CHLORINE FROM CANADA

Determination of the Commission
in Investigation No. 731-TA-90
(Preliminary) Under the
Tariff Act of 1930,
Together With the
Information Obtained
in the Investigation

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UNITED STATES INTERNATIONAL TRADE COMMISSION

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Note: Information which would disclose the confidential operations of individual concerns may not be published. This information has been deleted from the report. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

Investigation No. 731-TA-90 (Preliminary)

CHLORINE FROM CANADA

Determination

On the basis of the record 1/ developed in investigation No. 731-TA-90 (Preliminary), the Commission determines, 2/ pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)), that there is no reasonable indication that an industry in the United States is materially injured or threatened with material injury, or that the establishment of an industry in the United States is materially retarded, by reason of imports from Canada of chlorine, as provided for in item 415.20 of the Tariff Schedules of the United States (TSUS), which are alleged to be sold in the United States at less than fair value (LTFV).

Background

On April 5, 1982, a petition was filed by counsel on behalf of Diamond Shamrock Corp., Olin Corp., and Pennwalt Corp. with the U.S. International Trade Commission and with the Department of Commerce alleging that an industry in the United States is materially injured, or is threatened with material injury, by reason of imports from Canada of chlorine which is allegedly being sold at LTFV. Accordingly, the Commission instituted a preliminary investigation under section 733(a) of the Tariff Act of 1930 to determine whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, or that the establishment of an industry in the United States is materially retarded, by reason of the importation of such merchandise into the United States.

1/ The "record" is defined in sec. 207.2(i) of the Commission's Rules of Practice and Procedure (47 F.R. 6190, Feb. 10, 1982).

2/ Commissioner Frank dissenting.

Notice of the institution of the Commission's investigation and of a conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and by publishing the notice in the Federal Register on April 14, 1982 (47 F.R. 16126). The conference was held in Washington, D.C. on April 29, 1982, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF CHAIRMAN BILL ALBERGER, VICE CHAIRMAN MICHAEL J. CALHOUN, AND COMMISSIONERS PAULA STERN, ALFRED E. ECKES, AND VERONICA A. HAGGART

On the basis of the record established in this investigation, we determine that there is no reasonable indication that an industry in the United States is being materially injured or threatened with material injury by reason of imports from Canada of chlorine allegedly sold at less than fair value. 1/ The reasons for our determination are set forth below.

Domestic Industry

Section 771(4) of the Tariff Act of 1930 defines the term "industry" as,

> the domestic producers as a whole of the like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product.

The term "like product" is defined in section 771(10) of the Act as,

> a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this title.

The chlorine that is imported into the United States from Canada is almost exclusively liquid chlorine. Chlorine is an inorganic chemical and one of the largest volume chemicals produced in the United States. Chlorine is produced as gas, and it remains in that state at normal temperatures and pressures. Under low temperatures and/or elevated pressures, chlorine reaches a liquid state. Most chlorine is liquified before shipment because the volume can be

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1/ Material retardation of the establishment of an industry was not raised as an issue in this investigation.

reduced in the liquification process. However, there are no chemically discernible differences between the liquid and gaseous chlorine and both forms can be used interchangeably.

We find the like product to be chlorine whether in its liquid or gaseous state. Therefore, the domestic industry against which injury should be assessed consists of the domestic producers of chlorine.

An argument has been made by the respondents during the course of this investigation that injury should be assessed with regard to the profitability of the chlor-alkali industry and not solely with regard to the chlorine industry. The chlor-alkali industry represents the production of both chlorine and caustic soda. Chlorine is produced by an electrolytic charging process which also produces caustic soda and hydrogen 1/ as co-products. The respondents argued that, since the producers of chlorine produce both chlorine and caustic soda "by definition, and not by choice or by coincidence, the economic reality is that they constitute a single chlor-alkali industry." 2/

The respondents also claim that, because there is no separate production process and because there are no separate industry-wide profit figures available, the Commission must analyze injury to the domestic industry in terms of information on the production of chlorine and caustic soda. The respondents cite 19 U.S.C. § 16//(4)(D) (section //1(4)(D) of the Tariff Act of 1930) in support of their position. Section //1(4)(D) states:

1/ The amount of hydrogen produced in the electrolytic charging process is minimal in comparison to chlorine and caustic soda.

2/ Post Conference Brief of C-I-L, Inc. and C-I-L Chemicals, Inc. in Opposition to the Petition, p. 4.

> (D) PRODUCT LINES--The effect of subsidized or dumped imports shall be assessed in relation to the United States production of a like product if available data permit the separate identification of production in terms of such criteria as the production process or the producer's profits. If the domestic production of the like product has no separate identity in terms of such criteria, then the effect of the subsidized or dumped imports shall be assessed by the examination of the production of the narrowest group or range of products, which includes a like product, for which the necessary information can be provided.

We have not found the respondents' arguments persuasive because there are data published on an industry-wide basis concerning the chlorine industry alone. Furthermore, the staff has been able to gather from the domestic producers information on the chlorine production process and producers' profits with regard to chlorine. 1/ Although chlorine and caustic soda are coproducts, there is a point in the production process where the chlorine gas is removed from the reaction stream. From this point on, chlorine and caustic soda are completely segregated and assume separate identities. Although we received limited profit and loss data from the domestic industry, for the most part this was not related to their inability to allocate data to their chlorine operations, but rather a failure to come forward with the information.

Although we find the domestic industry to consist of all producers of chlorine in the United States, we have considered the impact of the LTFV imports on both the overall market and the domestic commercial chlorine market in reaching our determination in this investigation.

1/ See Sodium Hydroxide, in Solution (Liquid Caustic Soda), from the Federal Republic of Germany, France, Italy, and the United Kingdom, inv. No. 731-TA-8 through 11 (Preliminary), U.S.I.T.C. Pub. No. 1040 (1980). In that investigation, the Commission relied on information gathered with regard to the production of caustic soda only. See also views of Vice Chairman Bill Alberger in that investigation.

Within the overall chlorine market in the United States there are two submarkets: the commercial market and the captive market. The captive market accounts for approximately 60 percent of the chlorine produced. This chlorine is consumed internally for the production of other products. Approximately 40 percent of the chlorine produced domestically is sold in the open commercial market. 1/

All of the alleged LTFV imports are produced by C-I-L Chemicals, Inc. C-I-L's exports to the United States are sold almost exclusively in the open commercial market. Almost all of the other Canadian imports are sold to the captive domestic market. These involve transfers between divisions or subsidiaries or between a subsidiary and its parent. Thus, it is in the domestic commercial market where the allegedly LTFV imports compete.

No reasonable indication of material injury by reason of LTFV imports.

Under section 733(a) of the Tariff Act of 1930, 2/ the Commission is required to determine whether there is a reasonable indication that an industry in the United States is materially injured by reason of imports of the merchandise which is the subject of the investigation by the administering authority. The record demonstrates that, while there are indications that the domestic industry has been experiencing difficulties, imports of chlorine from Canada which are allegedly sold in the United States at less than fair value are not a cause of material injury.

In making its determination of whether there is a reasonable indication of material injury, the Commission must consider, among other factors, the

1/ Statement of Petitioners on Reasonable Indication of Material Injury or Threat Thereof, p. 3.
2/ 19 U.S.C. § 1673b(a).

volume of imports, the effect of imports on prices in the United States for the like product, and the impact of imports of such merchandise on domestic producers of the like product. 1/

U.S. production declined by 12 percent from 1979 until 1981, and then declined by another 14 percent in January-March 1982, relative to production for the corresponding period of 1981. 2/ In contrast, available information indicates that production capacity increased by 3 percent from 1979-1981. Production capacity again increased by 3 percent in January-March 1982 relative to January-March 1981. 3/ As a logical result of increased capacity coupled with decreasing production, capacity utilization declined from approximately 86 percent in 1979 to approximately 64 percent in January-March 1982. 4/

The most current data available on the quantity of U.S. producers' shipments are published by the Chlorine Institute. 5/ These data reflect liquid chlorine shipments. 6/ Shipments of liquid chlorine accounted for an average of 49 percent of U.S. production during the period under consideration and declined throughout the period, though not quite as sharply as U.S. production. The quantity of liquid chlorine shipped declined from 5.8 million short tons in 1979 to 5.4 million short tons in 1981, or by 7 percent. The quantity of liquid chlorine shipped declined again, by 14 percent, in

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1/ Tariff Act of 1930, § 771(7), 19 U.S.C. § 1677(7)(B) and (C).
2/ Report to the Commission, p. A-11.
3/ Ibid., p. A-13.
4/ Ibid., p. A-14.
5/ The Chlorine Institute is a trade association to which a majority of the domestic chlorine producers belong. In 1979, all but five of the thirty-six U.S. producers were members.
6/ These data exclude shipments of gaseous chlorine via pipelines. Shipments of gaseous chlorine have been estimated to account for approximately 5 percent of U.S. production of chlorine (see Report to the Commission, p. A-14). However, these data do include intercompany transfers involving the shipment of liquid chlorine.

January-March 1982 from that for the corresponding period of 1981. Information supplied by domestic producers in response to the Commission's questionnaires demonstrates similar trends.

On an aggregated basis, the weighted average unit value of the commercial shipments of those producers responding to the Commission's questionnaire declined from $100 per short ton in 1980 to $80 per short ton in January-March 1982, or by 20 percent.

Although no significant inventories of chlorine are maintained because there are tremendous costs and hazards related to the storage of the product, U.S. producers' inventories have increased, both quantitatively and relative to producers' shipments during the period under consideration. 1/ In addition, apparent U.S. consumption of chlorine declined throughout the period under consideration. Data available to the Commission on U.S. employment and wages showed generally declining trends during the same period.

Six producers, accounting for an average of 19 percent of U.S. producers' shipments of liquid chlorine in 1981, provided profit-and-loss data on their chlorine operations to the Commission. 2/ This information indicates that in the aggregate, the six firms providing the information were profitable in 1979, but unprofitable in 1980 and 1981. Together, the six firms earned an operating profit of $1.1 million in 1979, which represented 1.0 percent of net sales that year. These firms sustained losses of $4.1 million (3.6 percent of net sales) and $6.6 million (6.3 percent of net sales), respectively in 1980 and 1981. The three firms which supplied interim data for January-March 1982

1/ Report to the Commission, pp. A-18-19.

2/ Although the data are limited, this information is the best information available to the Commission.

reported an aggregate loss of $4.2 million (40.6 percent of net sales) compared to a loss of $2.0 million (14.9 percent of net sales) for the corresponding period of 1981.

The ratio of cost of goods sold to net sales rose from 91.1 percent in 1979 to 96.1 percent in 1981. This indicates that manufacturing costs rose at a faster rate than the selling price of chlorine during 1979-81. 1/

Causation

Section 733(a) of the Tariff Act of 1930 requires the Commission to determine whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury--

> by reason of imports of the merchandise which is the subject of the investigation by the administering authority. (Emphasis added).

We are unable to find a reasonable indication of injury under the statute because any injury experienced by the domestic industry is not caused by the allegedly less-than-fair value imports from Canada.

In determining whether material injury to an industry is "by reason of" alleged LTFV imports, the legislative history of Title VII of the Tariff Act of 1930 states that:

> the Commission must satisfy itself that in light of all the information presented, there is a sufficient causal link between the less-than-fair value imports and the requisite injury. The determination of the ITC with respect to causation is, under current law, and will be, under section 735, complex and difficult, and is a matter for the judgment of the ITC. 2/

The record indicates that, although imports of chlorine from Canada steadily increased from 1979 through January-March 1982, the market

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1/ Report to the Commission, p. A-24.
2/ S. Rep. No. 249, 96th Cong., 1st Sess. 75 (1979).

penetration was minimal. The ratio of all imports of chlorine from Canada to apparent U.S. consumption increased from 1.1 percent in 1979 to 1.7 percent in 1981 and increased again in January-March 1982 relative to the ratio for the corresponding period in 1981. The ratio of imports from Canadian producers, which are unrelated to U.S. producers, to apparent U.S. open-market consumption similarly increased from 1979 to January-March 1982. Under the circumstances of this investigation, these ratios never reached a level capable of causing an adverse impact on the domestic producers. 1/ 2/

The information on the record with regard to prices indicates that, on a weighted average basis, there is no underselling by the Canadians nor was there ever an established pattern of underselling. The weighted average price for domestically produced chlorine declined irregularly from $96 per short ton, f.o.b. plant in January-March 1980 to $75 per short ton, f.o.b. plant in January-March 1982. At the same time, the prices of Canadian imports were higher and showed an irregular increase. 3/ By early 1981, the delivered prices of imported chlorine were substantially higher than the f.o.b. prices of the domestic buyers. 4/ Thus, the allegations that the Canadian imports have suppressed and depressed the U.S. prices have not been substantiated.

We have considered the allegations of lost sales offered by the petitioner. We do not find them sufficient to establish a causal link between

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1/ We are unable to cite the specific ratios as that information is confidential.

2/ Comm. Eckes' determination in this investigation that there is no causal connection between alleged LTFV imports and the condition of the domestic industry is based on his assessment of import penetration in conjunction with the absence of any underselling or pattern of underselling or any significant lost sales as discussed in this opinion.

3/ We are unable to disclose the weighted average prices for the Canadian imports inasmuch as that information is confidential.

4/ The majority of domestic producers provided the Commission only with prices, f.o.b. their plants, although delivered pirces were also requested. The Canadian delivered prices and the U.S. f.o.b. prices are comparable, however, because the U.S. prices reflect sales involving purchasers who are close to the producer (transcript of the conference, pp. 63-66).

the Canadian imports and the domestic industry's difficulties because the lost sales were isolated incidents, primarily limited to the municipal market which accounts for only 6 percent of the total U.S. chlorine market. 1/ Further, the last verified lost sale occurred in June 1981.

