

# **SODIUM NITRATE FROM CHILE**

**Determination of the Commission  
in Investigation No. 731-TA-91 (Final)  
Under the Tariff Act of 1930,  
Together With the Information  
Obtained in the Investigation**

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**United States International Trade Commission / Washington, D.C. 20436**



**UNITED STATES INTERNATIONAL TRADE COMMISSION**

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Note.--Information which would disclose confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C.

Investigation No. 731-TA-91 (Final)

SODIUM NITRATE 1/ FROM CHILE

Determination

On the basis of the record 2/ developed in the subject investigation, the Commission determines, pursuant to section 735(b)(1) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)(1)), that an industry in the United States is materially injured by reason of imports from Chile of industrial grade sodium nitrate which have been found by the Department of Commerce to be sold in the United States at less than fair value; and that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from Chile of agricultural grade sodium nitrate which have been found by the Department of Commerce to be sold in the United States at less than fair value.

Background

The Commission instituted this investigation effective November 15, 1982, following a preliminary determination by the Department of Commerce that there was a reasonable basis to believe or suspect that imports of sodium nitrate from Chile were being sold in the United States at less than fair value.

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1/ Sodium nitrate is provided for in item 480.2500 of the Tariff Schedules of the United States Annotated (1983). Agricultural grade sodium nitrate contains less than 98 percent, by weight, of sodium nitrate and industrial grade sodium nitrate contains 98 percent or more, by weight, of sodium nitrate.

2/ The record is defined in sec. 207.2(i) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(i), 47 F.R. 6190, Feb. 10, 1982).

Notice of the institution of the Commission's investigation and of a public hearing 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 December 1, 1982 (47 F.R. 54179). The hearing was held in Washington, D.C., on February 1, 1983, and all persons who requested the opportunity were permitted to appear in person or by counsel.

## Views of The Commission

Introduction

We find that an industry in the United States is materially injured by reason of imports of industrial grade sodium nitrate from Chile which are being sold at less than fair value (LTFV). Further, we find that an industry in the United States is not materially injured or threatened with material injury by reason of imports of agricultural grade sodium nitrate from Chile which are being sold at less than fair value (LTFV). <sup>1/</sup> <sup>2/</sup>

Domestic industry

The term "industry" is defined in section 771(4)(A) of the Tariff Act of 1930 as meaning "the domestic producers as a whole of a like product or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product." <sup>3/</sup> The term "like product" is defined in section 771(10) of the Tariff Act as meaning "a

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- <sup>1/</sup> Material retardation of a sodium nitrate industry is not an issue in this investigation. Petitioner originally alleged that there is material retardation of a domestic solar nitrate salts industry as a result of the imports of sodium nitrate from Chile. However, this allegation was dropped by petitioner. Hearing transcript (Tr.) at 73.
- <sup>2/</sup> Commissioner Haggart notes that petitioner argues that LTFV imports of industrial and agricultural grades of sodium nitrate are threatening Olin's ability to commercialize a new solar technology process based upon sodium nitrate salts. Pre-Hearing Brief of Olin Corporation at 18-20. The question of whether imports of sodium nitrate from Chile are threatening Olin's ability to commercialize a new solar technology process based on solar nitrate salts is not relevant to our finding of material injury or threat thereof with respect to the domestic sodium nitrate industry. See, Sodium Nitrate from Chile, Inv. No. 731-TA-91 (Preliminary) (May 1982).
- <sup>3/</sup> 19 U.S.C. § 1677(4)(A).

product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation. . . ." <sup>4/</sup>

The subject of this investigation is sodium nitrate ( $\text{NaNO}_3$ ), a colorless, solid chemical which is moderately hygroscopic and very soluble in water. All imports from Chile are of natural sodium nitrate, mined from natural deposits of nitrate ore. <sup>5/</sup> The imports from Chile are of two grades: industrial and agricultural. <sup>6/</sup> The industrial grade imports contain approximately 98 percent, by weight, of sodium nitrate and are used by the explosives, glass, metal treatment and charcoal briquette industries, among others. <sup>7/</sup> The agricultural grade imports contain approximately 97 percent, by weight, of sodium nitrate and are predominantly used as a fertilizer for specialty crops such as tobacco, citrus and sugar beets. <sup>8/</sup> Agricultural grade imports also have some limited industrial uses such as in the manufacture of charcoal briquettes. <sup>9/</sup>

All domestic sodium nitrate is produced synthetically. It is manufactured in essentially one grade, referred to as industrial grade, which contains over 99 percent, by weight, of sodium nitrate and is sold in the same

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<sup>4/</sup> 19 U.S.C. § 1677(10).

<sup>5/</sup> Chile has the largest known deposits of natural sodium nitrate in the world. Report at A-4.

<sup>6/</sup> Report at A-3.

<sup>7/</sup> *Id.* at A-3, 4.

<sup>8/</sup> *Id.*

<sup>9/</sup> *Id.* at A-22.



markets as the imported natural industrial grade sodium nitrate. <sup>10/</sup>

Domestic producers do not market an agricultural grade sodium nitrate.

However, they do sell a negligible amount of substandard industrial grade material for agricultural use. <sup>11/</sup>

We find that the domestic synthetic sodium nitrate is "like" the natural imported industrial grade sodium nitrate. Its chemical composition is nearly identical to imported industrial grade sodium nitrate and, for most uses, the two are fungible.

With regard to the agricultural grade imports, we find that there is no domestic production of a product "like" these imports. The domestic product has fewer impurities than the agricultural grade imported product, but it is similar in chemical composition. With regard to uses, domestic synthetic industrial grade sodium nitrate can be substituted for the imported agricultural grade in all those industrial end uses for which the agricultural grade is suitable. <sup>12/</sup> For example, both products are used for metal treatment, water treatment, ice melting, and charcoal briquettes. <sup>13/</sup> In addition, the domestic industrial product could be used for agricultural purposes. <sup>14/</sup> Therefore, the domestic product "most similar in

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<sup>10/</sup> Olin also produces small quantities of food-grade sodium nitrate. This high purity material is produced upon order to a customer's specifications. CNS has not reported any imports of this premium grade.

<sup>11/</sup> In 1975 Olin produced a product it referred to as agricultural grade sodium nitrate. In fact, it was an industrial grade sprayed with an anticaking agent. TR at 21.

<sup>12/</sup> Data developed in this investigation indicate that actual competition between the imported agricultural grade and the domestic product is limited to approximately 10 percent of the market for industrial uses.

<sup>13/</sup> CNS confidential submission dated February 9, 1983.

<sup>14/</sup> See discussion regarding limitations on this use at p. 7, *infra*.

characteristics and uses" to the imported agricultural product is the domestic synthetic industrial grade product.

