

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

UNITED STATES OF AMERICA

Plaintiff,

v.

THE DOW CHEMICAL COMPANY
and ETHYL CORPORATION,

Defendants.

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CIVIL ACTION NO: 87C 4280

FILED: 5/11/87

COMPETITIVE IMPACT STATEMENT

Pursuant to Section 2(b) of the Antitrust Procedures and Penalties Act, 15 U.S.C. § 16(b)-(h), the United States of America files this Competitive Impact Statement relating to the proposed Final Judgment submitted for entry with the consent of the defendants in this civil antitrust proceeding.

I

NATURE AND PURPOSE OF THE PROCEEDINGS

On May __, 1987, the United States filed a civil antitrust complaint under Section 15 of the Clayton Act, 15 U.S.C. § 25, challenging the acquisition of the bromine and brominated products business of The Dow Chemical Company ("Dow") by Ethyl Corporation ("Ethyl") as a violation of Section 7 of the Clayton Act, 15 U.S.C. § 18. The complaint alleges that the effect of the acquisition may be substantially to lessen competition in the United States market for the production and sale of bromides, such as calcium bromide, sodium bromide, and

zinc bromide. Bromides are blended with other substances to produce clear brine fluids ("CBFs"), which are used as weighting fluids during completions and workover operations on oil and gas wells. The complaint requests that Dow and Ethyl be enjoined from carrying out any agreement or plan, the effect of which would be to combine or otherwise reduce the competitive viability of the bromide business of Dow or Ethyl.

The United States and defendants have stipulated that the proposed Final Judgment may be entered after compliance with the Antitrust Procedures and Penalties Act, unless the United States withdraws its consent. Entry of the proposed Final Judgment will terminate the action, except that the Court will retain jurisdiction to construe, modify, or enforce the provisions of the proposed Judgment and to punish violations of the proposed Judgment.

II

EVENTS GIVING RISE TO THE ALLEGED VIOLATION

1. Introduction

On September 11, 1986, Ethyl agreed to acquire Dow's bromine and brominated products business for approximately \$55 million. Pursuant to the agreement, Ethyl would acquire (a) substantially all of Dow's real property and equipment used or to be used in the production of bromine, bromides, and other brominated products in Arkansas, (b) an option to take possession of much of Dow's equipment used in the production of bromides and other brominated products in or near Midland,

Michigan, (c) Dow's inventories of bromine, bromides, and other brominated products, and (d) a variety of intangible assets including copyrights, patents, technology and know-how. After consummation of the agreement, Dow would no longer produce or sell bromides, and following a transition period, Dow would cease its production of bromine (except as a by-product) and other brominated products in Arkansas and Midland, Michigan.

Dow, which produces and sells chemicals, plastic materials, and a variety of pharmaceutical, agricultural, and consumer products, reported net sales of about \$11.5 billion in 1985. Dow's Basic Chemicals Segment, which had about \$5.2 billion in sales to unaffiliated customers in 1985, produces and sells inorganic and organic chemicals, including bromine and bromides. Ethyl is a diversified producer of performance chemicals for the petroleum industry, high technology chemicals, plastics and aluminum products, and has interests in oil, gas and coal. It reported net sales of about \$1.5 billion in 1985. Its Special, Industrial and Bromine Chemicals Division, which accounted for about \$500 million in net sales in 1985, produces a broad range of chemicals, including bromine and bromides.

Five companies produce virtually all of the bromine that is sold, or used in brominated products that are sold, in the United States. These companies are Dow, Ethyl, Great Lakes Chemical Corporation ("Great Lakes") (the largest domestic bromine producer), Arkansas Chemicals, Inc. ("ACI") (an

affiliate of Great Lakes that is managed and fifty-percent owned by Great Lakes), and Dead Sea Bromine Company Limited ("Dead Sea") (the only foreign firm that participates in the sale of bromine and brominated products in the United States).

Bromine has no significant use in and of itself. Rather, it is an intermediate product which must be processed into an end product, such as bromides, before it has commercial significance. Dow, Ethyl, Great Lakes and Dead Sea are vertically integrated into the production of such products and are the major producers of such products. ACI conveys the bromine it produces to Great Lakes.

