary, Dow South Africa Holdings (Pty) Ltd., of the entire issued share capital of Sentrachem Limited.

G. "*Chelating agents*" means chemicals used to react with metal ions to form ring structures incorporating the metal ion within the molecule.

H. "*Chelant products*" means ethanoldiglycine sodium ("EDG") and diethanolglycine sodium ("DEG") and aminopolycarboxylic acids and salts, including, but not limited to, ethylenediaminetetraacetic acid ("EDTA"), diethylenetriaminepentaacetic acid ("DTPA"), hydroxyethylenediaminetriacetic acid ("HEDTA"), nitrilotriacetic acid ("NTA"), ethylenediaminetriacetic ("ED3A"), and the salts and nitrile precursors of EDTA, DTPA, HEDTA, ED3A, and any other chelating agents, but excluding propylenediaminetetraacetic acid ("PDTA").

I. "*Hampshire Chelant Products*" means all chelant products that have been, at any time in the two (2) years preceding the Acquisition, researched, developed, manufactured, distributed or sold by Hampshire in the United States or Canada, including, but not limited to, all projects in research and development by Hampshire that relate to improving existing or developing new chelant products, or improving processes for manufacturing chelant products.

J. "*Hampshire Non-Chelant Products*" means any product other than Hampshire Chelant Products, that have been, at any time in the two (2) years preceding the Acquisition, researched, developed, manufactured, distributed, or sold at the Lima Facility or Other Hampshire Facilities, including, but not limited to, all projects in research and development by Hampshire that relate to improving existing or developing new Hampshire Non-Chelant Products, or improving processes for manufacturing Hampshire Non-Chelant Products.

K. "*Hampshire Products*" means Hampshire Chelant Products and Hampshire Non-Chelant Products.

L. "*Lima Facility*" means Hampshire's Lima, Ohio manufacturing facility.

M. "*Other Hampshire Facilities*" means Hampshire's facilities located at Deer Park, Texas and Nashua, New Hampshire.

N. "*Akzo Lima Expansion*" means such improvements, additions, and expansions to the Lima Facility to produce no less than 175 million pounds per annum (on a solution pound basis) of chelant

products and to provide sufficient hydrogen cyanide ("HCN"), nitrile, and other raw material storage, chelant products warehouse space and related facilities, to enable the Hampshire Chelant Business to operate at sustained levels of output no less than 175 million pounds per annum (on a solution pound basis) of chelant products.

O. "*Akzo Lima Expansion Milestones*" means: (i) the submission by Akzo of complete applications for any and all federal, state, and local governmental permits that may be required to complete the Akzo Lima Expansion, within twelve (12) months after the date this order becomes final; (ii) the receipt by Akzo of all federal, state, or local governmental permits that are required to complete the Akzo Lima Expansion, within eighteen (18) months after the date this order becomes final; provided, however that if Akzo has not received approval or final disapproval of its permit application(s) within eighteen (18) months after the date this order becomes final, this second milestone shall be extended until Akzo receives approval or final disapproval for a period up to, but in no event longer than, twelve (12) months; (iii) the completion by Akzo of the structural steel installation required for the Akzo Lima Expansion, within twelve (12) months after permitting.

P. "*Dow's Competing Chelant Business*" means all assets, properties, business and goodwill, tangible and intangible of Dow relating to the research, development, manufacture, distribution or sale of chelant products, its employees, agents, representatives, and any other personnel assigned to such business, or to whom such persons report directly or indirectly.

Q. "*Dow's Contract Manufacturing Services*" means the Dow business unit engaged in the contract manufacture of chemical and polymer products and services for independent firms.

R. "*Hampshire Chelant Business*" means all assets, properties, business and goodwill, tangible and intangible, of Hampshire relating to the research, development and manufacture in the United States, and the distribution and sale in North America, of Hampshire Chelant Products, including, but not limited to:

1. All rights, title and interest in and to owned or leased real property at the Lima Facility (including completion of the current nitrile expansion project underway), together with its appurtenances, licenses and permits; but excluding real property at (i) the Other Hampshire Facilities; (ii) Hampshire's Lexington, Massachusetts facility; and (iii) Hampshire's Teeside, United Kingdom facility;

2. All machinery, fixtures, equipment, vehicles, transportation facilities, furniture, tools and other tangible personal property located at the Lima Facility, but excluding machinery, fixtures, equipment, transportation facilities located at (i) the Other Hampshire Facilities; (ii) Hampshire's Lexington, Massachusetts facility; and (iii) Hampshire's Teeside, United Kingdom facility;

3. All intangible assets associated with Hampshire Chelant Products, including, but not limited to, processes, process improvements projects, production projects, permits, supporting data and documents, patents, patent applications and other intellectual property relating to any Hampshire Chelant Product;

4. All intellectual property used by Hampshire at the Lima Facility and all intellectual property used for the research, development, manufacture or sale of Hampshire Chelant Products, including, but not limited to, trade secrets, test data, technology and know-how (including, but not limited to, manufacturing know-how and application know-how), and all patents, patent applications, patent rights, licenses, registrations, submissions and approvals;