Since the domestic product is both "like" the imported industrial grade and "most similar" to the imported agricultural grade, we find there is one "like product" in this investigation, namely domestic synthetic sodium nitrate. Therefore, the domestic industry consists of the sole domestic producer of this product, Olin Corporation (Olin). <sup>15/</sup>

#### Condition of the domestic industry

During the period under investigation, the data show a steady decline in the condition of the domestic industry which accelerated in the first three quarters of 1982. <sup>16/</sup> Domestic production began decreasing between 1979 and 1981. A comparison of production for January - September 1982 with the corresponding period in 1981 shows a dramatic decrease. Capacity remained steady throughout the entire period of this investigation. Consequently, Olin's capacity utilization shows a steady decline from 1979 to 1981, with an even sharper decline in January - September 1982 as compared with January - September 1981. <sup>17/</sup>

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<sup>15/</sup> Although we found one domestic industry, we assessed the impact of each grade of imports on the domestic industry separately. While this analysis parallels the Commerce Department's designation of two imported products for purposes of determining LTFV margins, we note that Commerce's designation is not dispositive. Grade distinctions between chemical imports do not necessitate separate Commission determinations unless conditions of trade or the nature of the imports warrant this approach.

<sup>16/</sup> Because the domestic industry consists of a single producer, specific company related data are confidential and cannot be disclosed in this opinion.

<sup>17/</sup> Report at A-12.

Domestic shipments exhibited the same declining trends. <sup>18/</sup> Although inventories of the domestic producer declined between 1979 and 1981, inventories increased in the period January - September 1982 as compared with the corresponding period in 1981. <sup>19/</sup>

Olin's net operating profit for its sodium nitrate operations fell substantially from 1979 to 1981, and declined further when comparing the January - September 1982 period to the corresponding period in 1981. In 1982, the company suffered a loss.

Material Injury by reason of LTFV imports

Section 771(7) of the Act directs the Commission to consider, among other factors, (1) the volume of imports of the merchandise under investigation, (2) their impact on domestic prices, and (3) the consequent impact on the domestic industry.

Agricultural grade

Nearly all the imports of agricultural grade sodium nitrate are marketed as fertilizer. Although the petitioner alleges that the domestic product could be used for agricultural purposes, the U.S. producer does not compete in that market. <sup>20/</sup> There is some indication that the imported agricultural

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<sup>18/</sup> Id. at A-13.

<sup>19/</sup> Id. at A-14.

<sup>20/</sup> Tr at 76

grade product is preferred by some agricultural users because the domestic product lacks micronutrients sought for certain specialty crops. <sup>21/</sup>

The agricultural grade product is suitable for some industrial uses and thus competes with the domestic product to a limited extent. Data developed in this investigation indicate that actual competition between the imported agricultural grade and the domestic product is limited to approximately 10 percent of the market for industrial uses. There is no indication of a significantly increased role for agricultural grade imports in the industrial market in the near future. <sup>22/</sup> Such minimal competition does not establish a sufficient causal connection between the imports of agricultural grade sodium nitrate and the injury being experienced by the domestic industry. For the above reasons, we find that there is no material injury or threat of material injury to the domestic industry by reason of LTFV imports of the agricultural-grade sodium nitrate.

#### Industrial grade

The imported and domestic product have been competing in a declining market. U.S. consumption of industrial grade sodium nitrate declined substantially during 1979-81 and declined even more in January-September 1982 compared with the corresponding period in 1981. <sup>23/</sup>

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<sup>21/</sup> Commissioner Stern notes further that the LTFV margin is .54 percent ad valorem. Even if such a dumping duty were assessed, the competitive position of the U.S. product vis-a-vis agricultural grade imports would not change.

<sup>22/</sup> The imported agricultural grade is not suitable for the largest industrial use of this product, explosives. Report at 22.

<sup>23/</sup> Id. at A-20.

Imports of industrial grade sodium nitrate from Chile are substantial in absolute and relative terms. <sup>24/</sup> Market penetration in terms of a ratio of imports to consumption increased from 1979-1981 and then declined in the period January-September 1982 as compared with the corresponding period in 1981. Trends in terms of the ratio of shipments to consumption are revealing. During this period of declining consumption, this ratio increased from 1979 through 1981 and then increased substantially for the period January-September 1982 as compared with the corresponding period in 1981. <sup>25/</sup>

There is evidence of price suppression and underselling. <sup>26/ 27/</sup> A pattern of underselling is established by a comparison of delivered price data for both bag and bulk sales. The amount of underselling for both bag and bulk sales is substantial. <sup>28/</sup> Further, the Commission has confirmed lost sales of domestic industrial grade sodium nitrate to the imported product in the period 1980-82. <sup>29/</sup> Many of these buyers who had previously sourced solely with the domestic producer purchased Chilean industrial grade sodium nitrate because of its lower price. <sup>30/</sup>

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<sup>24/</sup> Id. at A-25.

<sup>25/</sup> Id. at A-21.

<sup>26/</sup> See Report at Table 15.

<sup>27/</sup> The Bureau of Labor Statistics' Producers' Price Index indicates that prices of industrial chemicals increased by 116 percent from January 1979 - September, 1982. The domestic producer's prices have not kept pace with this trend. In 1981, domestic prices dropped.

<sup>28/</sup> Commissioner Stern notes that for industrial grade sodium nitrate the LTFV margin is substantial enabling the imported product to be sold at prices substantially below the domestic product. Report at A-2.

<sup>29/</sup> Id. at A-29 through 31.

<sup>30/</sup> Importers argue that substitutes of sodium nitrate are the cause of the domestic industry's problems. The legislative history of the act indicates that the law does not contemplate that the causes of material (Continued)

Therefore, based upon the above factors, we conclude that a domestic industry is being materially injured by LTFV imports of industrial grade sodium nitrate from Chile.

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30/ (Continued)

injury from LTFV imports be weighed against other factors which may be contributing to overall injury to the domestic industry. H. Rep. No. 317, 96th Cong., 1st Sess. 47 (1979). The Commission must satisfy itself that in light of all the information presented, there is a sufficient causal link between the LTFV imports and the requisite injury. S. Rep. No. 249, 96th Cong., 1st Sess. 75 (1979).

## INFORMATION OBTAINED IN THE INVESTIGATION

## Introduction

Following a preliminary determination by the U.S. Department of Commerce that there is a reasonable basis to believe or suspect that sodium nitrate from Chile is being sold, or is likely to be sold, in the United States at less than fair value (LTFV) within the meaning of section 733 of the Tariff Act of 1930 (19 U.S.C. § 1673b), 1/ the U.S. International Trade Commission instituted investigation No. 731-TA-91 (Final) under section 735(b) of the Act (19 U.S.C. § 1673d(b)) to determine whether 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 Chile of the specified merchandise.