2. Effect of the Proposed Acquisition in
the United States Bromide Market

The complaint alleges that the production and sale of bromides comprises a relevant product market for antitrust purposes and that the effect of Ethyl's proposed acquisition may be substantially to lessen competition in the production and sale of bromides in the United States in violation of Section 7 of the Clayton Act.

Both Dow and Ethyl produce bromides for use in CBFs. The CBFs serve as weighting fluids that totally or partially counterbalance an oil or gas well's down-hole pressure and thereby prevent, or reduce the potential for, a blowout. Drilling muds are also used as weighting fluids, and in most completions and workover operations, operators of oil and gas wells use drilling muds or CBFs that do not include bromides. Because CBFs that include bromides ("brominated CBFs")

generally are the most expensive weighting fluids, operators use brominated CBFs only when they determine that the physical characteristics of a well's geological formation require the use of a CBF with properties that only the bromides can provide. Thus, other CBF ingredients and drilling muds do not serve as viable substitutes for bromides in CBFs for those wells.

Brominated CBFs are used as weighting fluids primarily in high pressure oil or gas producing formations that consist of highly unconsolidated sands or shale or that contain a significant amount of hydratable clays. In the United States, these formations are concentrated primarily in the coastal areas around the Gulf of Mexico, offshore in the Gulf of Mexico, and offshore near California. In these wells, the use of brominated CBFs in lieu of drilling muds in completions and workover operations helps the operator to maximize oil or gas production, minimize formation damage, reduce the necessity and frequency of subsequent workover operations on the well, and protect the capital investment in the well.

Dow and Ethyl produce bromides in solution and concentrate forms and sell them as commodity products to oilfield service companies. Oilfield service companies then blend the bromides with other CBF ingredients to form brominated CBFs having the precise densities and crystallization temperatures desired by operators for completion and workover operations on particular oil and gas

wells. The service companies sell the brominated CBFs to the operators, which include major oil companies and independent oil exploration firms.

The complaint alleges that the United States bromide market is highly concentrated. Only two firms other than Dow and Ethyl, Great Lakes and Dead Sea, produce bromides for sale in the United States. Dead Sea produces bromides in Israel and exports them to the United States for sale through a wholly-owned subsidiary. Dead Sea has only a very small presence in the United States market. Of about \$50 million in total 1985 sales in the United States bromide market, Dow had about 24 percent, and Ethyl had about 17 percent, making them the second and third largest firms in the market, respectively. Based on 1985 sales, the combination of the two firms would increase the Herfindahl-Hirschman Index ("HHI"), a measure of market concentration, by about 816, from 3710 to about 4526. Based on projected 1986 sales in the market, of which Dow was projected to have about 30 percent, and Ethyl about 16 percent, the combination of the two firms would increase the HHI by about 960, from 3582 to about 4542.

The complaint alleges that a de novo entrant into the production of bromides for sale in the United States bromide market would need to invest significant amounts of time and money to become a significant competitor. In addition to

constructing one or more bromide processing facilities and developing commercially acceptable products, a new entrant would incur other costs in the storage, transportation, and marketing of bromides. In order to secure a supply of bromine-bearing brines or other bromine-bearing raw materials independent of its competitors, and in order to be cost-competitive with other producers of bromides, a new entrant would also need to develop its own brine field, and possibly a bromine processing plant.

Due to currently depressed conditions in the oil and gas industry, the number of completions and workover operations has declined considerably, and the demand for brominated CBFs has been sharply reduced. Sales of bromides in the United States dropped from about \$59 million in 1984 to a projected \$31 million in 1986. The decline in sales of bromides has depressed the United States bromide market and created substantial excess production capacity in the market. The depressed condition of the United States bromide market and the substantial excess production capacity in the market serve as significant disincentives to de novo entry into the production of bromides.

The bromine industry in general also is depressed, and significant excess production capacity exists in that industry. The depressed condition of the bromine industry and the excess production capacity in that industry create additional disincentives for de novo entry into the United States bromide market.