5. All books, records and files, customer lists, customer records and files, vendor lists, catalogs, sales promotion literature, advertising materials, specifications, designs, drawings, and quality control data;

6. All right, title and interest in and to contracts and agreements entered into in the ordinary course of business with customers (together with associated bid and performance bonds), joint ventures, suppliers, sales representatives, distributors, agents, personal property lessors, personal property lessees, licensors, licensees, consignors and consignees, including, but not limited to, Hampshire's existing contract with BP Chemicals Inc. for the supply of liquid hydrogen cyanide and the related service agreements and land lease; and all existing Hampshire contracts for railcars used in the transport of Hampshire Chelant Products;

7. All projects in research and development by Hampshire as of the date of the Acquisition that relate to improving existing chelant products, or developing chelant products, including, but not limited to, all research materials, technical information, inventions, trade secrets, intellectual property, patents, technology, know-how (including, but not limited to, manufacturing know-how and application know-how), specifications, designs, drawings, processes, quality control data, and formulas, as well as licenses thereto, relating to all such projects in research and development;

8. All research materials and inventions and intellectual property used for research and development relating to Hampshire Chelant Products or processes, including, but not limited to, trade secrets, test data, technology and know-how, and all patents, patent applications, patent rights, licenses, registrations, submissions and approvals;

9. All rights under warranties and guarantees, express or implied;

10. All rights, titles and interests in registrations or other governmental approvals for manufacture and sale of any Hampshire Chelant Products or research and development efforts for Hampshire Chelant Products; and

11. All Hampshire (including Hampshire UK) brand names and trademarks for Hampshire Chelant Products worldwide, but excluding the Hampshire corporate name and any brand names or trademarks that include the full word "Hampshire."

In addition, the "Hampshire Chelant Business" shall include all intellectual property used by Hampshire in the research, development, and manufacture in the United States, and the distribution and sale worldwide, of PDTA.

S. "*Hampshire Business Unit*" means the Hampshire Chelant Business and all assets, properties, business and goodwill, tangible and intangible of Hampshire relating to the research, development and manufacture in the United States, and the distribution and sale in North America of Hampshire Products, including, but not limited to:

1. All right, title and interest in and to owned or leased real property at the Lima Facility and Other Hampshire Facilities together with its appurtenances, licenses and permits;

2. All machinery, fixtures, equipment, vehicles, transportation facilities, furniture, tools and other tangible personal property located at the Lima Facility and Other Hampshire Facilities;

3. All inventory and storage capacity;

4. All intangible assets associated with Hampshire Products, including, but not limited to, processes, process improvements projects, production projects, permits, supporting data and documents, patents, patent applications and other intellectual property relating to any Hampshire Product;

5. All intellectual property used for the research, development, manufacture or sale of Hampshire Products, including, but not limited to, trade secrets, test data, technology and know-how (including, but not limited to, manufacturing know-how and application know-how),

and all patents, patent applications, patent rights, licenses, registrations, submissions and approvals;

6. All books, records and files, customer lists, customer records and files, vendor lists, catalogs, sales promotion literature, advertising materials, specifications, designs, drawings, and quality control data;

7. All right, title and interest in and to contracts and agreements entered into in the ordinary course of business with customers (together with associated bid and performance bonds), joint ventures, suppliers, sales representatives, distributors, agents, personal property lessors, personal property lessees, licensors, licensees, consignors and consignees including, but not limited to, all existing contracts with BP Chemicals Inc. for the supply of liquid hydrogen cyanide and the related service agreements and land lease; and all existing contracts for railcars used in the transport of Hampshire Products;

8. All projects in research and development as of the date of the divestiture required by this order pursuant to paragraph IV.B that relate to improving existing, or developing new, Hampshire Products, including, but not limited to, all research materials, technical information, inventions, trade secrets, intellectual property, patents, technology, know-how (including, but not limited to, manufacturing know-how and application know-how), specifications, designs, drawings, processes, quality control data, and formulas, as well as licenses thereto, relating to all such projects in research and development;

9. All research materials and inventions and intellectual property used for research and development relating to Hampshire Products, including, but not limited to, trade secrets, test data, technology and know-how, and all patents, patent applications, patent rights, licenses, registrations, submissions and approvals;

10. All rights under warranties and guarantees, express or implied;

11. All items of prepaid expense;

12. All rights, titles and interests in registrations or other governmental approvals for manufacture and sale of any Hampshire Non-Chelant Products, or research and development efforts for Hampshire Non-Chelant Products; and

13. All Hampshire (including Hampshire UK) brand names and trademarks for Hampshire Products worldwide, including the Hampshire corporate name and any brand names or trademarks that include the full word "Hampshire."

II.

It is further ordered, That:

A. Respondent shall divest, absolutely and in good faith, as an ongoing business, simultaneously with consummation of the Acquisition, the Hampshire Chelant Business to Akzo pursuant to the agreement between Dow and Akzo dated as of November 15, 1997. Provided, however, that respondent may retain (i) a non-exclusive, fully-paid and global license from Akzo to intangible assets and intellectual property used by the Hampshire Chelant Business in the research, development or manufacture of Hampshire Chelant Products to make, have made, use and sell Hampshire Non-Chelant Products; and (ii) a non-exclusive, fully-paid and global license relating to the manufacture of ED3A to make, have made, use and sell ED3A for use as a precursor for surfactants; and (iii) a non-exclusive, fully-paid, and global license to intellectual property used in the manufacture of PDTA to make, have made, use and sell PDTA in any part of the world.