Notice of the institution of the Commission's investigation and of the public hearing 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 December 1, 1982 (47 F.R. 54179). 2/ The hearing was held in Washington, D.C., on February 1, 1983. 3/

The Department of Commerce published its final determination as to the question of LTFV sales in this investigation on January 28, 1983. 4/ The applicable statute directs that the Commission make its final injury determination in this case by March 10, 1983.

## Background

On April 12, 1982, a petition was filed by Olin Corp. with the U.S. International Trade Commission and the U.S. Department of Commerce alleging that imports of sodium nitrate from Chile are being sold in the United States at LTFV. Accordingly, the Commission instituted preliminary antidumping investigation No. 731-TA-91 (Preliminary) 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 the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise into the United States.

On the basis of the record 5/ developed in the preliminary investigation, the Commission determined, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)), that there was a reasonable indication that an

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1/ Commerce's preliminary determination was published in the Federal Register on Nov. 15, 1982 (47 F.R. 51460).

2/ A copy of the Commission's notice is presented in app. A.

3/ A list of witnesses appearing at the hearing is presented in app. B.

4/ A copy of Commerce's final determination is presented in app. C.

5/ The record is defined in sec. 207.2(i) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(i)).

industry in the United States is materially injured or threatened with material injury 1/ by reason of imports from Chile of sodium nitrate, provided for in item 480.25 of the Tariff Schedules of the United States (TSUS), which are alleged to be sold in the United States at less than fair value.

Notice of the institution of the Commission's preliminary investigation and of a public 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 21, 1982 (47 F.R. 17136). The conference was held in Washington, D.C., on May 4, 1982, and all persons who requested the opportunity were permitted to appear in person or by counsel.

#### Nature and Extent of Sales at LTFV

The Department of Commerce published its final determination of sales at LTFV concerning imports of sodium nitrate from Chile in the Federal Register on January 28, 1983. The complete text of Commerce's determination is presented in appendix C.

To determine whether sales of the subject merchandise in the United States were made at LTFV, the Department of Commerce compared the U.S. price with the foreign market value. Commerce examined sales made during November 1, 1981-April 30, 1982, by Sociedad Quimica y Minera de Chile, S.A. (SQM), the only Chilean exporter of sodium nitrate to the United States. Commerce calculated two margins, one for agricultural-grade (less than 98 percent pure) sodium nitrate and one for industrial-grade (98 percent or more pure) sodium nitrate. Commerce found that the foreign market value exceeded the U.S. price on 15.6 percent of total sales to the United States of agricultural-grade sodium nitrate. LTFV margins ranged from 0.96 percent to 13.4 percent ad valorem; the weighted-average margin on all agricultural-grade sales is \$0.45 per short ton (0.54 percent ad valorem).

For industrial-grade sodium nitrate, Commerce found that the foreign market value exceeded the United States price on 100 percent of sales. LTFV margins ranged from 16.1 percent to 101.7 percent ad valorem; the weighted-average margin on all industrial-grade sales was \$39.08 per short ton (33.4 percent ad valorem).

#### The Product

##### Description

Sodium nitrate ( $\text{NaNO}_3$ ) is a colorless solid which is moderately hygroscopic, i.e., capable of absorbing and retaining moisture, and very soluble in water. Commercial sodium nitrate is of two types: natural and

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1/ Chairman Alberger, Commissioner Haggart, and Commissioner Frank found only that there is a reasonable indication that an industry in the United States is materially injured.



synthetic. Although they are produced by completely different processes, their chemical composition is almost identical and, for purposes of most users, the two are fungible.

Natural sodium nitrate.-- Natural sodium nitrate, also known as Chile saltpeter or Chile nitrate, occurs in nature, usually in deposits associated with sodium chloride, sodium sulfate, and other salts. Although many parts of the world may contain small deposits of natural sodium nitrate, the largest known deposit is located in northern Chile.

Nitrate ore is mined from open pits and is generally found in two grades: the high-grade ore referred to as caliche, and the low-grade ore known as costra. Today, all Chilean nitrate ore is simply referred to as caliche since no effort is made to separate the high-grade from the low-grade ore. In addition to sodium nitrate, nitrate ores are rich in sodium sulfate, magnesium compounds, borax, and potassium nitrate. Nitrate ores also contain significant amounts of calcium and sodium iodate, which may be extracted and converted to free iodine concurrently with the refining of the nitrate.

In general, the process used to extract sodium nitrate from nitrate ore involves washing the ore in water or in an aqueous solution, at which time the sodium nitrate is dissolved in the solution. After this so-called leaching phase, the sodium nitrate is removed from the solution by a crystallization step. The extraction processes used to separate the sodium nitrate from the ore vary in the temperature at which the sodium nitrate is dissolved or is crystallized, the chemical composition of the aqueous solution used to dissolve the sodium nitrate, and the number of leaching cycles to which the nitrate ore is subjected.

In the current process used to extract sodium nitrate from ore (known as the Guggenheim process), the ore, having an average sodium nitrate content of about 7 to 9 percent, is crushed and then leached at a temperature of about 40°C. The solution is concentrated by circulating it sequentially through several vats of ore for about 4 days. The concentrated solution is then sent to a crystallizing plant, where it is cooled by refrigeration, which causes the sodium nitrate to separate in crystalline form. After cooling, the slurry containing the crystallized sodium nitrate is centrifuged and the separated sodium nitrate washed to remove impurities.

In response to rising energy costs, an open-circuit leaching process was recently developed in which the nitrate-containing ore is leached in only one pass, and the solution from which the sodium nitrate salt was crystallized is concentrated by solar evaporation. The open-circuit leaching process requires less energy and produces less waste salts than the Guggenheim process.

The purified natural sodium nitrate is marketed commercially in two grades: an agricultural grade which contains approximately 97 percent, by weight, of sodium nitrate, and an industrial grade which contains approximately 98 percent, by weight, of sodium nitrate. Both grades contain small amounts of sodium chloride, sodium sulfate, and potassium nitrate.

Synthetic sodium nitrate.--Sodium nitrate can also be obtained synthetically by the reaction of nitric acid with soda ash (sodium carbonate)

or sodium hydroxide. The nitric acid is obtained by the oxidation of ammonia, which is in turn obtained by the catalytic fixation of nitrogen (from air) and hydrogen under conditions of high temperature and pressure. In the United States, most hydrogen is obtained commercially from natural gas. The sodium nitrate obtained synthetically has a higher degree of purity than the natural sodium nitrate from Chile, having a sodium nitrate content of over 99 percent, by weight.