Factors accounting for the decline in the domestic industry are the recession and the resulting decline in the demand for chlorine in the housing and automobile industries and the impact that the relatively strong demand for caustic soda has had on the supply of chlorine. Because of the coproduct relationship between chlorine and caustic soda, their supply and demand are permanently intertwined. At present, the demand for caustic soda is relatively strong as compared to the demand for chlorine. In meeting the demands for caustic soda, chlor-alkali producers necessarily create an oversupply of chlorine which results in a drop in chlorine prices. Two factors cause a rapid decrease in chlorine prices under these circumstances. First, no significant inventories of chlorine can be maintained because of the tremendous costs and hazards involved in storing the product. Second, the high cost of disposing of chlorine either by removing it to special dump sites for hazardous and toxic materials or by recombining it with caustic soda to form salt makes it prohibitive to throw chlorine away if one cannot sell or keep it.

Given the failure of the petitioners in this case to demonstrate a causal link between the alleged LTFV imports and any injury the industry may be suffering, we conclude that other causes are responsible for the present condition of the domestic industry. 2/ Additionally, information gathered by the Commission demonstrates that any injury was not due to the subject imports.

1/ Report to the Commission, p. A-6.
2/ Senate Report, supra. note 3 at 75.

No reasonable indication of a threat of material injury by reason of LTFV imports

Direction for determining whether there is a threat of material injury in antidumping investigations can be found in the legislative history of the Trade Act of 1974 and the Trade Agreements Act of 1979. This was recently elaborated upon in a Court of International Trade opinion in Alberta Gas Chemicals, Inc. v. United States. 1/

In Alberta Gas, the Court reviewed a determination made in a final investigation, not a preliminary investigation. Undoubtedly, the Court's decision in that case offers instruction to the Commission in evaluating what factors are appropriate for reaching a determination based on threat of material injury in both preliminary and final investigations. The instant

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1/ 515 F.Supp 870 (CIT 1981). Chairman Alberger, Vice Chairman Calhoun, and Commissioner Stern note that in Alberta Gas the Court cited a section of the Senate Finance report on the Trade Act of 1974. (S. Rep. No. 1298, 93rd Cong., 2d Sess. 180 (1974)). The opinion states that the Congressional standard for determining likelihood of injury was articulated in this report. The report explained that future injury must be:

> based upon evidence showing that the likelihood is real and imminent and not on mere supposition, speculation or conjecture. [Emphasis added.]

In 1979, the Congress again made its intent clear by replacing the "likelihood of injury" language with language directing the Commission to determine whether there exists a "threat of material injury." (19 U.S.C. § 1673 (1980)). In that regard, Congress indicated that there must be "information showing that the threat is real and injury is imminent, not a mere supposition or conjecture." (S. Rep. No. 249, 96th Cong., 1st Sess. 88, 899 (1979); H.R. Rep. No. 317, 96th Cong., 1st sess 47 (1979)). The Court interpreted the legislative history to mean that a determination of a threat of material injury should not be based on future events that are uncertain or depend on several contingencies. A determination of a threat of material injury should not depend on a "mere possibility that injury might occur at some remote future time."

In applying this standard to the present investigation, it should be clear that the standard for threat of material injury is no different from that articulated by the Court in Alberta Gas. We are, however, concerned with whether or not there is a reasonable indication that this standard has been met, not with a final showing of threat.

case, being a preliminary determination, involves the determination of whether there is a reasonable indication of a threat of material injury by reason of LTFV imports of chlorine from Canada. For the reasons set forth below, we find that the facts do not reasonably indicate that an industry in the United States is threatened with material injury by reason of alleged LTFV imports of chlorine from Canada.

Production of chlorine in Canada increased significantly from 1979 to 1980, but has declined since then. Canadian production increased from 1.1 million short tons in 1979 to 1.4 million short tons in 1980, or by 6 percent, but then declined slightly, by less than 1 percent in 1981. Canadian production then declined by 7 percent in January-February 1982 relative to that reported for the corresponding period of 1981. 1/

The capacity to produce chlorine in Canada increased significantly (by 38 percent) from 1979 to 1981. As far as it is known, capacity in Canada has remained unchanged since 1981. In 1981 total Canadian capacity for the production of chlorine was only 12 percent of U.S. capacity. The utilization of Canadian producers' capacity declined from 92 percent in 1979 to 78 percent in January-February 1982. 1/

The United States is the predominant market for Canadian exports. However, as a share of total production of chlorine in Canada, exports to the United States declined from 16 percent in 1979 to 13 percent in January-February 1982. U.S. importers reported that minimal inventories of chlorine were held as of March 31, 1982.

The factors that would lead us to a determination of a reasonable indication of threat of material injury are not present in this case.

1/ Report to the Commission, p. 2/.
2/ Ibid.

VIEWS OF COMMISSIONER EUGENE J. FRANK

Affirmative - Material Injury

On the basis of the record in investigation No. 731-TA-90 (Preliminary), I determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of chlorine from Canada which are allegedly sold at less than fair value.

Overview

First, I would like to note that the statute and legislative history in title VII investigations require the Commission in its preliminary determinations for both antidumping and countervailing duty investigations to exercise only a low-threshold test based upon the best information available to it at the time of such determination that the facts reasonably indicate that an industry in the United States could possibly be suffering material injury, threat thereof, or material retardation. 1/

The 45-day preliminary injury determination compressed time period was, in my view, intended by Congress to screen out those petitions where it was readily apparent, albeit based on a necessarily incomplete record, that there was no indication of possibly establishing injury even with adequate time, a thorough and fully developed investigation and record, and comprehensive hearing before the Commission. As Chairman Alberger stated in testimony on November 12, 1981, before the House Ways and Means Trade Subcommittee:

> The 'reasonable indication of material injury' standard is low enough that it does not force domestic industries to present more than a prima facie case before there is a full adjudication.

Such a standard applies equally to antidumping and countervailing duty investigations inasmuch as the statutory language is the same and given the

1/ H.R. Report No. 96-317, 96th Cong., 1st Sess., p. 52 (1979).

intent of Congress for the ITC to follow the same general practices in both the antidumping and subsidy cases.

Of course, it is important to keep in mind that the Tariff Act of 1930 and its legislative history are quite clear that the "material injury" to be ascertained in these investigations is defined to mean harm which is "not inconsequential, immaterial, or unimportant". 1/ Section 771(7)(B) of the Act provides factors the Commission shall consider, among other factors:

> (i) the volume of imports of the merchandise which is the subject of the investigation,
>
> (ii) the effect of imports of that merchandise on prices in the United States for like products, and
>
> (iii) the impact of imports of such merchandise on domestic producers of like products. 2/

Within the context of evaluating the volume of imports of the merchandise which is subject to the investigation and its effect on prices, in assessing impact in the affected industry, the language of the statute makes it clear that economic factors cited therein are not all-inclusive to wit: ". . .the Commission should evaluate all relevant economic factors which have a bearing on the state of the industry, including but not limited to-. . ." 3/ Legislative history on this point is also quite clear:

> In determining whether an industry is materially injured, as that phrase is used in the bill, the ITC will consider, to the extent permitted by information submitted to it in a timely manner, the factors set forth in section 771(7)(C) and (D) together with any other factors it deems relevant. 4/

1/ Report on H.R. 4537 of the Senate Committee on Finance, p. 88.
2/ 19 U.S.C. § 1677 (7)(B).
3/ 19 U.S.C. § 1677 (7)(C).
4/ Report on H.R. 4537 of the Senate Committee on Finance, p. 88.

There is also recognition in the Statute and legislative history that discretion necessarily must be given to the Commission to determine the significance to be assigned to a particular factor within the framework of other facts of each specific case.

> Neither the presence nor the absence of any factor listed in the bill can necessarily give decisive guidance with respect to whether an industry is materially injured, and the significance to be assigned to a particular factor is for the ITC to decide. 1/
>
> It is expected that in its investigation the Commission will continue to focus on the conditions of trade, competition, and development regarding the industry concerned. 2/

A word on the issue of causation is pertinent, because I feel there is some misunderstanding about just what is required by law in this crucial area in these preliminary investigations. The causation element is that material injury must be "by reason of" the subsidized or less-than-fair-value imports: the linkage language "by reason of" directing an examination of the effects of such imports on the domestic industry. Legislative history makes it clear that Congress did not intend for the Commission, in examining whether a causal link exists, to weigh the injury which might be incurred from such imports against other factors which may be contributing to the overall injury to an industry, although the Commission should take into account evidence alleging that such harm which was attributed to such imports was attributable to other factors. Moreover, the petitioner is not required to "bear the burden of proving the negative" that material injury is in fact not caused by such other factors. Further, the Commission is not required to make any precise

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1/ Id., and 19 U.S.C. § 1677(7)(E).
2/ Senate report, p. 88.

mathematical calculations with respect to the harm associated by other factors. 1/ Finally, to quote directly from the House Report:

> In short, the Committee does not view overall injury caused by unfair competition, such as dumping, to require as strong a causation link to unfairly competitive imports as would be required for determining the existence of injury under fair trade conditions. 2/

I would like to emphasize an important point, namely, that the Commission's charge in these preliminary investigations in evaluating the impact of alleged unfair imports, within the framework of the aforementioned discretion accorded it in analyzing relevant factors and establishing a causation link, must be undertaken within the less rigorous standard that the facts on the record and information available to it reasonably indicate that the affected domestic industry could possibly be suffering material injury, threat thereof, or material retardation. 3/

This less rigorous standard which was, as I have said earlier, intended by Congress in my view to be applied in a 45-day compressed time frame to screen petitions devoid of any merit where there was no indication of possibly establishing injury even with adequate time, must be applied with caution and equity, not in an arbitrary or capricious fashion, with the reasons set forth adequately documented.

Reasons for Affirmative Determination of Material injury

The basic reasons for my determination that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of chlorine from Canada which are allegedly sold at less than fair value are the following:

1/ Report of the House Ways and Means Committee on H.R. 4537, p. 47.
2/ Id.
3/ Having found a reasonable indication of material injury by reason of these imports in this investigation, I did not reach the issue of threat.

1. The major Canadian exporter of noncaptive chlorine to the United States made bids and received orders in the United States (directly and through its U.S. subsidiary) at prices which I conclude could have been at less than fair value. The Secretary of Commerce should make this final determination, if the investigation should continue and resolve these allegations. Some winning bids by this Canadian chlorine exporter were made in the municipal sector of the market in such cities as Atlanta. The "net back" value of some orders (after deducting freight cost) as bid and won by the major Canadian noncaptive chlorine exporter do not appear to cover adequately production costs. Quotation to a large Canadian municipality appears to show a much higher price quotation for chlorine in the Canadian city despite the lower freight costs and despite practices of absorbing freight cost in part. Even with some absorption of freight costs to meet U.S. competitors that have chlorine plants closer to the municipalities, it appears that aggressive price competition caused sales at less than fair value into the highly visable U.S. municipal market.

I concluded that this caused a price rippling effect on chlorine prices in some of the other United States markets because industrial and other customers were frequently aware of chlorine prices bid in the municipal markets, and utilized their knowledge of such prices to seek significant reductions in prices quoted to their industrial corporation if these prices were higher. This awareness is supported by testimony and submissions provided in this investigation, some of which are confidential. In a period of soft demand and recession, especially with major final product user industries such as the automotive and construction industries really depressed (these industries use products that are produced from chlorine), there is probably a

very inelastic demand for chlorine. Hence, when prices decline, an increase in demand for chlorine is not sharply reflected in volume increases. During 1980, the major Canadian exporter of noncaptive chlorine aggressively penetrated into the United States market based frequently on being a low-bidder in the municipal market. The quantity of noncaptive chlorine being sold into the municipal market was visible and significant enough to exert pressures on U.S. producers to hold or reduce their prices. Instances exist where "meet-or-release" clauses, despite the fact that these generally refer to meeting other U.S. chlorine producers' bid or offering prices, played a factor in forcing involved U.S. chlorine producers to meet the Canadian noncaptive chlorine producers' prices or have all or portions of a contract's volume reduced. Hence, I conclude there has been price suppression or depression because of increased aggressive activity from a Canadian supplier of noncaptive chlorine to the United States market. It is not adequate to show some Canadian noncaptive chlorine producer's price increases to customers in the pulp and paper industry and overlook the price trends utilized with municipal market in some instances. It is not necessary to say there were only a few instances of alleged less-than-fair value (LTFV) sales. If any sales took place at alleged LTFV, then this would be reason to have an affirmative finding that there is reasonable indication that an industry in the United States is materially injured by reason of exports of chlorine from Canada.

Staff interviews with customers relative to lost sales did indicate that price frequently was an important or the most important factor in the awarding of a contract. Canadian delivery schedules or availabilities, Canadian expertise in pulp and paper chlorine applications and technology, and quality

chlorine railroad tank cars usage by the Canadians are only some of reasons some U.S. chlorine customers chose the major Canadian noncaptive chlorine producer to supply their company or municipality. There were some instances where the Canadian noncaptive chlorine producer's price was higher, but there was adequate evidence of alleged LTFV pricing to vote affirmatively and thus, seek a final investigation determination.

It is not my place in any preliminary investigation to be involved in judging any subsidies whether from different governmental levels, or in electrical or other raw material costing practices, or in capital and interest rate areas. These determinations are made relative to the existence and rate of foreign government subsidies by the U.S. Department of Commerce.

In this preliminary investigation, it is vitally important to realize that we are considering questions relative to only chlorine. The fact that the Canadian share of the United States market is small does not make the impact of aggressive and alleged LTFV pricing in a relative inelastic demand situation any less damaging. The small addition of new supply can cause a decline in prices because of aggressive pricing in a selected visable market - the municipal market.

2. High demands in Canada and the United States for caustic (soda) - a coproduct of the chlorine production process-precipitated an over-production of chlorine relative to demand. Caustic (soda) end-use markets are frequently different from those for chlorine. Increased production of caustic (soda) causes extra production of chlorine which may not be demanded by end-user industries. Because chlorine is corrosive and potentially hazardous if combined with certain other elements, very little storage capability or inventory is maintained. Hence, there is an incentive for companies to ship

chlorine at what is alleged to be below the cost of production. The cost of physical dumping or handling disposal may not be covered. If a product is in surplus and there are environmental and other disposal costs or problems, this must be considered as costs and must not lead to abnormal pricing tactics that almost give away the chlorine and thereby depress prices.