III

EXPLANATION OF THE PROPOSED FINAL JUDGMENT

As described above, the United States brought this action because the effect of Ethyl's acquisition of Dow's bromine and brominated products business may be substantially to lessen competition in violation of Section 7 of the Clayton Act in the production and sale of bromides. The United States believes that there may be other potential purchasers of Dow's bromide business that would not pose the same competitive concerns.

In the 1970's and early 1980's, Dow developed a new proprietary process for producing calcium bromide, by far the largest selling bromide, directly from bromine-bearing brines. In 1986, Dow completed construction of a new calcium bromide processing plant near Magnolia, Arkansas that incorporates Dow's new process technology. A purchaser of the assets to be divested, by using Dow's new process technology, could limit its investment and the scope of its entry to the bromide market. Unlike a producer that might rely on the traditional technology for processing calcium bromide, a producer that uses Dow's new technology would not be required to construct a bromine processing plant and possibly to enter into the production and sale of brominated products other than calcium bromide.

The purposes of the proposed Final Judgment are twofold: first, the proposed Judgment seeks to transfer Dow's new

process technology, as well as its new calcium bromide plant and certain other assets, to a buyer that has the capability of participating in the market as an independent producer of bromides; second, pending the purchaser's development of a completely independent business operation, the proposed Judgment seeks to provide the purchaser with a temporary means of competing in the supply of calcium bromide and other bromides at a cost that is no higher than the costs Dow would have if it were to remain in the market.

As to the first purpose, Section IX.A. of the proposed Judgment enjoins Ethyl from acquiring Dow's CBF business, and Section IV requires Dow to divest its CBF business to a purchaser for whom it is demonstrated to the United States' satisfaction that: the purchase is for the purpose of permitting the purchaser to compete effectively in the production and sale of bromides; the purchaser has the capabilities to compete effectively in the production and sale of bromides; and the purchaser can be anticipated to operate the CBF business in a responsible and lawful manner. Included in the CBF business to be divested are rights to Dow's proprietary technology (including its new process technology) and other intangible assets that relate to Dow's CBF business; Dow's new calcium bromide plant in Magnolia, Arkansas; the other tangible assets in Midland, Michigan and elsewhere that Dow has dedicated to its CBF business; the Crone Option; and Dow's lease rights to subsurface minerals in approximately 700

acres of land adjoining the Crone Option. The Crone Option is Dow's option to purchase rights to subsurface minerals in an area in Arkansas that comprises about 2045 acres. The purchaser of Dow's CBF business could develop the Crone Option area and the 700 adjoining acres as a brine field to supply bromine-bearing brine for the calcium bromide plant. All available information shows that the brine field has sufficient reserves to supply Dow's calcium bromide plant at its current capacity for at least ten years. Moreover, the purchaser could elect to expand the brine field by leasing additional rights to subsurface minerals in an area adjoining the Crone Option area.

The divestiture will be carried out by a trustee, Oppenheimer & Co., Inc., which will start its efforts to divest the CBF business immediately after the filing of the complaint. Section V of the proposed Judgment provides that only the trustee, and not Dow or Ethyl, shall have the right to effect the divestiture, but Dow and Ethyl are required to use all reasonable efforts to assist the trustee in fulfilling its responsibilities. Section V.F. provides that, if the trustee has not accomplished the divestiture within one hundred and eighty days after the complaint is filed, the Court will have the power to enter any appropriate orders, which may include extending the term of the trustee's appointment if it is in active negotiations with a purchaser or if Dow or Ethyl have not complied with the Judgment, or, in the alternative,

vacating Dow's obligation to divest the CBF business and terminating the injunction preventing Ethyl from acquiring it.

Section VI of the proposed Final Judgment provides the United States with an opportunity to review any proposed divestiture before it occurs. If the United States objects to a divestiture, it may not be completed unless approved by the Court.