### Uses

Sodium nitrate's principal use in the United States is as a nitrogenous fertilizer (it is believed to be the oldest known inorganic fertilizer material). However, demand for sodium nitrate for use as a fertilizer has declined sharply, especially since 1958, as a result of competition from less expensive nitrogenous fertilizers such as ammonium nitrate and urea, which are produced from synthetic ammonia. In the United States today, sodium nitrate is primarily used on specialty crops such as tobacco, citrus, and sugar beets. Although more expensive than other nitrogenous fertilizers, it has the advantage of being very rapidly assimilated by crops. It is claimed that the sodium in sodium nitrate can serve at least in part as a substitute for potash. In addition, sodium nitrate is slightly alkaline, which is advantageous for many crops grown in partly acidic soils.

Sodium nitrate's principal industrial use is in the manufacture of explosives, where it functions as an oxidant and a densifier and helps to ensure homogeneity of the mixture. Other major industrial uses for sodium nitrate include the production of charcoal, in which it is used to facilitate kindling; as an intermediate in the preparation of other chemicals such as nitric acid; in metal treatment, where it is used as a flux; as an oxidizing agent; and in the heat treatment of aluminum alloys. The ability of sodium nitrate to oxidize iron makes it useful in the manufacture of clear glass. It is finding new uses in the manufacture of architectural glass, which has energy-conserving properties. Small amounts of sodium nitrate are also used in the manufacture of adhesives and pulp and paper, in water treatment, and as a deicing agent. A mixture of molten sodium and potassium nitrate is being investigated for use as a heat-transfer fluid and a heat-storage medium in solar-energy receivers.

### U.S. tariff treatment

Sodium nitrate is classified under item 480.25 of the TSUS and is duty free from all sources.

### U.S. Market and Channels of Distribution

On the basis of the combined 1981 shipments of the U.S. producer and the U.S. importer to U.S. and Canadian markets, consumption of sodium nitrate may be broken down into the following end-use categories (in percent):

<u>End use</u>	<u>Percentage distribution of U.S. and Canadian shipments</u>
Fertilizer-----	33
Explosives-----	24
Glass-----	9
Metal treatment-----	9
Miscellaneous-----	25
	<u>100</u>

As mentioned earlier, the fertilizer market is currently the largest single market for sodium nitrate. However, sodium nitrate fertilizer is the most expensive of all nitrogenous fertilizers, and is used only on such specialized crops as tobacco, citrus, and sugar beets. Due to its apparent cost disadvantage and an anticipated decline in tobacco acreage, its use as a fertilizer is expected to decline slightly over the next 2 to 3 years.

Use of sodium nitrate in industrial applications (i.e., explosives, metal, glass, and so forth) is forecast by the industry to grow by only about 1 percent during 1982-84. However, new applications in the areas of architectural glass and solar energy, now in the developmental stages, could push the growth rate significantly higher in years ahead.

More than \* \* \* percent of the U.S. producer's sales of sodium nitrate are purchased directly by end-use customers; the remaining \* \* \* percent are sold to distributors. Similarly, about \* \* \* percent of the imported industrial-grade sodium nitrate is marketed through distributors. However, more than \* \* \* percent of the imported agricultural grade is marketed through distributors.

Sodium nitrate is generally shipped in 50- or 100-pound bags, or in bulk. All material shipped by the U.S. producer is shipped either from the producing plant in Lake Charles, La., or from a bag warehouse located in Norcross, Ga. Imported sodium nitrate is shipped to customers from warehouses in Norfolk, Va., Charleston, S.C., Tampa and Pensacola, Fla., San Diego, Calif., Wilmington, N.C., Gulfport, Miss., and Brunswick, Ga. Most of these locations also serve as ports of entry for the imported material. Sodium nitrate exports from Chile to Canada travel indirectly to Canada by way of Norfolk, Va.

#### Availability of Substitutes (1979-82) 1/

##### Agricultural applications

The principal substitutes for sodium nitrate in the agricultural sector are other nitrate salts, particularly calcium nitrate (which is not produced

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1/ A discussion of available substitutes for sodium nitrate has been included in this report in order to address the contention by the importer that the emergence of substitutes has been a factor in the decline of the U.S. sodium nitrate industry.

domestically in significant amounts), ammonium nitrate, and potassium nitrate. Like sodium nitrate, calcium nitrate is fast acting and can be used in slightly or moderately acidic soils. Calcium nitrate does, however, have the major disadvantage of being highly hygroscopic (having a tendency to pick up moisture from the air) and may be much more difficult to apply to crops than the more moderately hygroscopic sodium nitrate. Sodium nitrate would therefore be preferred to calcium nitrate were price considerations not a factor.

Calcium nitrate's chief competitive advantage over sodium nitrate is its price. The average price difference between agricultural-grade sodium nitrate and calcium nitrate in the United States was about \* \* \* per ton in 1982. According to one industry representative, the relative price difference between sodium nitrate and calcium nitrate should decrease as natural gas prices are decontrolled, leading to a lessening of the competitive impact of calcium nitrate on sales of sodium nitrate. Sales of calcium nitrate in 1981 were about \* \* \* tons, which amounted to only a small portion of the U.S. nitrogenous fertilizer market.

Ammonium nitrate, in contrast to calcium nitrate, is produced domestically (from synthetic ammonia) and is one of the largest volume nitrogenous fertilizers in the United States. Ammonium nitrate, which is about half as expensive as sodium nitrate, is used extensively in crops which also make use of sodium nitrate, such as tobacco. Ammonium nitrate has not completely replaced sodium nitrate in such crops because of tradition and because ammonium nitrate, which is more concentrated in nitrogen than is sodium nitrate, is more susceptible to calibration errors during application of the fertilizer. Ammonium nitrate is also slightly acidic (in contrast to sodium nitrate, which is slightly alkaline), making it less useful than sodium nitrate in highly acidic soils. According to some sources, the sodium in sodium nitrate also has nutritional value which is not provided by the ammonium nitrate fertilizer.

In addition to calcium nitrate and ammonium nitrate, sodium nitrate also faces significant competition from a number of other substitutes, especially potassium nitrate, even though it is considerably more expensive than sodium nitrate. Potassium nitrate is competitive because it supplies two primary nutrients to crops, nitrogen and potassium, whereas sodium nitrate supplies only the primary nutrient, nitrogen. Potassium nitrate is manufactured in Mississippi and is also imported from Israel and, sporadically, from Chile. Domestic consumption of potassium nitrate in 1981 was only about \* \* \* tons, but much larger quantities of potassium nitrate are imported into the United States from Chile as a component in a potassium nitrate/sodium nitrate mixture for use in specialty crops including tobacco, citrus, and vegetables.