To cross the United States-Canadian border with this "temporary" surplus of chlorine is in essence dumping a Canadian disposal problem of their surplus into the United States. The fact that a major Canadian exporter of noncaptive chlorine expanded plant capacity beyond the immediate and short-term internal Canadian market needs is not the fault of the United States suppliers of chlorine. The fact that technology changes may threaten some of the demand for chlorine in Canada in the future and especially in the pulp and paper industry is not the fault of the United States chlorine suppliers. The fact that the United States is the only significant export market for Canadian noncaptive "surplus" chlorine which is produced when there is significant demand for caustic (soda) is not the fault of United States chlorine producers. Many United States producers also have chlorine production facilities in Canada. The fact that not all the U.S. chlorine producers joined in the petition or this action is not significant. The fact that there are three major petitioners is sufficient to indicate alleged material injury, in this preliminary case, to major chlorine suppliers. There are a variety of different buyers and it is important to measure like methods of shipments for chlorine, which is a fungible product, without significant differences. I find that price comparisons with pipeline delivery of chlorine, when the Canadian noncaptive major chlorine suppliers utilized rail tank cars, is inappropriate. Delivery costs and long-term pipe-line commitments do matter.

The United States should hence not allow faulty potential foreign demand analyses to cause a disposal problem in United Stated markets through aggressive and alleged LTFV pricing. I am not making any comments on Canadian caustic (soda) being supplied to the United States market or on whether there is any evidence that this is related to the past Canadian plant expansion by the major Canadian noncaptive chlorine exporter.

3. It is important to note that with minor exceptions, United States chlorine producers' shipments of chlorine have declined generally in the 1979 through March 1982 period and U.S. chlorine production has declined while production capacity rose during the same above period. Capacity utilization in the U.S. has declined significantly during this same above period. The average unit value of chlorine has declined since 1980. The small inventory level of U.S. chlorine producers, as a percent of shipments, has risen to high levels by traditional standards. The share of total U.S. apparent consumption of the significant Canadian exporter of noncaptive chlorine has risen and exports to the United States expanded generally in the January 1979 - March 1982 period. U.S. firms supplying information on income and profit or loss accounted for 19 percent of total shipments of liquid chlorine in 1981 and these firms' aggregate operations on chlorine were unprofitable in 1980 and 1981. The Canadian major noncaptive chlorine exporter intensified its marketing effort into the United States municipal market in particular in 1980 and probably had a significant impact on United States chlorine producers' profits, operating rates (capacity utilization), and pricing strategies. I find there is evidence that the volume of chlorine imports rose, the effects of these imports of Canadian chlorine on U.S. chlorine, which is a like product, was significant, and that there was a significant impact on domestic producers of like chlorine products.

Additional details on the basis of more complete returns of the questionnaires, investigative efforts and company contacts or confirmations should occur if the investigation were to continue. The Commisssion should not lightly dismiss this investigation and leave these budding questions still-born. Major financial or other strength of a major foreign affiliated company backs the smaller Canadian company which is a major exporter of noncaptive chlorine. There needs to be more than the looking at the last year's U.S. prices relative to the Canadian supplier's United States bids. There needs to be recognition by the Commission that 1980 pricing levels of the Canadian companies in large measure started the recent price and hence profit pressures on U.S. companies which, because of the nature of the industry and sales contracts, responded to the Canadian price aggressiveness as was referred to by United States purchasers. The United States chlorine producers were unable to obtain chlorine price increases on three separate occasions. Employment was down in 8 U.S. establishments producing chlorine for which responses were received by the Commission in this measurement area.

In my opinion, there is a reasonable indication of material injury to the United States chlorine industry as evidenced by the aggressive pricing by the major Canadian noncaptive chlorine exporter. If there has been or still is over-production of chlorine in Canada to satisfy caustic demands, then adjustment of this should not be in the form of alleged LTFV imports which probably also "dump" the what-would-have-been Canadian disposal problem into the American market place rather than building hazardous inventories in Canada or recombining caustic and chlorine to store in Canada more safely but at a significant Canadian loss.

Conclusion

By not finding material injury in this investigation, I believe the Commission has by-passed the low threshold of injury and refrained from learning more about aggressive pricing impacts and alleged abuses of United States trade laws. In the long-run, the United States consumers and national security may suffer if investigations are unable to at least gather additional facts or enough information so as to be truly representative. It is improper, in my opinion, to say that the response to a questionnaire is too low or too late or represents too little of an industry and then to apply what I consider to be too high a threshold. If there are unanswered questions, these should be answered. Non-frivolous investigations where significant factors point to alleged significant LTFV sales should be allowed to proceed to final investigations. I am of the opinion that the facts of this investigation as cited above cry out for a final investigation to be conducted and for a final Commission determination. I believe the United States has nothing to fear if the Commission learns more truths and facts about a basic United States industry and its trade patterns with any country. It is justified.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On April 5, 1982, a petition was filed by counsel on behalf of Diamond Shamrock Corp., Olin Corp., and Pennwalt Corp. with the U.S. International Trade Commission and with the Department of Commerce alleging that an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Canada of chlorine which is allegedly being sold at less than fair value (LTFV). Accordingly, on April 8, 1982, the Commission instituted a preliminary investigation under section 731 of the Tariff Act of 1930 to determine whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, or that the establishment of an industry in the United States is materially retarded, by reason of the importation of such merchandise into the United States. The statute directs that the Commission make its determination within 45 days after its receipt of a petition, or in this case by May 20, 1982.

Notice of the institution of the Commission's investigation and of a conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and by publishing the notice in the Federal Register on April 14, 1982 (47 F.R. 16126). 1/ The conference was held in Washington, D.C., on April 29, 1982. 2/ The Commission voted on this case on May 12, 1982.

The Product

Description and uses

Chlorine, an inorganic chemical, is one of the largest volume chemicals produced in the United States. 3/ It exists as a heavy, greenish yellow gas (Cl_2) at normal temperatures and pressures. While chlorine is neither explosive nor inflammable alone, it reacts with most elements under a given set of conditions, often explosively. When contaminated by water, chlorine forms extremely corrosive acids. Antimony, arsenic, bismuth, boron, copper, iron, phosphorus, and certain alloys of these chemicals will ignite spontaneously when exposed to chlorine. Chlorine reacts explosively with hydrogen when exposed to sunlight or temperatures above 250° C. Chlorine is also a respiratory irritant and can cause suffocation at high concentrations. The threshold concentration of chlorine is generally regarded as 1 part per million (0.0001 percent concentration by volume). Because of the hazardous

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1/ A copy of the Commission's notice of institution of preliminary investigation is presented in app. A. A copy of the Department of Commerce's notice of institution of preliminary investigation is presented in app. B.

2/ A copy of the calendar of the conference is presented in app. C.

3/ Chlorine ranked seventh among the 10 largest volume chemicals produced in the United States in 1975 (Kirk-Othmer Encyclopedia of Chemical Technology, III ed., vol. 1, p. 800.

nature of chlorine, contaminants are, of necessity, kept to a minimum. All chlorine produced is reported to be 99.9 percent pure. 1/

Under low temperatures and/or elevated pressures, chlorine becomes a clear, amber liquid. Because of the volume reductions achieved through this compression, most chlorine is shipped in the liquid form. However, there is no chemically discernible difference between liquid and gaseous chlorine.

The imported product.--The product imported from Canada is liquid chlorine, nearly all of which is shipped to the United States by rail in pressurized tank cars.

The domestic product.--The domestic product is obtained as a gas, which may be used internally in the production or processing of other products, shipped to nearby customers via pipeline, or liquefied. The liquefied chlorine is shipped primarily via pressurized rail cars to purchasers. However, a small amount is used internally. Some liquid chlorine may also be shipped to nearby customers via pipelines.

Roughly 95 percent of the chlorine made in the United States is obtained from the electrolytic decomposition of sodium or potassium chloride. 2/ However, the electrolysis of sodium chloride is, by far, the predominant method. In this process, an aqueous solution of sodium chloride (brine) is converted by an electrical current into chlorine gas, sodium hydroxide (caustic soda), and hydrogen gas. The reaction is represented by the following chemical equation:

$$\underset{\text{(brine)}}{2Na^{+} + 2Cl^{-} + 2H_2O} \xrightarrow{\text{energy}} \underset{\text{(chlorine)}}{Cl_2(g)} + \underset{\text{(hydrogen)}}{H_2(g)} + \underset{\text{(caustic)}}{2NaOH(aq)}$$

The coproducts of this process, the chlorine, caustic, and hydrogen, are generated in a fixed ratio of 1 to 1.1 to 0.03 by weight. The primary products are chlorine and caustic. Industry representatives estimate that the hydrogen accounts for less than 5 percent of the cost of production and less than 10 percent of the value of production. 3/

There are three types of electrolytic cells used to produce chlorine in the United States--diaphragm cells, mercury cells, and membrane cells. Diaphragm cells maintain the purity of the coproducts through the use of a thin, asbestos partition (the diaphragm). This type of cell is used to produce about 75 percent of the chlorine in the United States. 4/ Mercury cells employ liquid mercury as the cathode in the electrolytic cell and are used to produce about 20 percent of domestic chlorine. 5/ Membrane cells account for less than 1 percent of U.S. production and are still largely in the developmental stage. A small amount (less than 5 percent) of chlorine is

1/ Transcript of conference, p. 74.
2/ Kirk-Othmer. . ., p. 806.
3/ Transcript of conference, p. 10.
4/ Chemical Economic Handbook, SRI International, p. 733.1001A.
5/ Ibid., p. 733.1001C.

obtained as a byproduct of other chemical processes. Diaphragm cells generally use less electricity than mercury cells, and membrane cells are being developed to use even less energy than the diaphragm cells. There are also many added costs engendered through the use of mercury cells because of the environmentally hazardous nature of the mercury. However, mercury cells generally produce a higher purity caustic soda.

Chlorine is an intermediary product. It is used in a multitude of processes and products. A flow chart showing chlorine derivatives is presented in figure 1. The most important use of chorine is in the processing of other chemicals, principally organic chemicals. Its next single largest use is in the manufacture of plastics, particularly polyvinylchloride (PVC). Because of its unique chemical properties, there are no direct substitutes for chlorine. Nonetheless, there are substitutes for the chemical processes and chemical products which use chlorine.

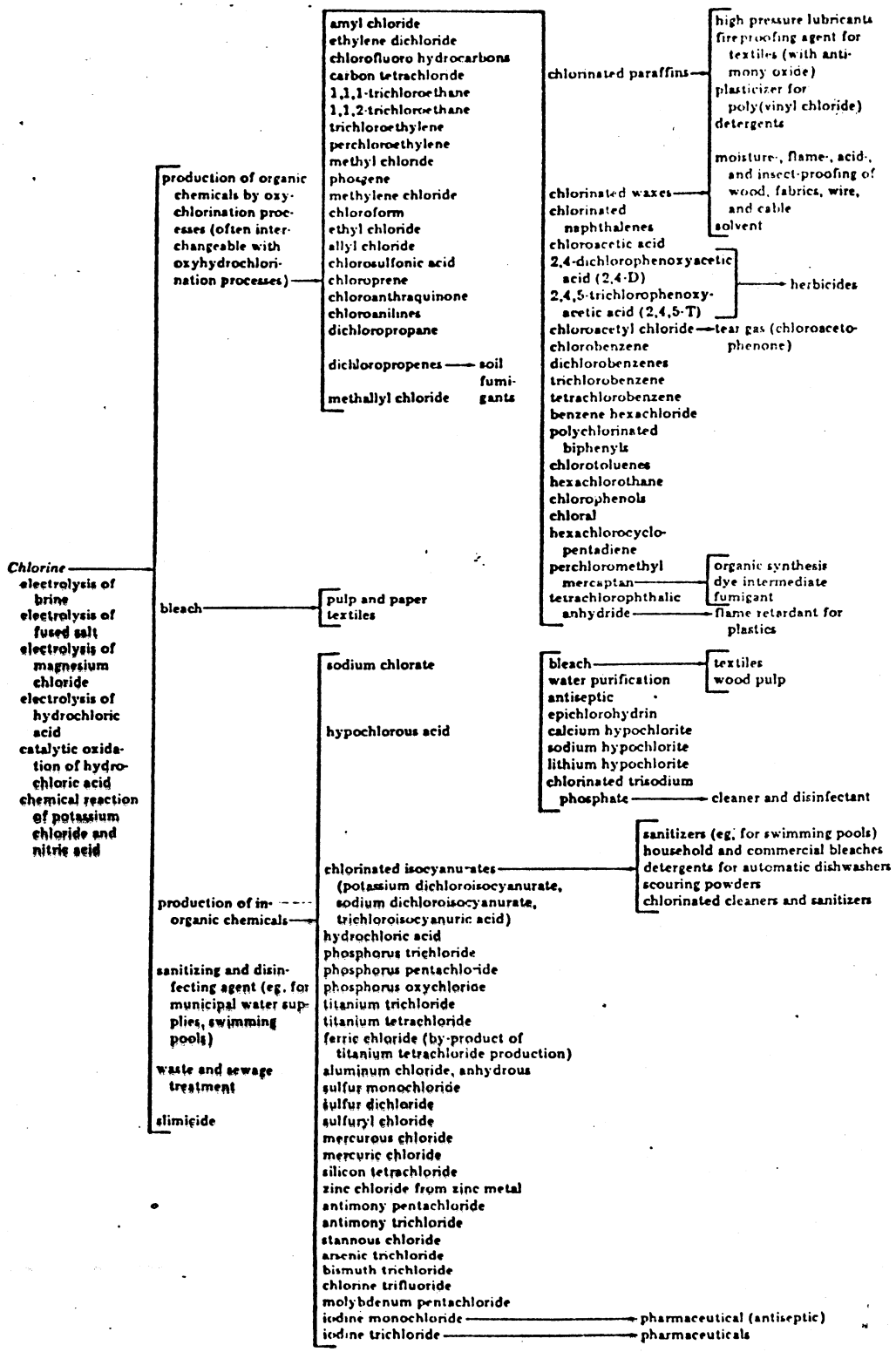
The interrelationship of chlorine and caustic soda.--Chlorine is never produced alone; it is always obtained as a coproduct or as a byproduct along with a variety of other chemicals. The most important of these is caustic soda. Because of the coproduct relationship, the supply and demand for chlorine and caustic soda are permanently intertwined. When the demand for both of these products is in balance, buyers can be found that will pay a reasonable price for each as it is produced. However, difficulties arise because the demands for each of the products are independent of one another and fairly regularly become imbalanced.