Pending the divestiture, Section IV.D. requires Dow to preserve and maintain its CBF business in operable condition. After the divestiture, the purchaser will need to construct or develop a number of supporting assets before the calcium bromide plant can be operated as a completely independent business operation. These assets include brine production wells, injection wells for disposing spent brine, brine pretreatment facilities, a holding pond for spent brine, and pipelines. Moreover, over time, the purchaser may want to take steps to improve the operating efficiency or change the capacity of the calcium bromide plant. Because the plant is new, the purchaser may perceive that certain adjustments could be made to improve its efficiency. Indeed, Dow has already identified several such adjustments, and Section VIII.A. requires Dow to make those adjustments at no cost to the purchaser. Because of the currently depressed condition of the CBF industry, Dow has adjusted the plant to operate at approximately sixty percent of its original design capacity. Over time, the purchaser may want to make other adjustments to the plant's capacity.

Section VIII requires the defendants to provide the purchaser engineering, management and contracting advice and services with respect to the CBF business. The purchaser may seek advice and services both with respect to the supporting assets that it will need to construct or develop and with respect to any changes or improvements it may seek for the calcium bromide plant. The purchaser generally may seek advice and services under Section VIII for a period of four years, and such advice and services generally will be available at Dow's or Ethyl's cost.

The assets that the purchaser must construct or develop to operate the CBF business as an independent operation are not technically complex or difficult to construct or develop. However, because of the currently depressed condition of the CBF industry, the purchaser may choose not to develop immediately all of the necessary assets. The second purpose of the proposed Judgment is to provide the purchaser with a temporary means of competing in the supply of calcium bromide and other bromides at a cost no higher than the cost Dow would have if it were to remain in the market.

Section IX.D. implements this purpose by requiring Ethyl to enter into a supply agreement with the purchaser. Under the supply agreement, Ethyl will be required, for three and one-half years, to supply the purchaser's requirements of pretreated brine ready for use in the production of bromides. The purchaser may require Ethyl to supply as much brine as it

would require to operate the calcium bromide plant at its current sixty percent capacity configuration. In addition, Ethyl will be required to convey to the purchaser for a nominal sum (\$10.00), during the term of the supply agreement, three injection wells and connecting pipeline that the purchaser may use to dispose of its spent brine.

With the supply of pretreated brine and the injection wells, the purchaser can begin operation of the calcium bromide plant immediately after it constructs a holding pond and some additional pipeline connecting the holding pond to the plant and the injection wells. During this construction period, which should not take more than a few months, the purchaser will have bromides to sell because the supply agreement also will require Ethyl, for a period of nine months, to supply the purchaser's requirements for resale of calcium bromide, sodium bromide, and zinc bromide. Under the supply agreement, Ethyl must supply the purchaser's requirements of pretreated brine and finished bromides at cost.

Because of the close physical proximity of the CBF business to be divested and the other bromine-related assets that Ethyl plans to purchase from Dow, Section X requires Ethyl and the purchaser to exercise reasonable efforts in the operation of their respective businesses to minimize disruption to the physical operation of the other's business. In addition, Section X provides that Ethyl and the purchaser must consent that the conveyance of the real property included in the CBF

business be subject to mutually enforceable covenants, which will provide the purchaser with an opportunity to sell the property to Ethyl if the property will no longer be used in connection with the operation of a chemical manufacturing facility.

The proposed Judgment provides that controversies concerning the supply agreement or the provision of advice or services under Section VIII shall be settled by arbitration. Section XI requires the defendants and the purchaser to enter into a reasonable arbitration agreement concerning those controversies that are to be settled by arbitration.

IV

REMEDIES AVAILABLE TO POTENTIAL PRIVATE LITIGANTS

Section 4 of the Clayton Act (15 U.S.C. § 15) provides that any person who has been injured as a result of conduct prohibited by the antitrust laws may bring suit in federal court to recover three times the damages the person has suffered, as well as costs and reasonable attorney fees. Entry of the proposed Final Judgment will neither impair nor assist the bringing of any private antitrust damage action. Under the provisions of Section 5(a) of the Clayton Act (15 U.S.C. § 16(a)), the proposed Final Judgment has no prima facie effect in any subsequent private lawsuit that may be brought against the defendants.