### Explosives

The principal substitutes for sodium nitrate used in the manufacture of explosives are ammonium nitrate and calcium nitrate. Ammonium nitrate is the principal ingredient used in the manufacture of industrial explosives. The chief competitive advantages of ammonium nitrate are its relatively low price (\* \* \*-\* \* \* per ton, which is cheaper than either calcium nitrate or sodium

nitrate), and its high explosive power (about five times that of sodium nitrate). Ammonium nitrate also differs from both sodium nitrate and calcium nitrate in that it functions both as a fuel and as an oxidant in explosives, whereas sodium nitrate and calcium nitrate function as oxidants only.

Although calcium nitrate is more expensive than ammonium nitrate (with a price range of about \* \* \*-\* \* \* per ton), it is used in limited amounts as a component of explosives because the calcium nitrate lowers the temperature sensitivity of the explosives. Apparent consumption of calcium nitrate for use in the manufacture of explosives is about \* \* \* to \* \* \* short tons a year.

In spite of the fact that sodium nitrate is more expensive than either ammonium nitrate or calcium nitrate, about \* \* \* short tons a year of sodium nitrate are used in the manufacture of explosives. In many explosive compositions sodium nitrate and calcium nitrate are used interchangeably in conjunction with ammonium nitrate.

Sodium nitrate was one of the principal oxidants used in dynamite and blasting agents until the 1920's, when relatively inexpensive synthetic ammonium nitrate became available. In a reversal of the historical trend, sodium nitrate may now be replacing ammonium nitrate in some applications because of compositions that have been developed, such as "SAMFO," that are replacing a portion of the ammonium nitrate used in traditional explosives with sodium nitrate. Although the amount of sodium nitrate used in dynamite and blasting powder decreased sharply during the last 20 years, it is increasingly being used in water gels and slurry explosives.

#### Glass and enamels

No important substitute was reported that could commercially replace sodium nitrate as an oxidant in the manufacture of glass. Neither ammonium nitrate nor calcium nitrate can be used in glass manufacturing on a large scale because of ammonium poisoning. <sup>1/</sup> Potassium nitrate, although more expensive than sodium nitrate, has been used as a substitute in a limited number of cases for manufacturing a product having a low-sodium content.

Sodium nitrate is also used as a source of sodium oxide in glass. Sodium oxide is used to lower the melting temperature of the glass, making it easier to work with. Sodium carbonate and sodium sulfate have been substituted for the more expensive sodium nitrate in this end use.

Sodium nitrate is also used as a refining agent in the manufacture of glass. New processes have evolved which reduce and in some applications eliminate the need for refining agents in glass manufacturing. One of these processes utilizes calumite, a more effective flux, which permits the elimination of various refining agents, including sodium nitrate, in this end use.

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<sup>1/</sup> The calcium nitrate that is available is in an ammoniated form.

### Metal refining

In the metal manufacturing and refining sector, sodium nitrate is used as an oxidant and as a component in heat baths. Substitute products or processes that were reported to have replaced sodium nitrate in metal processing included the use of oxygen or air blowing to replace sodium nitrate as an oxidant in lead smelting during periods of low plant capacity utilization; the replacement of sodium nitrate with less expensive calcium carbonate in steel manufacturing; and the replacement of sodium nitrate with potassium hydroxide in metallurgical processing so as to reduce the residual sodium content of the metal product.

Substitutes for sodium nitrate used in heat baths include potassium nitrate (heat baths in metal refining are often mixtures of sodium nitrate and potassium nitrate) and chloride salts. The chloride salts are used in heat baths which have a higher temperature than the sodium nitrate/potassium nitrate mixture and are more corrosive than the sodium salts.

### Other end uses

Substitutes for sodium nitrate that have been reported for other industrial applications include urea, which has been substituted for sodium nitrate in the manufacture of adhesives; and hydrogen peroxide, chlorine, and potassium permanganate, which have been substituted for sodium nitrate in waste water treatment.

No substitute for sodium nitrate has been reported in the manufacture of charcoal briquettes to facilitate kindling except for some limited quantities of soda ash. However, to cut costs, some charcoal producers have reportedly modified the composition of the charcoal briquettes so as to eliminate the need for sodium nitrate entirely.

## The Domestic Industry

### U.S. producers

Prior to 1965, there were two domestic producers of sodium nitrate: Allied Chemical Corp. (Hopewell, Va.) and Olin Corp. (Stamford, Conn). In 1965, Allied stopped producing sodium nitrate altogether, leaving Olin as the sole domestic producer. There are other companies that reprocess the material; i.e., they purchase the finished product from either the domestic producer or the importer and further purify and grind the material to a particular particle size to suit individual customer preferences.

Olin's synthetic sodium nitrate facility is located in Lake Charles, La. The plant, built in the 1940's, is used to produce a host of chemical products in addition to sodium nitrate, although the equipment used to produce sodium nitrate is used exclusively for that purpose.

### U.S. importers

Virtually all (99 percent) sodium nitrate imported into the United States originates in Chile. The exclusive U.S. importer of record for these imports is Chilean Nitrate Sales Corp. (CNS), Norfolk, Va. CNS is a wholly owned U.S. subsidiary of Nitrate Corp. of Chile located in the United Kingdom. The United Kingdom parent is, in turn, wholly owned by SQM, Santiago, Chile. Other chemicals imported into the United States from Chile, by CNS, include sodium-potassium nitrate and iodine.

### Foreign Producers

There are only a handful of sodium nitrate producers throughout the world. With the exception of the one in Chile, those in other countries--France, West Germany, and Japan--are relatively small-volume producers that do not export to the U.S. market. The Chilean producer, SQM, is in effect a state-owned company which is directly controlled by the State Development Corp. of the Government of Chile, Corporacion de Fomento de la Produccion. Chile first exported sodium nitrate to the United States in 1831.

SQM has two plants that are capable of producing sodium nitrate, although only one is currently used for that purpose. In 1981, that plant's sodium nitrate capacity was approximately \* \* \* short tons and production totaled more than \* \* \* short tons, or \* \* \* percent of capacity. Of the \* \* \* short tons of sodium nitrate produced in 1981, nearly \* \* \* short tons, or roughly \* \* \* percent of production, was exported to markets in \* \* \*.

SQM's other plant is currently used to produce potassium nitrate. Should this plant be used to produce sodium nitrate in the future, its annual capacity would be about \* \* \* short tons of industrial-grade sodium nitrate.

### U.S. Imports

Official statistics of the U.S. Department of Commerce on imports of sodium nitrate include material that is subsequently exported to Canada (i.e., not consumed in the United States). Therefore, the Commission relied on import data submitted by CNS in response to its questionnaire, which excluded product exported to Canada, in calculating U.S. consumption and in examining trends in imports since 1979. Historical data on imports during 1970-78, as reported by the Department of Commerce, are also presented for information.