These difficulties can be illustrated by two examples. If the demand for chlorine were strong, but that for caustic soda were weak, those firms producing the chlorine demanded by their customers would soon find that caustic soda was accumulating in inventory. To reduce inventories, producers would lower the price of caustic soda and would eventually be forced to cut production, thus causing a shortage of chlorine and forcing the price of chlorine to rise. Similarly, if demand for chlorine were weak, but that for caustic soda were strong, the price of chlorine would fall, a shortage of caustic soda would eventually develop, and the price of caustic soda would rise. In this case, however, there are several factors which would cause the price of chlorine to decline at a more rapid rate than that for caustic soda if the reverse situation were true. Those factors are (1) no significant inventories of chlorine can be maintained because of the tremendous costs and hazards involved in storing the product, (2) chlorine sales are more sensitive to price than those of caustic soda because chlorine is the same no matter how it is produced, whereas caustic soda is available in a variety of grades, (3) other sodium compounds such as soda ash can be substituted for caustic soda and augment short supplies whereas there is no direct substitute for chlorine, and (4) the high cost of disposing of chlorine either in special dump sites for hazardous and toxic materials or by recombining it with caustic soda and returning it to salt makes it prohibitive to throw chlorine away if one cannot sell it or keep it.

Historically, the demand for chlorine has tended to establish the production level for caustic soda. Since 1979, however, the demand for chlorine has been declining, while the demand for caustic soda has remained relatively strong. 1/ Therefore, during the period under consideration, the demand for caustic has established the production level for chlorine.

1/ Transcript of conference, p. 53.

Figure 1.--Chlorine derivatives.



Source: Kirk-Othmer . . . , p. 838.

U.S. tariff treatment

Chlorine is classified under item 415.20 of the Tariff Schedules of the United States (TSUS). As of January 1, 1982, the column 1 (most-favored-nation) rate of duty for chlorine is 3.1 percent ad valorem. 1/ This rate is a result of concessions granted in the Tokyo round of the Multilateral Trade Negotiations (MTN). Under the Trade Agreements Act of 1979, the rate of duty negotiated under the MTN is to be achieved through annually staged reductions. The final reduction to duty-free status is to become effective on January 1, 1987. From January 1972 through December 1979, the column 1 rate of duty was 5 percent ad valorem.

The column 2 rate of duty is 25 percent ad valorem. 2/ Imports of chlorine from beneficiary developing countries have been designated as eligible for duty-free treatment under the Generalized System of Preferences (GSP). 3/ Imports of chlorine from any of the least developed developing countries (LDDC's) are also duty free. 4/

Nature and Extent of Alleged Sales at LTFV

The petition alleges that the Canadian company believed to be the primary exporter of chlorine to the United States at LTFV is C-I-L Inc. (CIL). The petitioners have stated that they have had difficulty in obtaining home-market prices for chlorine in Canada. However, the petition presents data comparing one CIL price quote on a public bid in Canada with a CIL price quote on a similar type of bid in the United States on a factory, net-back basis. The comparison of these prices suggests a dumping margin of 87 percent.

U.S. Market and Channels of Distribution

Because chlorine is primarily an intermediary product, the demand for chlorine is dependent upon the demand for its derivatives. A breakdown of the U.S. market for chlorine and a projection of the expected growth for the market is presented in figure 2. Several factors have contributed to a

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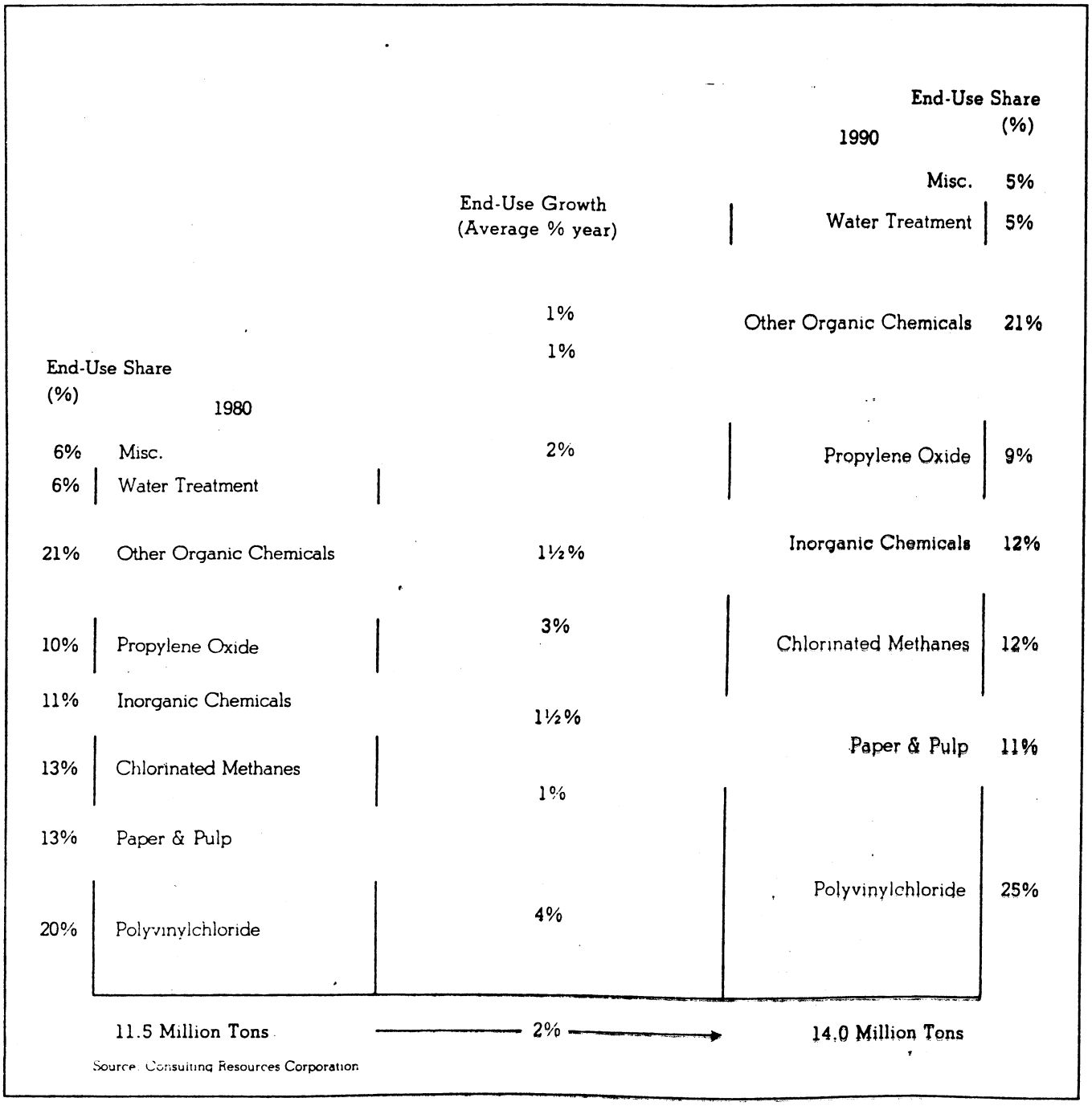
1/ The col. 1 rates are applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(f) of the TSUS. However, such rates do not apply to products of developing countries which are granted preferential tariff treatment.

2/ The col. 2 rates apply to imported products from those Communist countries and areas enumerated in general headnote 3(f) of the TSUS.

3/ Under title V of the Trade Act of 1974, the GSP provides duty-free treatment for specified articles imported directly from designated beneficiary developing countries. GSP, implemented by Executive Order No. 11888 of Nov. 24, 1975, applies to merchandise imported on or after Jan. 1, 1976, and is expected to remain in effect until January 1985.

4/ The LDDC rates are preferential rates (reflecting the full U.S. MTN concession rate for a paricular item without staging) and are applicable to products of the LDDC's designated in general headnote 3(d) of the TSUS which are not granted duty-free treatment under the GSP.

Figure 2.--Chlorine: Estimated shares of the U.S. market and expected growth rates, by end uses, 1980-90.



dampening of U.S. demand for chlorine during the last several years. The most immediate factor is the current economic recession. A sluggish economy affects the demand for a wide variety of chlorine products. In particular, the decline in housing starts and automobile sales during the current recession have significantly reduced the demand for plastics and, thus, for PVC and chlorine.

Other factors have more significant long-term implications. There is currently significant excess capacity to produce PVC. The oversupply in this end-use market can be expected to increase the downward pressure on chlorine prices during the coming years. The use of chlorine and chlorine-containing products is also discouraged by their environmentally hazardous character and the Government regulations pertaining to them. For these reasons, oxygen bleaching is displacing chlorine bleaching in the pulp and paper industry. The regulation of fluorocarbons adversely affects the demand for chlorinated methanes. Environmental regulations have stymied the use of various chlorine-containing solvents and pesticides. Technology changes in the production process for diisocyanates and propylene oxide will reduce the demand for chlorine in the future. And, as leaded gasoline consumption is reduced, so is the market for ethyl chloride, which is used to manufacture the leading agent. Furthermore, the use of chlorine in water purification and waste water treatment is under scrutiny, and minimal growth is foreseen. Thus, only the slow, annual average growth rate of 2 percent is expected for the chlorine market during the 1980's (fig. 2).

Most of the chlorine produced in the United States (estimates range from 50 to 70 percent) is used internally by the producing firms in the manufacture of other chemicals or in the processing of other products such as pulp and paper. Approximately 3 percent of the chlorine produced for shipment on the open market is sold to what are known as repackagers, firms which purchase tank cars of chlorine, fill cylinders, and distribute the product to small, local customers. The remainder of the chlorine is sold directly to end users.

An estimated 80 to 90 percent of the chlorine sold in the United States is sold under contract. 1/ These contracts typically last from 1 to 5 years, contain provisions for announced price increases, specify some quantity and delivery schedule, and contain a "meet-or-release" clause. This clause requires a supplier to meet a competitive offer or release the customer from his obligation to purchase the quantity specified in the offer. 2/ In addition, these contracts often contain clauses whereby a producer can reduce the quantity of chlorine it is required to supply during periods when chlorine is in short supply. This clause becomes important when the demand for caustic is weak and U.S. producers become unwilling to produce caustic they are unable to sell.

Approximately 20 percent of the chlorine produced for shipment is transported by pipeline either as a liquid or as a gas. 3/ These pipeline

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1/ Transcript of conference, p. 61.

2/ Ibid., p. 62.

3/ Kirk-Othmer . . ., p. 847. This figure may be somewhat overstated since it is based on 1975 data. At the conference, industry representatives estimated that less than 10 percent of U.S. production of chlorine is shipped via pipeline (Transcript of conference, p. 59). That would translate to less than 20 percent of the quantity of liquid chlorine shipped during 1981.

customers are located adjacent to chlorine plants and most often have an exclusive relationship with their pipeline supplier. The pipelines represent a significant capital investment.

The remaining chlorine produced for sale is transported either by tank car or in barges, with the most important mode of transportation being the tank car. Because chlorine is hazardous and, in its natural state, a gas, it is expensive to transport and to store. Chlorine is transported and stored in pressurized vessels which are subject to a multitude of safety regulations designed to prevent leakage or contamination of the chlorine. These pressurized vessels are expensive to build, maintain, and operate and represent a significant operating cost for U.S. producers.

One segment of the U.S. market for chlorine which is unique in the manner in which it obtains its chlorine requirements is the municipal market. Municipalities purchase chlorine for water treatment. As shown in figure 2, this segment of the market is considered to account for approximately 6 percent of U.S. chlorine consumption. However, this segment may account for as much as 15 percent of U.S. producers' commercial shipments of chlorine. For the most part, the smaller municipalities purchase their requirements from repackagers. However, the larger cities purchase tank-car quantities and invite all suppliers to bid on annual contracts. The bids are submitted by a given day, opened, and the results made public. The low bidder generally receives the contract.