B. The purpose of the divestiture of the Hampshire Chelant Business is to ensure the continuation of the Hampshire Chelant Business as an ongoing, viable business engaged in the research, development, manufacture, distribution and sale of chelant products independent of Dow, and in competition with Dow, and to remedy the lessening of competition resulting from the Acquisition as alleged in the Commission's complaint.

C. On reasonable notice to respondent, respondent shall provide technical assistance and know-how to Akzo with respect to the Hampshire Chelant Business. Such technical assistance shall include, without limitation, consultation with knowledgeable employees of Hampshire and training at the manufacturing facilities of Hampshire. Respondent may charge the reasonable costs incurred in providing such technical assistance, including reimbursement (commensurate with the salary and benefits of Hampshire personnel involved) for the time plus expenses of Hampshire personnel providing the technical assistance. Hampshire shall continue to provide such technical assistance until Akzo is satisfied that it is capable of producing, and of developing for production, commercially saleable chelant products utilizing the assets of the Hampshire Chelant Business; provided, however, Hampshire shall not be required to continue providing such technical assistance and training after the earlier of (i) one (1) year

after the Akzo Lima Expansion is fully operational and released to production; or (ii) three (3) years after the date this order becomes final.

III.

It is further ordered, That:

A. Respondent shall exclusively toll manufacture for Akzo Hampshire Chelant Products at the Other Hampshire Facilities, at no more than Hampshire's historical cost as provided for in the agreement between Dow and Akzo dated as of November 15, 1997, in order to provide Akzo with sufficient time to accomplish the Akzo Lima Expansion for such period as Akzo may request, but in no event to extend beyond the earlier of (i) the date the Akzo Lima Expansion is fully operational and released to production or (ii) four (4) years after the date this order becomes final. Upon the Akzo Lima Expansion being released to production, respondent shall not manufacture at the Other Hampshire Facilities any chelant products for a period of one (1) year.

B. Dow's Contract Manufacturing Services shall (i) oversee the production of Hampshire Chelant Products at the Other Hampshire Facilities for Akzo, and (ii) administer and control the supply and allocation of HCN from Akzo at Lima, Ohio to respondent. Dow's Contract Manufacturing Services shall maintain any information arising from its obligations under paragraph III.B as confidential and not disclose such information to Dow's Competing Chelant Business. Any Dow or Hampshire employees supervised by Dow's Contract Manufacturing Services in carrying out the obligations of this paragraph III.B shall also maintain such information as confidential and not disclose such information to Dow's Competing Chelant Business.

C. Respondent shall use information relating to the Hampshire Chelant Business only to fulfill its obligations in paragraphs II.C and III.A, and shall not provide, disclose or otherwise make available to Dow's Competing Chelant Business, any information relating to Hampshire Chelant Products or the Hampshire Chelant Business, including information obtained as a result of the Acquisition, or directly or indirectly from Dow's Contract Manufacturing Services, or from respondent's operations of the Other Hampshire Facilities, and Dow shall not use any such information in Dow's Competing

Chelant Business, until respondent has fulfilled all obligations under paragraph III.A, above.

IV.

It is further ordered, That:

A. In the event that any of the Akzo Lima Expansion Milestones is not achieved, respondent shall acquire back from Akzo, within thirty (30) days, the Hampshire Chelant Business pursuant to the agreement between Dow and Akzo dated as of November 15, 1997.

B. Upon its acquisition of the Hampshire Chelant Business pursuant to paragraph IV.A, above, respondent shall divest, absolutely and in good faith, within sixty (60) days after respondent has obtained from Akzo all assets pursuant to paragraph IV.A the Hampshire Business Unit as a viable and competitive business. Provided, however, respondent may seek Commission approval to divest, in lieu of the divestiture of the Hampshire Business Unit, less than all assets of the Hampshire Business Unit and/or such other assets if such divestiture meets the purpose of paragraph IV.C, below. Respondent shall divest the Hampshire Business Unit or such other assets approved by the Commission only to an Acquirer that receives the prior approval of the Commission and only in a manner that receives the prior approval of the Commission.

C. The purpose of the divestiture of the Hampshire Business Unit is to ensure the continuation of the Hampshire Chelant Business as an ongoing, viable enterprise engaged in the research, development, manufacture, distribution and sale of chelant products independent of Dow, and in competition with Dow, and to remedy the lessening of competition alleged in the Commission's complaint.

D. Respondent shall take such actions as are necessary to maintain the viability and marketability of the Hampshire Business Unit and shall not cause or permit the destruction, removal, wasting, deterioration, or impairment of the Hampshire Business Unit, except in the ordinary course of business and except for ordinary wear and tear, until the Akzo Lima Expansion Milestones are achieved, or until the divestiture required by paragraph IV.B, above.