Official statistics of the U.S. Department of Commerce indicate that between 1970 and 1978, U.S. imports of sodium nitrate from Chile accounted for not less than 99 percent of total U.S. imports. U.S. imports from other countries, primarily Canada, <sup>1/</sup> were recorded sporadically over the same period. As shown in table 1 and in the following figure, the annual volume of U.S. imports between 1970 and 1978 was very erratic. Total U.S. imports

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<sup>1/</sup> There are no known sodium nitrate producers in Canada; it is generally believed that such imports are reimports of the Chilean material.

Table 1.--Sodium nitrate: U.S. imports for consumption, 1/  
by principal sources, 1970-78

Year	Quantity			Value			Average unit value		
	Total	Chile	Other	Total	Chile	Other	Total	Chile	Other
	-----Short tons-----			-----1,000 dollars-----			-----Per short ton-----		
1970--	129,458	129,418	40	4,141	4,138	3	\$31.99	\$31.97	\$75.00
1971--	203,188	203,138	50	6,917	6,913	4	34.04	34.03	80.00
1972--	110,877	110,877	0	3,865	3,865	-	34.86	34.86	-
1973--	69,209	69,209	0	2,833	2,833	-	40.93	40.93	-
1974--	150,082	150,069	13	14,356	14,356	2/	95.65	95.65	36.85
1975--	139,149	139,144	5	19,100	19,099	1	137.26	137.26	200.00
1976--	102,746	102,746	0	8,143	8,143	-	79.25	79.25	-
1977--	165,772	165,772	0	11,735	11,735	-	70.79	70.79	-
1978--	142,479	142,255	224	11,602	11,584	17	81.43	81.43	75.89

1/Includes material that is imported into the United States but which is not offered for sale in the United States and is subsequently exported to Canada.

2/ Less than \$500.

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

increased from 129,458 short tons in 1970 to 203,188 short tons in 1971. They then declined in 1972 to 110,877 short tons. This fluctuating pattern continued throughout the remainder of the period.

The value of U.S. imports of sodium nitrate rose from \$4.1 million in 1970 to \$11.6 million in 1978. The average unit value of U.S. imports increased from \$32 per short ton in 1970 to \$81 per short ton in 1978.

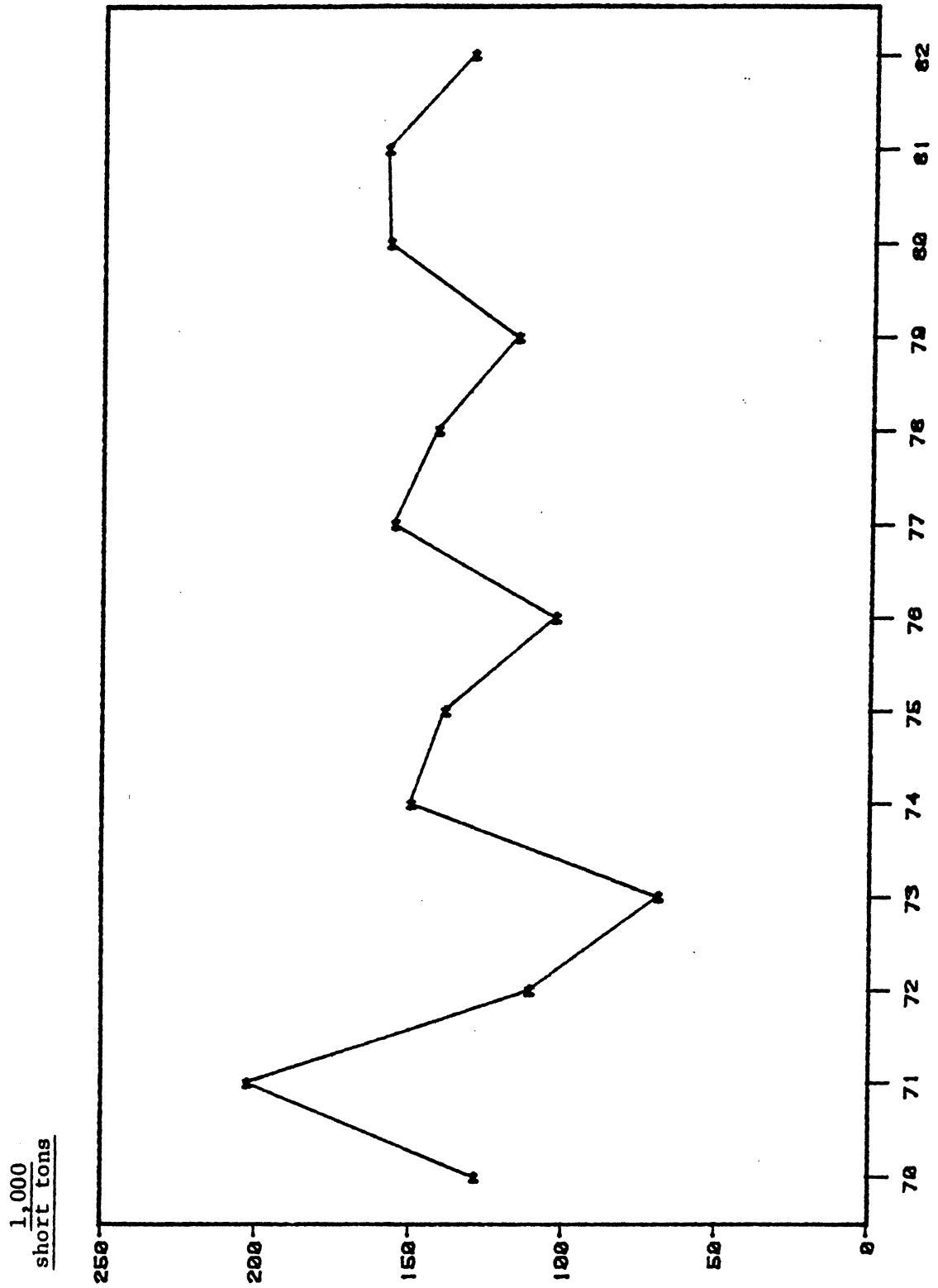
Data supplied in the questionnaire response of the U.S. importer show that the volume of U.S. imports of sodium nitrate from Chile increased by \* \* \* percent between 1979 and 1981. Again, sodium nitrate imported from Chile accounted for not less than \* \* \* percent of total U.S. imports during the period. U.S. imports from Chile rose from \* \* \* short tons in 1979 to \* \* \* short tons in 1981 (table 2). In January-September 1982, such imports totaled \* \* \* short tons, declining by \* \* \* percent from the level reported in January-September 1981.