The Domestic Industry

U.S. producers

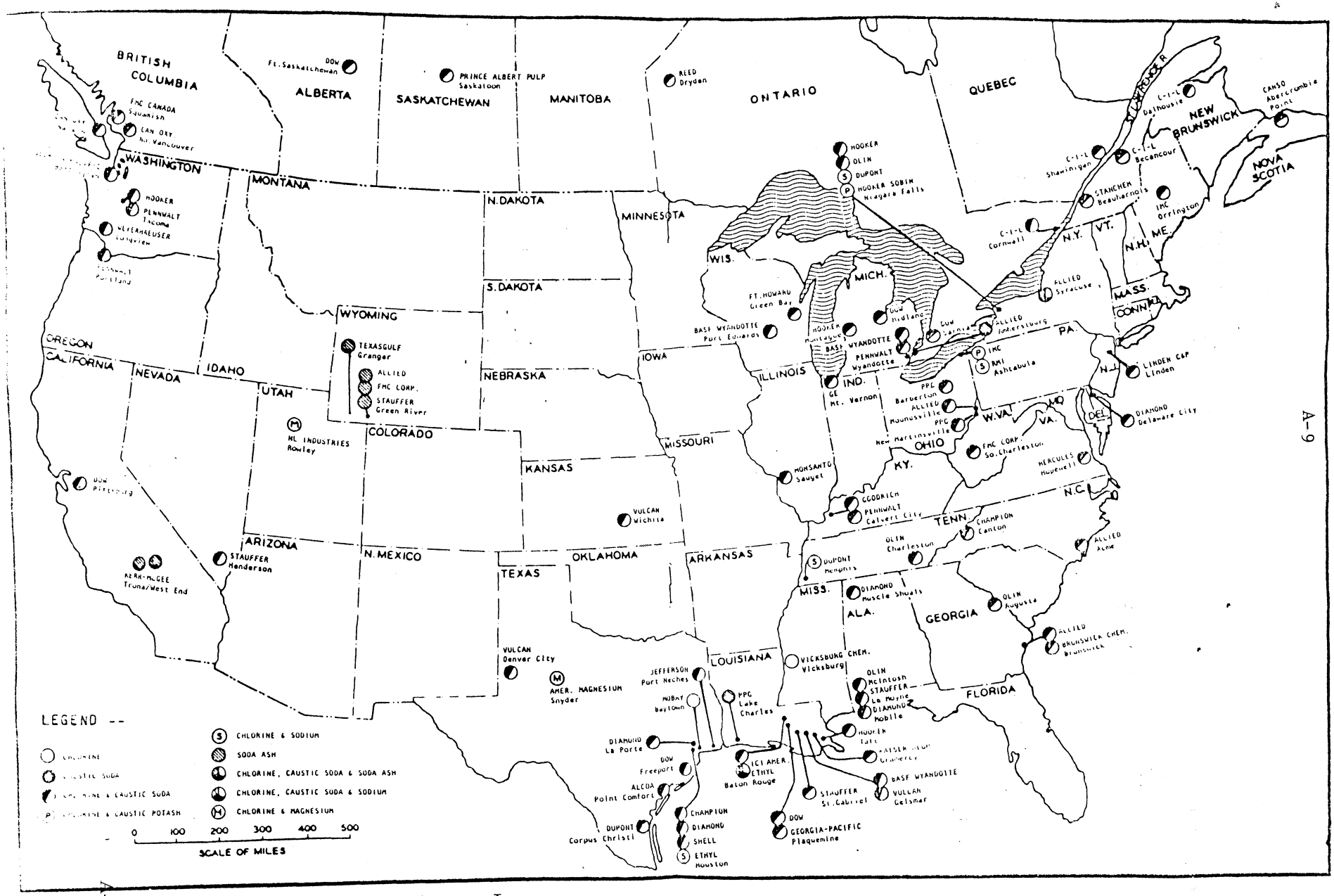
In 1979, the Chlorine Institute listed some 36 firms which together operated 68 plants producing chlorine. The oldest of the production facilities was built in 1897. A map showing the location of the chorine plants is presented in figure 3. Most of the plants are located east of the Mississippi and along the Gulf coast. The number of plants currently operating has declined since 1979 and is expected to continue to decline in the next several years as U.S. producers come under increasing pressure to modernize and maintain aging facilities and cope with rapidly rising energy costs and depressed chlorine prices. 1/

U.S. capacity to produce chlorine increased by 20 percent from 1975 to 1980 under expectations of a 3 to 7 percent annual increase in demand for chlorine. 2/ However, State and Federal regulations on chlorine and chlorine-containing products have had a more negative impact on demand than had been expected. Thus, the industry is faced with significant excess capacity.

1/ "Chlor-Alkali in the 1980's: New Strategies for a Maturing Industry," Chemical Purchasing, April 1982, pp. 32 to 34.

2/ North American Chlor-Alkali Industry Plants and Production Data Book, January 1979, Chlorine Institute pamphlet 10.

Figure 3.--Operating chlorine and alkali plants in the United States and Canada as of January 1, 1979.



Source: The Chlorine Institute, Inc.

The U.S. industry is also highly concentrated. The five largest U.S. producers--Dow Chemical USA, PPG Industries, Inc., Diamond Shamrock, Occidental Petroleum Ltd., and Olin Corp.--currently supply over two-thirds of the market. 1/ The likelihood that the industry will become further concentrated is strong, since some of the smaller and older facilities are likely to be closed. 2/ There are no major capacity additions currently scheduled. However, some small expansions are in progress.

U.S. importers

The U.S. industry is dominated by large multinational corporations several of which have subsidiaries or related firms which produce chlorine in Canada. These firms, specifically Dow Chemical Co., Occidental Petroleum, PPG Industries, FMC Corp., and Pennwalt Corp., often import chlorine from their subsidiaries for their own internal use. The only producer in Canada known to participate to any significant degree in the U.S. merchant market for chlorine is CIL.

All of CIL's transactions occur either directly with the end user/purchaser or through CIL's wholly-owned U.S. subsidiary, CIL Chemicals, Inc. However, these sales are simply arranged by CIL Chemicals, Inc., and the merchandise is shipped directly from the plant in Canada to the customer. In all cases, CIL, whether in Canada or the United States, is the importer of record.

Foreign Producers

The major foreign producers of chlorine are located in Europe, Japan, and Canada. The following tabulation presents the shares of world production of chlorine by specified geographic regions for 1975:

Region	Percentage distribution of world production (percent) 1/
Europe	46
United States	36
Japan	11
Canada	4
All others	3
	100

1/ Kirk-Othmer . . ., p. 808.

In Europe, Japan, and Canada, approximately 120 companies operate an estimated 180 plants, most of which produce chlorine by the electrolytic decomposition of sodium chloride. Collectively, these plants represent roughly 16 million tons of annual chlorine capacity.

1/ Chemical Purchasing, pp. 32 to 34.
2/ Ibid.

About 75 percent of the chlorine produced in Europe is produced by members of the European Community (EC) where mercury cell technology predominates. However, a proposed amendment to the EC's law on toxic substances limiting the mercury level in effluents from chlor-alkali plants could reduce total output in that area. 1/ The predominant portion (about 90 percent) of chlorine production in the EC is used captively. Exports of chlorine, particularly to the United States, are minimal (less than 1 percent). The Communist bloc countries produce a relatively small amount of chlorine and almost never export to the West.

Japan produces approximately 60 percent of its total chlorine output in diaphragm or membrane cells. Although the remaining 40 percent is currently produced in mercury cells, in recent years, environmental laws regarding mercury are pressuring Japanese producers to convert to diaphragm or membrane cells by 1984. 2/ Like their European counterparts, Japanese producers export little or no chlorine to the United States.

In Canada, there are seven known firms operating some 11 chlor-alkali plants located mainly along the U.S. border (fig. 3). Their combined capacity is about 1.6 million tons per year, most of which is based on diaphragm-cell technology. 3/ Canadian subsidiaries of U.S. chlorine producers account for more than 66 percent of total plant capacity in Canada. CIL accounts for about 23 percent. The remaining companies account for less than 10 percent of total plant capacity. 4/ Canadian exports are almost exclusively to the United States.

The Question of Material Injury

U.S. production, production capacity, and capacity utilization

Data on U.S. production of chlorine are available from several sources; however, industry representatives feel that the data published by the Chlorine Institute are the most reliable. These data show that the production of gaseous chlorine declined throughout the period under consideration (table 1). U.S. production declined from 12.3 million short tons in 1979 to 10.8 million short tons in 1981, or by 12 percent. U.S. production then declined by another 14 percent in January-March 1982 relative to that for the corresponding period of 1981.

1/ Economist, Dec. 12, 1981, p. 99.
2/ European Chemical News, Oct. 8, 1979, p. 4.
3/ Canadian Chemical Processing, Mar. 27, 1981, p. 12.
4/ Ibid.

Table 1.--Chlorine: U.S. production, capacity, and capacity utilization, 1979-81, January-March 1981, and January-March 1982

Item	1979	1980	1981	January-March--	
				1981	1982
Production------1,000 short tons--	12,271	11,466	10,756	2,750	2,374
Capacity 1/----------do----	14,341	14,502	14,665	3,562	3,685
Capacity utilization-----percent--	85.6	79.1	73.3	77.2	64.4

1/ Average capacity on either an annual or quarterly basis as indicated.

Source: Compiled from data obtained from the Chlorine Institute.

Questionnaires were sent to all known producers of chlorine in the United States. Twenty-four producers supplied the Commission with data on production and shipments. These data are compared with the data available from the Chlorine Institute in the following tabulation:

Item	1979	1980	1981	January-March--	
				1981	1982
Production:					
Respondents---1,000 short tons--	10,037	9,398	8,735	2,280	1,949
Chlorine Institute--------do----	12,271	11,466	10,756	2,750	2,374
Ratio of respondents' data to Chlorine Institute data percent--	81.8	82.0	81.2	82.9	82.1
Shipments:					
Respondents---1,000 short tons--	3,133	3,153	3,026	791	706
Chlorine Institute--------do----	5,836	5,421	5,376	1,356	1,162
Ratio of respondents' data to Chlorine Institute data percent--	53.7	58.2	56.3	58.3	60.8

Those producers responding to the Commissions' questionnaire accounted for an average of 82 percent of U.S. production for the period under consideration.

The production of those producers responding to the Commission's questionnaires also declined throughout the period under consideration (table 2). It declined from 10.0 million short tons in 1979 to 8.7 million short tons in 1981, or by 13 percent, and continued to decline, by an additional 15 percent in January-March 1982, relative to the production level reported for the corresponding period in 1981. The three largest producers responding to the questionnaires accounted for between 55 and 60 percent of reported production during the period.

Table 2.--Chlorine: U.S. production, by responding firms, 1/ 1979-81, January-March 1981 and January-March 1982

Firm	1979	1980	1981	January-March--	
				1981	1982
	Quantity (short tons)				
Diamond Shamrock----	***	***	***	***	***
Dow Chemical--------	***	***	***	***	***
Du Pont-------------	***	***	***	***	***
Georgia Pacific-----	***	***	***	***	***
Olin Corp-----------	***	***	***	***	***
Pennwalt------------	***	***	***	***	***
PPG Industries------	***	***	***	***	***
Stauffer Chemicals--	***	***	***	***	***
Vulcan Materials----	***	***	***	***	***
All other-----------	***	***	***	***	***
Total-----------	10,037,566	9,397,821	8,735,435	2,279,833	1,949,124
	Percent of total				
Diamond Shamrock----	***	***	***	***	***
Dow Chemical--------	***	***	***	***	***
Du Pont-------------	***	***	***	***	***
Georgia Pacific-----	***	***	***	***	***
Olin Corp-----------	***	***	***	***	***
Pennwalt------------	***	***	***	***	***
PPG Industries------	***	***	***	***	***
Stauffer Chemicals--	***	***	***	***	***
Vulcan Materials----	***	***	***	***	***
All other-----------	***	***	***	***	***
Total-----------	100.0	100.0	100.0	100.0	100.0

1/ Data include responses from 24 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Note.--Because of rounding, figures may not add to the totals shown.

In contrast to data on U.S. production, the published data on U.S. production capacity show an increasing trend. The data available from the Chlorine Institute show that the average annual capacity of U.S. firms to produce chlorine increased from 14.3 million short tons in 1979 to 14.7 million short tons in 1981, or by 3 percent. U.S. producers' average quarterly capacity increased from 3.6 million short tons in January-March 1981 to 3.7 million short tons in January-March 1982, or by another 3 percent.

The production capacity reported by those firms responding to the Commission's questionnaire followed a slightly different trend (table 3). The annual capacity of the responding firms increased from 11.6 million short tons in 1979 to 12.3 million short tons in 1980, or by 6 percent, but then declined to 12.0 million short tons in 1981, or by 3 percent. The quarterly production capacity of these firms increased, but by less than 1 percent from 1981 to 1982.

The published data on capacity utilization show a significant decline during the period under consideration. These data show that the utilization of U.S. producers' capacity to produce chlorine declined steadily from 86 percent in 1979 to 64 percent in January-March 1982. Because of the continuous nature of the electrochemical process, this low capacity utilization would indicate a significant decline in production efficiencies, and thus, a significant increase in the domestic industry's production costs.

The data obtained from those producers responding to the Commission's questionnaire on capacity utilization reveal a similar trend. These data show that the responding producers' utilization of production capacity declined from 87 percent in 1979 to 73 percent in 1981 and declined again, to 66 percent, in January-March 1982.

U.S. producers' shipments

There are no published data which refer specifically to U.S. producers' commercial shipments. The most current data available from the Chlorine Institute show the quantity of liquid chlorine shipped. This figure would include the vast majority of U.S. producers' commercial shipments, excluding only that quantity of gaseous chlorine shipped via pipelines. This quantity has been estimated to account for approximately 5 percent of U.S. production of chlorine. However, the data on liquid chlorine shipped may also include some intercompany transfers. 1/ Thus, the data on liquid chlorine shipments only approximate U.S. producers' actual commercial shipments.

The quantity of liquid chlorine shipped is presented in the following tabulation:

Period	Quantity (1,000 short tons)
1979	5,836
1980	5,421
1981	5,376
January-March--	
1981	1,356
1982	1,162

1/ An intercompany transfer refers to movements of goods between divisions or subsidiaries or between a subsidiary and its parent.

Table 3.--Chlorine: U.S. production, production capacity, and capacity utilization, by responding firms, 1/ 1979-81, January-March 1981, and January-March 1982

Firm	1979	1980	1981	January-March-- 1981	January-March-- 1982
	Production (short tons)				
Diamond Shamrock	***	***	***	***	***
Dow Chemical	***	***	***	***	***
Du Pont	***	***	***	***	***
Georgia Pacific	***	***	***	***	***
Olin Corp	***	***	***	***	***
Pennwalt	***	***	***	***	***
PPG Industries	***	***	***	***	***
Stauffer Chemicals	***	***	***	***	***
Vulcan Materials	***	***	***	***	***
All other	***	***	***	***	***
Total	10,037,566	9,937,821	8,735,435	2,279,833	1,949,124
	Production capacity 2/ (short tons)				
Diamond Shamrock	***	***	***	***	***
Dow Chemical	***	***	***	***	***
Du Pont	***	***	***	***	***
Georgia Pacific	***	***	***	***	***
Olin Corp	***	***	***	***	***
Pennwalt	***	***	***	***	***
PPG Industries	***	***	***	***	***
Stauffer Chemicals	***	***	***	***	***
Vulcan Materials	***	***	***	***	***
All other	***	***	***	***	***
Total	11,580,425	12,264,920	11,950,883	2,947,824	2,959,359
	Capacity utilization (percent)				
Diamond Shamrock	***	***	***	***	***
Dow Chemical	***	***	***	***	***
Du Pont	***	***	***	***	***
Georgia Pacific	***	***	***	***	***
Olin Corp	***	***	***	***	***
Pennwalt	***	***	***	***	***
PPG Industries	***	***	***	***	***
Stauffer Chemicals	***	***	***	***	***
Vulcan Materials	***	***	***	***	***
All other	***	***	***	***	***
Average	86.7	76.6	73.1	77.3	65.9

1/ Data include responses from 24 firms.