V

PROCEDURES AVAILABLE FOR MODIFICATION
OF THE PROPOSED FINAL JUDGMENT

The United States and defendants have stipulated that the proposed Final Judgment may be entered by the Court after compliance with the provisions of the Antitrust Procedures and Penalties Act, provided that the United States has not withdrawn its consent. The Act conditions entry upon the Court's determination that the proposed Final Judgment is in the public interest.

The Act provides a period of at least sixty (60) days preceding the effective date of the proposed Final Judgment within which any person may submit to the United States written comments regarding the proposed Final Judgment. Any person who wants to comment should do so within sixty (60) days of the date of publication of this Competitive Impact Statement in the Federal Register. The United States will evaluate the comments, determine whether it should withdraw its consent, and respond to the comments. The comments and the response of the United States will be filed with the Court and published in the Federal Register.

Written comments should be submitted to:

Kent Brown, Chief
Midwest Office
Antitrust Division
United States Department of Justice
Room 3820 Kluczynski Federal Building
230 South Dearborn Street
Chicago, Illinois 60604

Under Section XIII of the proposed Judgment the Court will retain jurisdiction over this matter for the purpose of enabling any of the parties to apply to the Court for such further orders or directions as may be necessary or appropriate for the construction, implementation, modification, or enforcement of compliance with the Judgment, or for the punishment of any violations of the Judgment.

VI

ALTERNATIVES TO THE PROPOSED FINAL JUDGMENT

The proposed Final Judgment will provide all of the relief necessary to address the violation alleged in the complaint. The proposed Judgment provides an independent trustee with a significant time period (six months) to locate a purchaser of Dow's CBF business that would be preferable to Ethyl from a competitive standpoint. Moreover, it also assures that any purchaser of the CBF business can participate immediately in the market for bromides at costs no greater than Dow would have if it were to remain in the business.

The United States considered, and rejected, two alternatives to the Final Judgment. Initially, the United States considered whether to file suit and seek a preliminary injunction to enjoin Ethyl's proposed acquisition of Dow's bromine and brominated products business. The United States rejected this alternative because the divestiture required under the Final Judgment should establish an independent viable competitor in the bromide market and prevent the merger from having any anticompetitive effect in that market.

The other alternative considered by the United States would have required including additional assets in the divestiture package. Under this alternative, in addition to Dow's calcium bromide plant, the divestiture package would have included other assets in Magnolia, Arkansas, including Dow's entire brine field (which, for geological reasons, cannot be divided), its production and injection wells, its brine pretreatment facilities, and its holding ponds. The purpose of requiring the divestiture of these additional assets would be to provide the purchaser with the means to begin the immediate production of calcium bromide without having to enter into any supply agreement.

Ordinarily, the United States does not consider a supply agreement to be an acceptable alternative to a divestiture that immediately results in a completely independent competitor. Divestitures without supply agreements create completely independent businesses, eliminate any need for interaction between competitors, and reduce the prospects that the United States or the Court will become involved as a referee in future disputes in the industry.

In this case, however, the United States concluded that the divestiture and supply agreement provided for by the proposed Judgment were the best solution for promptly establishing an independent competitor in the United States bromide market.

Inclusion of the additional assets in the divestiture package would significantly increase the necessary cost and scope of entry into the bromine industry by a prospective purchaser. These assets were designed for operation in connection with, and are partially integrated into, Dow's elemental bromine production plant, and are much larger than necessary for use only with the calcium bromide plant. The costs of operating these larger assets would be much higher than the costs of operating assets specifically designed for use with the calcium bromide plant. In the context of the depressed conditions of the bromide market and the overall bromine industry, the United States concluded that increasing the necessary cost and scope of entry by a purchaser would decrease the attractiveness of the divestiture package and thereby reduce the prospects for a successful divestiture. The United States believes that the better alternative is to have the purchaser of the CBF business construct or develop supporting assets that are appropriately scaled to its own operations. This is the result contemplated by the proposed Judgment.

VII

DETERMINATIVE DOCUMENTS

Two documents, a letter from counsel for Dow dated May 8, 1987 and a letter from Ethyl dated May 7, 1987, were determinative in the formulation of the proposed Final Judgment. These two letters are attached to this Competitive Impact Statement.

DATED:

Respectfully submitted,

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