Table 2.--Sodium nitrate: U.S. imports for consumption from Chile,  
by grades, 1979-81, January-September 1981, and January-September 1982

\* \* \* \* \*



## SODIUM NITRATE: U.S. imports from Chile, 1970-82



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

The composition of sodium nitrate imported from Chile after 1979 was heavily skewed in favor of the agricultural-grade material, which accounted for \* \* \* percent and \* \* \* percent of total U.S. imports in 1980 and 1981, respectively. In January-September 1982, \* \* \* percent of total imports from Chile consisted of the agricultural material.

The value of sodium nitrate imported from Chile rose by \* \* \* percent during 1979-81, from \* \* \* million to \* \* \* million. The average unit value of imported sodium nitrate rose from \* \* \* per short ton in 1979 to \* \* \* per short ton in 1981, or by \* \* \* percent. The average unit value in January-September 1982 was \* \* \* percent below that in the corresponding period of 1981.

### The Question of Injury or the Threat Thereof

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

Olin's total sodium nitrate production, net of intracompany consumption, <sup>1/</sup> declined by \* \* \* percent between 1979 and 1981. Its production fell from \* \* \* short tons in 1979 to \* \* \* short tons in 1981. Total production decreased by \* \* \* short tons in January-September 1982 from production in January-September 1981 (table 3).

Table 3.--Sodium nitrate: U.S. producer's production, capacity, and capacity utilization rate, by grades, 1979-81, January-September 1981, and January-September 1982

\* \* \* \* \*

From 1979 to 1981, Olin's annual sodium nitrate capacity remained unchanged at \* \* \* short tons. Its capacity utilization rate fell from \* \* \* percent in 1979 to \* \* \* percent in 1981, and then dropped sharply to \* \* \* percent in January-September 1982, well below the rate of \* \* \* percent in January-September 1981. The decline in Olin's capacity utilization resulted from its declining production.

Olin's sodium nitrate production consists of the production of agricultural-, industrial-, and food-grade sodium nitrate. However, for all practical purposes the industrial-grade material is the chief output of Olin's plant, as shown in the following tabulation:

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<sup>1/</sup> \* \* \*.

<u>Period</u>	<u>Agricultural grade 1/ (short tons)</u>	<u>Percent of total</u>	<u>Industrial grade 2/ (short tons)</u>	<u>Percent of total</u>	<u>Other grade (food) (short tons)</u>	<u>Percent of total</u>
1979-----	***	***	***	***	***	***
1980-----	***	***	***	***	***	***
1981-----	***	***	***	***	***	***
January-September--						
1981-----	***	***	***	***	***	***
1982-----	***	***	***	***	***	***

1/ Consists of substandard quality industrial-grade sodium nitrate that was sold for use in agricultural applications.

2/ Production reported is net of intracompany consumption.

Olin effectively stopped producing agricultural-grade sodium nitrate in 1975. Although some production of this grade was reported in the company's questionnaire response, it was explained that this material was, in effect, substandard industrial sodium nitrate that was unsuitable for industrial uses. Olin produces its food-grade sodium nitrate only upon receipt of a customer order.

#### U.S. producer's shipments and exports

In terms of quantity shipped, Olin's domestic sodium nitrate shipments declined by \* \* \* percent in 1980 and by \* \* \* percent in 1981. Such shipments fell from \* \* \* short tons in 1979 to \* \* \* short tons in 1980, and to \* \* \* short tons in 1981. In January-September 1982, domestic shipments declined by \* \* \* percent to \* \* \* short tons, compared with \* \* \* short tons in January-September 1981 (table 4).

Table 4.--Sodium nitrate: U.S. producer's domestic shipments, by grades, 1979-81, January-September 1981, and January-September 1982

\*   \*   \*   \*   \*   \*   \*

Conversely, the value of Olin's domestic shipments rose by \* \* \* percent from 1979 to 1981, from \* \* \* million to \* \* \* million. In January-September 1982, Olin's domestic shipments were valued at \* \* \* million.

The average unit value of Olin's domestic shipments increased from \* \* \* per short ton in 1979 to \* \* \* per short ton in 1981, up by \* \* \* percent. In January-September 1982, the average unit value increased to \* \* \* per short ton, up by \* \* \* percent over the average unit value in the corresponding period of 1981. The average unit value of Olin's industrial-grade sodium nitrate, which represents more than \* \* \* percent of Olin's total domestic

shipments, rose by \* \* \* percent from 1979 to 1981, from \* \* \* per short ton to \* \* \* per short ton. In January-September 1982, the average unit value of Olin's industrial-grade sodium nitrate increased to \* \* \* per short ton.

Olin's sodium nitrate exports, which go primarily to \* \* \* and consist mostly of the industrial-grade material, declined sharply in 1980, but then recovered in 1981. Exports of sodium nitrate declined once again in January-September 1982, falling \* \* \* percent from the level reported in the corresponding period of 1981, as shown in the following tabulation (in short tons):

	<u>Exports</u> (short tons)	<u>Commercial</u> <u>shipments</u> (short tons)	<u>Ratio of exports</u> <u>to commercial</u> <u>shipments</u> (percent)
1979-----	***	***	***
1980-----	***	***	***
1981-----	***	***	***
January-September--			
1981-----	***	***	***
1982-----	***	***	***

#### Inventories

Olin's reported inventories of sodium nitrate consisted solely of the industrial-grade material. End-of-period inventories of industrial sodium nitrate declined from \* \* \* short tons in 1979 to only \* \* \* short tons in 1981. Inventories held, as of September 30, 1982, increased by \* \* \* percent, to \* \* \* short tons, compared with the volume held on the corresponding date in 1981. The ratio of Olin's inventories to sales followed a similar trend, declining from 1979 to 1981 but then rising in January-September 1982 (table 5).

Table 5.--Sodium nitrate: U.S. producer's inventories, by grades, as of Dec. 31 of 1979-81, Sept. 30, 1981, and Sept. 30, 1982

\* \* \* \* \*

Total inventories held by the U.S. importer, CNS, rose significantly throughout 1979-81 before declining in January-September 1982, 1/ as shown in the following tabulation (in short tons):

---

1/ Inventory data are estimates provided by CNS.

	<u>Total</u>	<u>Agricultural Grade</u>	<u>Industrial Grade</u>
As of Dec. 31--			
1979-----	***	***	***
1980-----	***	***	***
1981-----	***	***	***
As of Sept. 30--			
1981-----	***	***	***
1982-----	***	***	***

A primary consideration in CNS' decision to buildup inventory is the matter of ocean freight rates. A typical shipment of sodium nitrate entering the United States from Chile consists of \* \* \* metric tons. During times of declining ocean rates, a shipment from Chile could total as much as \* \* \* metric tons, twice the normal tonnage.