2/ Capacity is defined as the greatest level of output a firm can achieve within the framework of a realistic work pattern. This typically means 24-hour per day operation for 50 weeks per year.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Shipments of liquid chlorine accounted for an average of 49 percent of U.S. production during the period under consideration and declined throughout the period, though not quite as sharply as U.S. production. The quantity of liquid chlorine shipped declined from 5.8 million short tons in 1979 to 5.4 million short tons in 1981, or by 7 percent. The quantity of liquid chlorine shipped declined again, by 14 percent, in January-March 1982 from that for the corresponding period of 1981.

The commercial shipments of those producers responding to the Commission's questionnaire accounted for an increasing share of the firms' total shipments (including intraplant consumption and intercompany transfers). Responding producers' commercial shipments accounted for 33 percent of their total shipments in 1979 and increased in each period, accounting for 38 percent of their total shipments in January-March 1982 (table 4). These producers' commercial shipments declined from 3.1 million short tons in 1979 to 3.0 million short tons in 1981, or by 3 percent, and then declined by another 11 percent in January-March 1982 relative to those for the corresponding period of 1981.

Table 4.--Chlorine: U.S. producers' commercial shipments, by responding firms, 1/ 1979-81, January-March 1981, and January-March 1982

Firm	1979	1980	1981	January-March--	
				1981	1982
	Quantity (short tons)				
Diamond Shamrock	***	***	***	***	***
Dow Chemical	***	***	***	***	***
Du Pont	***	***	***	***	***
Georgia Pacific	***	***	***	***	***
Olin Corp	***	***	***	***	***
Pennwalt	***	***	***	***	***
PPG Industries	***	***	***	***	***
Stauffer Chemicals	***	***	***	***	***
Vulcan Materials	***	***	***	***	***
All other	***	***	***	***	***
Total	3,133,637	3,152,778	3,025,582	791,335	706,051
	Value (1,000 dollars)				
Diamond Shamrock	***	***	***	***	***
Dow Chemical	***	***	***	***	***
Du Pont	***	***	***	***	***
Georgia Pacific	***	***	***	***	***
Olin Corp	***	***	***	***	***
Pennwalt	***	***	***	***	***
PPG Industries	***	***	***	***	***
Stauffer Chemicals	***	***	***	***	***
Vulcan Materials	***	***	***	***	***
All other	***	***	***	***	***
Total	287,217	315,042	278,155	72,213	56,366

See footnotes at end of table.

Table 4.--Chlorine: U.S. producers' commercial shipments, by responding firms, 1/ 1979-81, January-March 1981, and January-March 1982--Continued

Firm	1979	1980	1981	January-March--	
				1981	1982
	Unit value (per short ton)				
Diamond Shamrock----	***	***	***	***	***
Dow Chemical--------	***	***	***	***	***
Du Pont------------	***	***	***	***	***
Georgia Pacific-----	***	***	***	***	***
Olin Corp----------	***	***	***	***	***
Pennwalt-----------	***	***	***	***	***
PPG Industries------	***	***	***	***	***
Stauffer Chemicals--	***	***	***	***	***
Vulcan Materials----	***	***	***	***	***
All other----------	***	***	***	***	***
Average---------	$91.7	$100.0	$92.9	$91.3	$79.8
	Percent of total quantity				
Diamond Shamrock----	***	***	***	***	***
Dow Chemical--------	***	***	***	***	***
Du Pont------------	***	***	***	***	***
Georgia Pacific-----	***	***	***	***	***
Olin Corp----------	***	***	***	***	***
Pennwalt-----------	***	***	***	***	***
PPG Industries------	***	***	***	***	***
Stauffer Chemicals--	***	***	***	***	***
Vulcan Materials----	***	***	***	***	***
All other----------	***	***	***	***	***
Total----------	100.0	100.0	100.0	100.0	100.0

1/ Data include responses from 24 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The average unit value of U.S. producers' commercial shipments of chlorine, taken individually, show a considerable range, and the range apparently expanded during the period under consideration. The average unit value of responding U.S. producers' chlorine shipments ranged from * * * per short ton, or by 61 percent, in 1979. However, by January-March 1982, that range had increased, and the average unit value varied from * * * per short ton, or by 138 percent. On an aggregated basis, the weighted average unit value of the commercial shipments of those producers responding to the Commission's questionnaire declined from $100 per short ton in 1980 to $80 per short ton in January-March 1982, or by 20 percent.

U.S. producers have exported chlorine to many countries; however, the quantity of these exports has been relatively insignificant (table 5). U.S. producers' exports (as reported by the Department of Commerce) increased from 94,000 short tons in 1979 to 117,000 short tons in 1980 and then declined to 50,000 short tons in 1981. U.S. producers' exports accounted for roughly 1 to 2 percent of their shipments of liquid chlorine during the period under consideration.

Table 5.--Chlorine: U.S. producers' exports and shipments of liquid chlorine, 1979-81, January-March 1981, and January-March 1982

Period	Producers' exports	Producers' shipments	Ratio of exports to shipments
	1,000 short tons		Percent
1979	94	5,836	1.6
1980	117	5,421	2.1
1981	50	5,376	.9
January-March--			
1981	16	1,356	1.2
1982	1/ 0	1,162	-

1/ Data on U.S. exports were not available from the Department of Commerce for this period; however, no exports were reported by those producers reponding to the Commission questionnaire.

Source: Exports compiled from official statistics of the U.S. Department of Commerce; producers' shipments of liquid chlorine compiled from data published by the Chlorine Institute.

Inventories

Those producers responding to the Commission's questionnaire have reported that relatively small quantities of chlorine were held in inventory during the period under consideration (table 6). However, those inventories have increased, both quantitatively and relative to producers' shipments, during the period under consideration. Responding U.S. producers' yearend inventories of chlorine increased from 81,000 short tons in 1979 to 127,000 short tons in 1981, or by 57 percent. Inventories held as of March 31 also increased from 1981 to 1982, or by 46 percent. As a share of U.S. producers' total shipments, inventories of chlorine increased from 0.8 percent in 1979 to 1.5 percent in 1981, and increased again to 7 percent in January-March 1982.

Table 6.--Chlorine: U.S. producers' inventories held as of Dec. 31 of 1979-81, Mar. 31, 1981, and Mar. 31, 1982, and U.S. producers' total shipments, 1/ 1979-81, January-March 1981, and January-March 1982

Period	Producers' inventories	Producers' shipments	Ratio of inventories to shipments
	1,000 short tons		Percent
1979	81	9,584	0.8
1980	119	9,046	1.3
1981	127	8,404	1.5
January-March:			
1981	84	2,227	3.8
1982	123	1,864	6.6

1/ Total shipments include intraplant and intercompany transfers in addition to commercial shipments.

Source: Compiled from data obtained in response to questionnaires of the U.S. International Trade Commission.

U.S. importers have reported that only minimal quantities of chlorine were held in inventory during the period under consideration (table 7). Quantitatively, U.S. importers' inventories have remained fairly stable, totaling * * * short tons as of December 31 of 1979 and 1981 and March 31, 1982. U.S. importers' inventories of chlorine represented less than * * * percent of their imports during 1979-81 and less than * * * percent of imports for January-March 1981 and 1982.

Table 7.--Chlorine from Canada: Inventories of selected U.S. importers held as of Dec. 31 of 1979-81, Mar. 31, 1981, and Mar. 31, 1982, and imports by these firms, 1979-81, January-March 1981, and January-March 1982

Period	Importers' inventories	Imports	Ratio of inventories to imports
	Short tons		Percent
1979	***	***	***
1980	***	***	***
1981	***	***	***
January-March--			
1981	***	***	***
1982	***	***	***

Source: Compiled from data obtained in response to questionnaires of the U.S. International Trade Commission.

Apparent U.S. consumption

Apparent U.S. consumption of chlorine declined throughout the period under consideration (table 8). It declined from 12.3 million short tons in 1979 to 10.9 million short tons in 1981, or by 12 percent. Apparent U.S. consumption then declined by another 13 percent in January-March 1982 relative to that for the corresponding period of 1981.

Table 8.--Chlorine: U.S. production, imports for consumption, exports, and apparent U.S. consumption, 1979-81, January-March 1981, and January-March 1982

(In thousands of short tons)

Item	1979	1980	1981	January-March--	
				1981	1982
U.S. production	12,271	11,466	10,759	2,750	2,374
Imports for consumption	133	166	182	29	39
Exports	94	117	50	16	1/ 0
Apparent U.S. consumption 2/	12,310	11,515	10,891	2,763	2,413

1/ Data on U.S. exports were not available from the Department of Commerce for this period, however, no exports were reported by those producers reponding to the Commission's questionnaire for this period.

2/ This figure is not adjusted for inventory changes.

Source: U.S. production compiled from data obtained from the Chlorine Institute; exports and imports for consumption compiled from official statistics of the U.S. Department of Commerce.

Apparent open-market consumption of chlorine also declined throughout the period under consideration, however the declines were not as sharp (table 9). Apparent U.S. open-market consumption declined from * * * million short tons in 1979 to * * * million short tons in 1981, or by 6 percent. Apparent U.S. open-market consumption then declined another 13 percent of January-March 1982 relative to that for the corresponding period of 1981.

Table 9.--Chlorine: U.S. producers' shipments of liquid chlorine, imports by unrelated firms, 1/ exports, and apparent open-market consumption, 1979-81, January-March 1981, and January-March 1982

(In thousands of short tons)

Item	1979	1980	1981	January-March--	
				1981	1982
U.S. producers' shipments	5,836	5,421	5,376	1,356	1,162
Imports for consumption	***	***	***	***	***
Exports	94	117	50	16	2/ 0
Apparent U.S. consumption	***	***	***	***	***

1/ Unrelated firms refers to firms which are unrelated to a domestic producer of chlorine.

2/ Data on U.S. exports were not available from the Department of Commerce for this period; however, no exports were reported by those producers reponding to the Commission's questionnaire.

Source: U.S. producers' shipments of liquid chlorine compiled from data obtained from the Chlorine Institute; imports by unrelated firms compiled from data submitted in response to questionnaires of the U.S. International Trade Commission; exports compiled from official statistics of the U.S. Department of Commerce.

U.S. employment and wages

Only eight firms, accounting for an average of 12 percent of U.S. production of chlorine during 1979-81, provided the Commission with data on employment (table 10). These data show generally declining trends. The average number of all persons employed in the establishments producing chlorine declined by 8 percent from 1979 to 1981, but then increased slightly, by 2 percent in January-March 1982, relative to the number reported for the corresponding period of 1981. The average number of production and related workers producing chlorine declined by 36 percent from 1979 to 1981 and declined again, though only slightly, in January-March 1982 relative to the number reported for the corresponding period of 1981.

The number of hours worked by production and related workers also declined by 36 percent from 1979 to 1981, but then declined by an additional 4 percent in January-March 1982 relative to the hours reported for the corresponding period of 1981. Hourly wages paid to all production and related workers producing chlorine declined by 18 percent from 1979 to 1981 and then declined by an additional 4 percent over those wages paid during the corresponding period of 1981. Total compensation paid to production and related workers declined at a faster rate, falling by 29 percent from 1979 to 1981 and then registering a 5-percent decline in January-March 1982 over total compensation paid during the corresponding period of 1981.

Table 10.--Average number of employees, 1/ total and production and related workers, in 8 U.S. establishments producing chlorine, and hours worked by and hourly wages and total compensation 2/ paid to production and related workers producing chlorine, 1979-81, January-March 1981, and January-March 1982

Item	1979	1980	1981	January-March--	
				1981	1982
Average employment:					
All persons:					
Number	5,427	5,302	4,989	4,228	4,873
Percentage change	3/	-2.3	-4.1	3/	15.3
Production and related workers producing chlorine:					
Number	1,116	991	719	714	711
Percentage change	3/	-11.2	-27.4	3/	-0.4
Hours worked by production and related workers producing chlorine:					
1,000 hours	2,290	2,048	1,456	792	762
Percentage change	3/	-10.6	-28.9	3/	-3.8
Hourly wages paid to production and related workers producing chlorine--1,000 dollars--	23,158	22,628	18,898	10,120	9,672
Total compensation paid to production and related workers producing chlorine 1,000 dollars--	30,867	29,802	24,977	13,855	13,206

1/ Includes data from 8 producers.

2/ Includes hourly wages, contributions to Social Security, and other employee benefits.

3/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Financial experience of U.S. producers

Overall establishment operations.--Six producers of chlorine provided profit-and-loss data relative to the overall operations of the establishments or divisions within which chlorine is produced. These firms accounted for an average of 10 percent of U.S. production of chlorine during 1979-81. Total net sales by these producers rose yearly during 1979-81, from $448 million to $534 million (table 11). Net sales for the period ending March 31, 1982 totaled $134 million, compared with $126 million in net sales for the corresponding period of 1981.

Table 11.--Profit-and-loss experience of 6 U.S. producers on the overall operations of their establishments or divisions within which chlorine is produced, by firms, accounting years 1979-81 and partial accounting years thru March 1981 and 1982

Year and firm	Net sales	Cost of goods sold	Gross profit or (loss)	General, selling, and administrative expenses	Net operating profit or (loss)	Ratio of net operating profit or (loss) to net sales	Ratio of cost of goods sold to net sales
	1,000 dollars					Percent	
1979:							
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
Total or Average----	447,864	406,728	41,136	21,650	19,486	4.4	90.8
1980:							
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
Total or Average----	489,400	448,703	40,697	29,402	11,295	2.3	91.7
1981:							
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
Total or Average----	533,846	473,116	60,730	29,972	30,758	5.8	88.6
January-March--							
1981:							
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
Total or Average--	125,591	111,079	14,512	6,830	7,682	6.1	88.4
1982:							
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
***----------	***	***	***	***	***	***	***
Total or Average--	134,446	120,029	14,417	9,980	4,437	3.3	89.3

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

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The six firms reported an aggregate operating income of $19.5 million, or 4.4 percent of net sales, in 1979. In 1980, operating income dipped to $11.3 million, or 2.3 percent of net sales. Operating income rose sharply to $31 million in 1981, representing a 5.8-percent return of net sales for that year. Operating income slipped to $4.4 million (3.3 percent of net sales) during January-March 1982 compared with $7.7 million (6.2 percent of net sales) for the corresponding period of 1981.

Three firms sustained losses in 1979 and 1981, and two firms sustained losses in 1980. On an individual company basis, * * *.

Operations on chlorine.--The six firms which furnished profit-and-loss data accounted for 19 percent of total shipments of liquid chlorine in 1981. Their net sales of chlorine increased from $107 million in 1979 to $113 million in 1980 and then declined to $105 million in 1981 (table 12). Net sales for January-March 1982 totaled $10.5 million compared with net sales of $13.7 million for the corresponding period of 1981.

In the aggregate, these firms' operations on chlorine were profitable in 1979, but unprofitable in 1980 and 1981. Together, the six firms earned an operating profit of $1.1 million in 1979, which represented 1.0 percent of net sales that year. These firms sustained losses of $4.1 million (3.6 percent of net sales) and $6.6 million (6.3 percent of net sales), respectively, in 1980 and 1981. The three firms which supplied interim data for January-March 1982 reported an aggregate loss of $4.2 million (40.6 percent of net sales) compared with a loss of $2.0 million (14.9 percent of net sales) for the corresponding period of 1981. * * *.

The ratio of cost of goods sold to net sales rose from 91.1 percent in 1979 to 96.1 percent in 1981, indicating that manufacturing costs rose at a faster rate than the selling price of chlorine during 1979-81.

Cash flow from operations.--Cash flow generated from U.S. producers' overall establishment operations and their operations producing chlorine are shown in table 13. During 1979-81, cash flow from overall operations ranged from a low of $32 million in 1980 to a high of $52 million in 1981. Cash flow from overall operations was $11.4 million for January-March 1982 compared with $13.2 million for the corresponding period of 1981. Operations on chlorine generated positive cash flows of $5.3 million and $947,000, respectively, in 1979 and 1980, but generated a negative cash flow of $1.0 million in 1981. Three firms reported a cash flow of $2.8 million from their chlorine operations during January-March 1982 compared with 44,000 for the corresponding period of 1981.

Investment in productive facilities.--Five firms supplied data relative to their investment in overall establishment productive facilities, and three firms suppled investment data on the facilities used in the production of chlorine. As shown in table 14, certain assets consist of inventories at

Table 12.--Profit-and-loss experience of 6 U.S. producers on their operations producing chlorine, by firms, accounting years 1979-81 and partial accounting years thru March 1981 and 1982

Peirod and firm	Net sales	Cost of goods sold	Gross profit or (loss)	General, selling, and administrative expenses	Net operating profit or (loss)	Ratio of net operating profit or (loss) to net sales	Ratio of cost of goods sold to net sales
	1,000 dollars					Percent	
1979:							
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
Total or Average----	107,319	97,782	9,537	8,486	1,051	1.0	91.1
1980:							
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
Total or Average----	113,289	107,279	6,010	10,095	(4,085)	(3.6)	94.7
1981:							
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
Total or Average----	104,914	100,785	4,129	10,745	(6,616)	(6.3)	96.1
January-March--							
1981:							
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
Total or Average--	13,666	14,988	(1,322)	717	(2,039)	(14.9)	109.7
1982:							
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
***----------	***	***	***	***	***	****	***
Total or Average--	10,460	13,939	(3,479)	766	(4,245)	(40.6)	133.3

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

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Table 13.--Cash flow from U.S. producers' overall establishment operations and from operations producing chlorine, accounting years 1979-81 and partial accounting years thru March 1981 and 1982

(In thousands of dollars)

Item	1979	1980	1981	January-March--	
				1981	1982
Overall operations:					
Net operating profit	19,486	11,295	30,758	7,682	4,437
Depreciation and amortization	17,893	20,892	21,639	5,512	6,997
Cash flow	37,379	32,187	52,397	13,194	11,434
Chlorine:					
Net operating profit or (loss)	1,051	(4,085)	(6,616)	(2,039)	(4,245)
Depreciation and amortization	4,288	5,032	5,582	1,395	1,464
Cash flow	5,339	947	(1,034)	644	(2,781)

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 14.--Investment in certain assets by U.S. producers of chlorine, for overall and chlorine operations, accounting years 1979-81

Item	1979	1980	1981
Overall operations:			
Inventories, cost-1,000 dollars	38,274	46,551	58,152
Fixed assets, book value---do----	390,045	437,300	346,368
Other assets, cost---------do----	33,780	39,898	81,472
Ratio of operating profit or (loss) to--	462,099	523,749	485,992
Net sales----------percent--	4.4	2.3	6.3
Total certain assets-----do----	4.2	2.2	5.8
Chlorine operations:			
Inventories, cost-1,000 dollars	12,719	4,463	4,407
Fixed assets, book value---do----	49,177	59,463	59,094
Other assets, cost---------do----	16,610	6,484	7,806
Ratio of operating profit or (loss) to--			
Net sales----------percent--	4.6	(2.6)	(12.1)
Total certain assets-----do----	3.3	(2.1)	(8.7)

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

cost, fixed assets at book value, and other assets at cost. The relationship of operating income or loss to these assets generally follow the same trend as the ratio of such profit to net sales.

The Question of Threat of Material Injury

Production of chlorine in Canada increased significantly from 1979 to 1980, but has declined since then (table 15). Canadian production increased from 1.1 million short tons in 1979 to 1.4 million short tons in 1980, or by 26 percent, but then declined slightly, by less than 1 percent in 1981. Canadian production then declined by 7 percent in January-February 1982 relative to that reported for the corresponding period of 1981.

Table 15.--Chlorine: Canadian production, capacity, capacity utilization, and exports, 1979-81, January-February 1981, and January-February 1982

Item	1979	1980	1981	Jan.-Feb--	
				1981	1982
Production------1,000 short tons--	1,135	1,432	1,421	235	218
Capacity----------do----	1,253	1,383	1,733	289	1/ 289
Capacity utilization-----percent--	91	104	82	81	75
Exports to--					
United States-------short tons--	177,248	221,233	180,894	29,216	27,288
All other countries-------do----	745	1,316	305	0	0
Total----------do----	177,993	222,549	181,199	29,216	27,288

1/ Assuming no significant change in Canadian capacity from 1981.

Source: Production and exports compiled from official statistics of Canada; capacity obtained from data provided by the Chlorine Institute.

The capacity to produce chlorine in Canada increased significantly (by 38 percent) from 1979 to 1981. As far as it is known, capacity in Canada has remained unchanged since 1981. The utilization of Canadian producers' capacity declined from 92 percent in 1979 to 78 percent in January-February 1982.

The United States is the predominant market for Canadian exports. However, as a share of total production of chlorine in Canada, exports to the United States declined from 16 percent in 1979 to 13 percent in January-February 1982.

U.S. importers reported that minimal inventories of chlorine were held as of March 31, 1982. (See section on inventories in this report.)

The Question of the Causal Relationship between Imports Allegedly Sold at LTFV and the Alleged Injury

U.S. imports

During the period under consideration, imports of chlorine from Canada accounted for virtually all U.S. imports of this product (table 16). Imports from Canada increased throughout the period, from 132,843 short tons in 1979 to 182,351 short tons in 1981, or by 37 percent. These imports increased again, by 34 percent in January-March 1982, relative to those reported for the corresponding period of 1981.

Table 16.--Chlorine: U.S. imports for consumption, by principal sources, 1979-81, January-March 1981, and January-March 1982

Source	1979	1980	1981	January-March--	
				1981	1982
	Quantity (short tons)				
Canada	132,843	165,786	182,351	29,275	39,310
All other	0	90	1/	0	0
Total	132,843	165,876	182,351	29,275	39,310
	Value 2/ (1,000 dollars)				
Canada	14,055	15,694	16,029	2,486	3,636
All other	-	10	1	-	-
Total	14,055	15,704	16,030	2,486	3,636
	Unit value (per short ton)				
Canada	$105.8	$94.6	$88.0	$84.0	$92.5
All other	-	100.0	3/	-	-
Total	105.8	94.6	88.0	84.0	92.5
	Percent of total quantity				
Canada	100.0	99.9	100.0	100.0	100.0
All other	-	.1	4/	-	-
Total	100.0	100.0	100.0	100.0	100.0

1/ Less than 0.5 short ton.
2/ The landed, duty-paid value.
3/ Not available.
4/ Less than 0.05 percent.

Source: Compiled from official statistics of the U.S. Department of Commerce.

The average unit value of imports from Canada declined from $106 per short ton in 1979 to $88 per short ton in 1981, or by 17 percent, but then increased to $93 per short ton in January-March 1982, or by 5 percent. However, many of these imports have been intercompany transfers from subsidiaries of U.S. producers. Data on imports from firms that are unrelated to U.S. producers are presented in the following tabulation:

Period	Quantity (short tons)	Value (1,000 dollars)	Unit value (per short ton)
1979----------	***	***	***
1980----------	***	***	***
1981----------	***	***	***
January-March--			
1981----------	***	***	***
1982----------	***	***	***

CIL's share of these imports increased in each period, from * * * percent in 1979 to * * * percent in January-March 1982. U.S. imports by firms unrelated to U.S. producers increased by * * * percent from 1979 to 1981, but declined slightly, by * * * percent, in January-March 1982 relative to imports by these firms during the corresponding period of 1981. The average unit value of imports by these unrelated firms declined irregularly from * * * per short ton in 1980 to * * * per short ton in January-March 1982, or by * * * percent.

Market penetration of U.S. imports

As a share of apparent consumption, total imports of chlorine from Canada have increased throughout the period under consideration (table 17). They increased from 1.1 percent in 1979 to 1.7 percent in 1981 and increased again in January-March 1982 relative to the ratio for the corresponding period in 1981. The ratio of imports from unrelated firms to apparent U.S. open-market consumption increased from * * * percent in 1979 to * * * percent in 1981, and then increased again, to * * * percent, in January-March 1982.

Prices

Since the chlorine that is marketed by domestic and Canadian producers is virtually an identical product, price is the major purchasing consideration. However, past records of timeliness in meeting delivery schedules also influence purchasing decisions. In addition, the industrial consumer generally prefers to purchase chlorine from several sources at all times in order to insure that adequate supplies will always be available. Although most large purchases are based on contracts between buyers and sellers for periods ranging from 1 to several years, these contracts often contain provisions which allow for frequent price adjustments during the period.

Table 17.--Chlorine from Canada: U.S. imports from unrelated firms and total, 1979-81, January-March 1981, and January-March 1982

Item	1979	1980	1981	January-March	
				1981	1982
Imports from unrelated firms:					
Quantity-short tons--	***	***	***	***	***
Share of apparent open market consumption--percent--	***	***	***	***	***
Total imports:					
Quantity-short tons--	132,843	165,786	182,351	29,275	39,310
Share of apparent consumption percent--	1.1	1.4	1.7	1.1	1.6

Source: Imports form unrelated firms compiled from data submitted in response to questionnaires of the U.S. International Trade Commission; total imports compiled from official statistics of the U.S. Department of Commerce.

Price data for the investigation were developed largely from questionnaires that were mailed to all known domestic producers and importers of chlorine. The producers' questionnaire requested prices on both an f.o.b. and a delivered basis on sales to the firm's three largest customers for each quarter during January 1980-March 1982. The importers' questionnaire asked for quarterly f.o.b. and delivered prices on the largest purchases made from Canadian producers during the same period. In addition, the importers' questionnaire asked for prices on sales by the importer to its three largest customers in order to allow for cases in which the importers were distributors of chlorine. Although the importers' questionnaire responses were largely complete, and included both f.o.b. and delivered prices, only 11 domestic producers provided prices. These 11 firms accounted for 37 percent of total industry shipments during 1980 and 1981.

The weighted average price for domestically produced chlorine developed from these questionnaires shows an irregular decline from $100 per short ton in January-March 1980 to $75 in January-March 1982 (table 18). These data are roughly consistent with the Bureau of Labor Statistics (BLS) Producer Price Index for chlorine, which also registered a decline between January 1980 and March 1982 (table 19). Much of the weakness in chlorine prices during this period can be attributed to declines in demand that have resulted from recessionary conditions in the housing and auto industries and other major consuming sectors. As noted earlier, chlorine consumption declined in 1980 and 1981 and continued to decline significantly during January-March 1982 (see section on apparent U.S. consumption in this report.)

Table 18.--Chlorine: Weighted average prices for imported and domestic merchandise, by quarters, January 1980-March 1982

(Per short ton. Prices for the domestic product are f.o.b. prices; those for imports are on a delivered basis)

Period	Domestically produced chlorine	Imported chlorine from Canada
1980:		
January-March	$96	***
April-June	102	***
July-September	101	***
October-December	107	***
1981:		
January-March	91	***
April-June	90	***
July-September	88	***
October-December	79	***
1982:		
January-March	75	***

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 19.--Chlorine: BLS Producer Price Index for chlorine, all industrial chemicals, and caustic soda, by quarters, January 1980-March 1982

(January-March 1980=100)

Period	Chlorine	All industrial chemicals	Caustic soda
1980:			
January-March	100.0	100.0	100.0
April-June	103.5	106.1	107.9
July-September	101.1	106.7	119.6
October-December	99.4	107.9	131.0
1981:			
January-March	1/	113.7	162.9
April-June	94.9	119.1	176.9
July-September	93.9	120.5	188.5
October-December	92.6	118.6	197.6
1982:			
January-March	96.9	117.9	210.2

1/ Not available.

Source: Developed from data provided by the U.S. Department of Labor.

While chlorine prices have declined during 1980 and 1981, prices of related products have increased. Between the January 1980 and March 1982, the BLS Producer Price Index for all industrial chemicals rose by about 18 percent. Caustic soda prices doubled during the 2-year period, climbing sharply in every quarter. Industry sources attribute the rapid rise in caustic soda prices to the coproduct relationship between chlorine and caustic soda which was discussed earlier. (See the section on the interrelationship between chorine and caustic soda in this report.) Since chlorine is a hazardous gas that cannot readily be stored in inventory, declines in demand for chlorine during 1980 and 1981 required significant cutbacks in production. These cutbacks in chlorine production have necessarily resulted in proportionate reductions in caustic soda output.

However, unlike chlorine, the demand for caustic soda remained relatively strong throughout the period under consideration. Therefore, the continued strong demand for caustic soda in the face of declining production led to the countinuing sharp escalation in its price.

In contrast to the declining trend in domestic prices, delivered prices of imported chlorine from Canada increased moderately between January 1980 and March 1982. As shown in table 18, the average price of imported chlorine rose irregularly, by * * * percent, from * * * per short ton in January-March 1980 to * * * per short ton in January-March 1982.

The prices for domestically produced chlorine presented in table 18 represent f.o.b. prices. They exclude transportation charges and are, therefore, somewhat understated relative to the delivered prices shown for the imported material. Table 20 compares the delivered prices of domestically produced chlorine for tank-car shipments and for pipeline shipments with delivered prices for the imported product (which is transported by tank car). However, both domestic price series were developed from the responses of only three U.S. producers.

As shown in table 18, the f.o.b. price of the domestically produced material was consistently below the delivered price for the imported product. Moreover, the gap between the two prices increased during the period under consideration.

Although the comparisons of prices for the imported product with the delivered prices of tank-car shipments of domestic chlorine are based upon a limited response, they show underselling during 1980. In 1980, the margins of underselling ranged from * * *. However, during January-March 1981, the proce of the imported material rose above that of the domestic material, and the gap between the two prices continued to increase during the remainder of the period. By January-March 1982, the weighted average price for the imported product was * * * per short ton, or nearly * * * percent higher that the weighted average price for domestically produced chlorine delivered in tank cars. In the case of chlorine shipped by pipeline, the price of the domestic material was lower than that for the imported product in every quarter during January 1980-March 1982.

Table 20.--Chlorine: Weighted average delivered prices for imported and domestic merchandise, by quarters, January 1980-March 1982

Period	Domestically produced chlorine (tank car)	Imported chlorine from Canada (tank car)	Margins of underselling 1/		Domestically produced chlorine (pipeline)	Imported chlorine from Canada (tank car)	Margins of underselling 1/	
			Actual	Percentage			Actual	Percentage
	Per short ton			Percent	Per short ton			Percent
1980:								
January-March	$120	***	***	***	$108	***	***	***
April-June	123	***	***	***	111	***	***	***
July-September	122	***	***	***	107	***	***	***
October-December	126	***	***	***	83	***	***	***
1981:								
January-March	108	***	***	***	94	***	***	***
April-June	107	***	***	***	92	***	***	***
July-September	104	***	***	***	103	***	***	***
October-December	76	***	***	***	89	***	***	***
1982:								
January-March	74	***	***	***	79	***	***	***

1/ Minus sign (-) indicates that the price reported for the imported product is higher than the price reported for the domestic product

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

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Lost sales

Two of the three domestic petitioners, Pennwalt and Olin, cited eight instances in which they allegedly lost sales to imports from Canada or were forced to lower their prices in order to meet competition from imports from Canada. 1/ The Commission's staff contacted three municipalities and four industrial consumers in order to verify the allegations.

The allegation that CIL obtained a contract for chlorine for the city of Providence was confirmed. The purchasing department of Providence was able to confirm that CIL was the lowest bidder, offering a delivered price of $129 per ton for a 1-year contract for 600 short tons of chlorine. However, the State of Rhode Island took over the purchasing of chlorine for Providence late in 1981, and as a result, the contract with CIL was not renewed that year. However, the city is still making occasional purchases from several domestic suppliers.

It was also confirmed that CIL was the low bidder on a contract awarded by the city of Atlanta in May 1981. CIL's price was quoted at $101 per short ton. The contract was for 1 year and 1,000 tons of chlorine. Recently, bidding was recieved for the 1982-83 year. However, no supplier has yet been selected.

* * *. A representative of this firm states that it had increased its purchases from CIL slighlty relative to domestic suppliers during 1980 and 1981, and he acknowleged that CIL was more aggressive in its pricing than some domestic suppliers. However, * * *'s representative stated that the firm still purchases well over one-half of its chlorine from domestic sources.

* * * alleged that it was forced to lower its price significantly early in 1981 in order to maintain three of its customers--* * *. * * * acknowledged that CIL began offering chlorine at * * * per short ton in January 1981, a delivered price that was substantially lower than prices offered by domestic producers. As a result, * * * increased its purchases from CIL during 1981 and significantly reduced its purchases from domestic suppliers. However, * * *.

The chief purchasing agent at * * * stated that * * * has regularly purchased * * * percent of its chlorine from CIL since 1979 and believes that CIL is more timely in meeting its delivery schedules than the company's domestic suppliers. Furthermore, this agent stated that CIL has generally been more reluctant than U.S. producers to lower its price.

The Commission's staff was unable to substantiate * * * allegations that it had been forced to lower its prices to * * * in order to compete with imports from Canada in December 1980. However, a representative of * * * stated that since the firm * * * it does not regularly purchase chlorine from either domestic or Canadian suppliers.

1/ Several producers submitted questionnaires containing allegations of lost sales. However, some questionnaires were received too late in the investigation for the Commission's staff to have an opportunity to either tabulate or verify these allegations.

The purchasing department of the City of Detroit confirmed that CIL was the low bidder on its annual contract, offering a price of $71 per short ton in March 1981. CIL's bid was, however, rejected because of the firm's lack of experience in supplying chlorine to large municipal water systems of the type in Detroit. Therefore, the contract was awarded to a domestic supplier which continues to supply the city with chlorine.

APPENDIX A

NOTICE OF THE COMMISSION'S INSTITUTION OF PRELIMINARY INVESTIGATION

[Investigation No. 731-TA-90 (Preliminary)]

Chlorine From Canada; Institution of Preliminary Antidumping Investigation and Scheduling of a Conference

AGENCY: International Trade Commission.

ACTION: Institution of preliminary antidumping investigation and scheduling of a conference to be held in connection with the investigation.

SUMMARY: The International Trade Commission hereby gives notice of the institution of investigation No. 731-TA-90 (Preliminary) under section 733(a) of the Tariff Act (19 U.S.C. 1673b(a)) to determine whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Canada of chlorine, provided for in item 415.20 of the TSUS, which are alleged to be sold in the United States at less than fair value.

EFFECTIVE DATE: April 5, 1982.

FOR FURTHER INFORMATION CONTACT: Ms. Vera Libeau, Office of Investigations, U.S. International Trade Commission; telephone 202-523-0368.

SUPPLEMENTARY INFORMATION:

Background.—This investigation is being instituted following receipt of a petition filed by counsel for Diamond Shamrock Corp., Olin Corp., and Pennwalt Corp. The Commission must make its determination in this investigation within 45 days after the date of the filing of the petition, or by May 20, 1982 (19 CFR 207.17). This investigation will be subject to the provisions of Part 207 of the Commission's rules of practice and procedure (19 CFR Part 207, 44 FR 76457 and 47 FR 6190), and particularly Subpart B thereof.

Written submissions.—Any person may submit to the Commission on or before May 3, 1982, a written statement of information pertinent to the subject matter of this investigation. A signed original and fourteen copies of such statements must be submitted.

Any business information which a submitter desires the Commission to treat as confidential shall be submitted separately, and each sheet must be clearly marked at the top "Confidential Business Data." Confidential submissions must conform with the requirements of § 201.6 of the Commission's rules of practice and procedure (19 CFR 201.6). All written submissions, except for confidential business data, will be available for public inspection.

Conference.—The Director of Operations of the Commission has scheduled a conference in connection with this investigation for 10:00 a.m., on April 29, 1982, at the U.S. International Trade Commission Building, 701 E Street, NW., Washington, D.C. Parties wishing to participate in the conference should contact the supervisory investigator for the investigation, Ms. Vera Libeau, telephone 202-523-0368, not later than April 27, 1982, to arrange for their appearance. Parties in support of the imposition of antidumping duties in this investigation and parties in opposition to the imposition of such duties will each be collectively allocated one hour within which to make an oral presentation at the conference.

For further information concerning the conduct of this investigation and rules of general application, consult the Commission's rules of practice and procedure, Part 207, Subparts A and B (19 CFR Part 207), and Part 201, Subparts A through E (19 CFR Part 201). Further information concerning the conduct of the conference will be provided by Ms. Libeau.

This notice is published pursuant to § 207.12 of the Commission's rules of practice and procedure (19 CFR 207.12).

Issued: April 8, 1982.

By order of the Commission.

Kenneth R. Mason,

Secretary.

[FR Doc. 82-10247 Filed 4-13-82; 8:45 am]

BILLING CODE 7020-02-M

APPENDIX B

NOTICE OF THE DEPARTMENT OF COMMERCE'S INSTITUTION OF PRELIMINARY INVESTIGATION

Initiation of Antidumping Investigation; Chlorine From Canada

AGENCY: International Trade Administration, Commerce.

ACTION: Initiation of antidumping investigation.

SUMMARY: On the basis of a petition filed in proper form with the United States Department of Commerce, we are initiating an antidumping investigation to determine whether chlorine from Canada is being, or is likely to be, sold in the United States at less than fair value. We are notifying the United States International Trade Commission ("ITC") of this action so that it may determine whether imports of this merchandise are materially injuring, or threatening to materially injure, a United States industry. If the investigation proceeds normally, the ITC will make its preliminary determination on or before May 20, 1982, and we will make ours on or before September 13, 1982.

EFFECTIVE DATE: April 28, 1982.

FOR FURTHER INFORMATION CONTACT: Steve Garment, Office of Investigations, Import Administration, International Trade Administration, United States Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, D.C. 20230 (202) 377-1757.

SUPPLEMENTARY INFORMATION:

The Petition

On April 5, 1982, we received a petition from counsel for the Diamond Shamrock Corporation ("Diamond"), the Olin Corporation ("Olin"), and the Pennwalt Corporation ("Pennwalt"), on behalf of the United States industry producing chlorine. In compliance with the filing requirements of § 353.36 of the Commerce Regulations (19 CFR 353.36), the petition alleges that imports of the subject merchandise from Canada are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Act, and that these imports are materially injuring, or are threatening to materially injure, a United States industry. The allegation of sales at less than fair value is supported by comparisons of United States prices (developed from actual bids, quotes and acceptances) on sales of the merchandise in the United States with Canadian home market prices (obtained from bids, quotes and acceptances of Canadian manufacturers) on sale made in Canada.

Initiation of Investigation

Under section 732(c) of the Tariff Act of 1930, as amended (19 U.S.C. 1673a) ("the Act"), we must determine, within 20 days after the petition is filed, whether it sets forth the allegations necessary for the initiation of an antidumping investigation and whether it contains information reasonably available to the petitioner supporting the allegations. We have examined the petition filed by the industry, and we have found that it meets the requirements of section 732(b) of the Act. Therefore, we are initiating an antidumping investigation to determine whether chlorine from Canada is being, or is likely to be, sold at less than fair value in the United States. If our investigation proceeds normally, we will make our preliminary determination by September 13, 1982.

Scope of the Investigation

The merchandise covered by this investigation is chlorine, a chemical currently classifiable under item number 415.20, *Tariff Schedules of the United States Annotated* ("TSUSA"). Chlorine is primarily used in the production of the following products: (1) polyvinyl chloride; (2) pulp and paper industry processes; (3) chlorinated methanes or ethanes; and (4) water treatment.

Notification to ITC

Section 732(d) of the Act requires us to notify the United States International Trade Commission of this action and to provide it with the information we used to arrive at this determination. We will notify the ITC and make available to it all nonprivileged and nonconfidential information. We will also allow the ITC access to all privileged and confidential information in our files, provided it confirms that it will not disclose such information either publicly or under an administrative protective order without the written consent of the Deputy Assistant Secretary for Import Administration.

Preliminary Determination by ITC

The ITC will determine within 45 days whether there is a reasonable indication that imports of chlorine from Canada are materially injuring, or are likely to materially injure, a United States industry. If its determination is negative, this investigation will terminate; otherwise, it will proceed according to the statutory procedures.

Dated: April 21, 1982.

Gary N. Horlick,

Deputy Assistant Secretary for Import Administration.

[FR Doc. 82-11421 Filed 4-27-82; 8:45 am]

BILLING CODE 3510-25-M

APPENDIX C

CALENDAR OF THE PUBLIC CONFERENCE

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CALENDAR OF PUBLIC CONFERENCE

Investigation No. 731-TA-90 (Preliminary)

CHLORINE FROM CANADA

Those listed below appeared as witnesses at the United States International Trade Commission conference held in connection with the subject investigation on Thursday, April 29, 1982, in the Hearing Room of the USITC Building, 701 E Street, NW., Washington, D.C.

In support of the petition

Rogers & Wells
Washington, D.C.
on behalf of

Diamond Shamrock Corporation
Olin Corporation
Pennwalt Corporation

James D. Fleming, Business Manager, Chlorine and Hydrogen
Diamond Shamrock Corporation

Michael Herrington, Business Manager, Chlorine and Caustic Soda
Curtis Shaw, Counsel
Olin Corporation

William Fell, Director of Marketing, Inorganic Chemicals-Sales
Pennwalt Corporation

Robert V. McIntyre)
George C. Smith) --OF COUNSEL

In opposition to the petition

Rivkin, Sherman & Levy
Washington, D.C.
on behalf of

C-I-L Inc. and C-I-I Chemicals Inc.

Frederick M. Peterson, President, Prote Economics, Inc.
Charles K. Brennan, Project Manager, C.H. Kleine & Co.

Saul L. Sherman--OF COUNSEL