#### Apparent U.S. consumption

Apparent U.S. consumption of sodium nitrate declined by \* \* \* percent between 1979 and 1981, falling from \* \* \* short tons to \* \* \* short tons (table 6). Apparent consumption also registered a \* \* \*-percent decline in January-September 1982, compared with consumption in the corresponding period of 1981.

Table 6.--Sodium nitrate: U.S. production, imports for consumption, net change in inventories, Olin's exports, and apparent consumption, 1979-81, January-September 1981, and January-September 1982

\* \* \* \* \*

Practically all sodium nitrate sold for fertilizer use in the United States is imported from Chile. Although still the fertilizer of choice for certain specialty crops, emerging substitutes have increasingly replaced sodium nitrate in widespread agricultural use. Where replacement is taking place, the substitute offers a more attractive nitrogen value (amount of nitrogen supplied/cost of material) than sodium nitrate.

U.S. consumption of the industrial grade is not dependent on the level of activity in any one industry as products manufactured with sodium nitrate are broadly used throughout the economy. Accordingly, the general recession that has plagued the U.S. economy has adversely affected the demand for sodium nitrate.

#### U.S. employment

Table 7 shows that average employment of production and related workers engaged in the production of sodium nitrate at Olin's reporting U.S.

Table 7.--Sodium nitrate: Average number of employees, total and production and related workers, and man-hours worked by the latter, 1979-81, January-September 1981, and January-September 1982

\* \* \* \* \*

establishment decreased by \* \* \* workers between 1979 and January-September 1982. The average number of production and related workers producing sodium nitrate decreased from \* \* \* workers in 1979 to \* \* \* workers in 1981, and further declined in January-September 1982 to \* \* \* workers. The average number of production and related workers engaged in the production of all products increased by \* \* \* percent to \* \* \* workers between 1979 and 1981. A similar increase (\* \* \* percent) was recorded in the average number of all persons employed in the reporting U.S. establishment.

The number of man-hours worked by production and related workers producing sodium nitrate remained nearly unchanged at \* \* \* man-hours in 1981, compared with \* \* \* man-hours in 1979. This slight decrease contrasts sharply with the \* \* \*-percent increase in the number of man-hours worked by production and related workers engaged in the production of all products during the same period. Conversely, in January-September 1982, man-hours worked declined more sharply for those engaged in the production of all products (\* \* \* percent) than for those workers producing sodium nitrate (\* \* \* percent) when compared with hours worked in the corresponding period of 1981.

The following tabulation, which is based on data submitted by Olin in response to the Commission's questionnaire, shows average hourly wages paid to production and related workers employed at Olin's reporting establishment:

	<u>Average hourly wages paid to production and related workers engaged in the production of--</u>	
	<u>All products</u>	<u>Sodium nitrate</u>
1979-----	***	***
1980-----	***	***
1981-----	***	***
January-September--		
1981-----	***	***
1982-----	***	***

The tabulation shows that in all periods, except January-September 1981, the average hourly wages paid to production and related workers producing sodium nitrate were slightly higher than the average hourly wages paid to production and related workers engaged in the production of all products. Average hourly wages paid to the former workers increased by \* \* \* percent in 1980, \* \* \* percent in 1981, and a significant \* \* \* percent in January-September 1982, compared with those in the corresponding period of 1981.

Data on labor productivity, hourly compensation, and unit labor costs in the production of sodium nitrate are presented in table 8.

Table 8.--Sodium nitrate: Labor productivity, hourly compensation, and unit labor costs, 1979-81, January-September 1981, and January-September 1982

\* \* \* \* \*

Labor productivity, measured in tons per man-hour, declined by \* \* \* percent from 1979 to 1981, and by another \* \* \* percent in January-September 1982, compared with productivity in the corresponding period of 1981. Hourly compensation increased continuously throughout the period. Consequently, since the rise in hourly compensation was not offset by improved labor productivity, unit labor costs increased from \* \* \* per ton in 1979 to \* \* \* per ton in January-September 1982, or by \* \* \* percent.

All the production workers at the Lake Charles, La., facility are covered by collective bargaining agreements, with the majority represented by the Lake Charles Metal Trades Council (AFL-CIO).

#### Financial experience of the Olin Corp.

Overall establishment operations.--Net sales of all products produced in the establishment within which sodium nitrate is produced \* \* \* (table 9).

Table 9.--Income-and-loss experience of Olin Corp. on the overall operation of its establishment within which sodium nitrate is produced, 1979-81, interim 1981, and interim 1982

\* \* \* \* \*

\* \* \* \* \*

Cash flow generated from Olin's overall establishment operation is also shown in table 9. \* \* \*.

\* \* \* \* \*

Sodium nitrate operations.--Net sales of sodium nitrate \* \* \* (table 10).

Table 10.--Income-and-loss experience of Olin Corp. on its sodium nitrate operations, 1979-81, interim 1981, and interim 1982

\* \* \* \* \*

Operating income \* \* \*.

Cash flow generated from Olin's sodium nitrate operation \* \* \*.

The profits reported for Olin in this report differ substantially from those reported in connection with the Commission's preliminary investigation. Olin also produces nitric acid, a basic raw material used in the manufacture of sodium nitrate. For internal purposes, Olin uses the cost basis for valuating transfers of nitric acid to its sodium nitrate operation. However, for the purpose of this investigation, and for the preliminary investigation, Olin converted to the market basis of valuating nitric acid transfers. All income-and-loss data shown in this section have been adjusted to reflect transfers of nitric acid at cost. 1/

Investment in productive facilities.--Olin's investment in productive facilities, \* \* \* (table 11).

Table 11.--Olin's investment in facilities used in the production of sodium nitrate, as of Dec. 31, 1979-81, Sept. 30, 1981, and Sept. 30, 1982

\* \* \* \* \*

The relationship of operating income or (loss) to investment in productive facilities, at cost, book value, and replacement value, produces the same trend as when such income is related to net sales.

Capital expenditures.--Capital expenditures for machinery and equipment used in the manufacture of sodium nitrate \* \* \*, as shown in the following tabulation:

	<u>Capital expenditures for machinery and equipment (1,000 dollars)</u>
1979-----	***
1980-----	***
1981-----	***
January-September--	
1981-----	***
1982-----	***

1/ A comparison of the operating income or (loss) of sodium nitrate operations using both methods of valuating nitric acid transfers is shown below (in thousands of dollars):

	<u>Nitric acid at market</u>	<u>Nitric acid at cost</u>
1979-----	***	***
1980-----	***	***
1981-----	***	***
Interim 1981----	***	***
Interim 1982----	***	***



Research and development expenditures.--Olin supplied research and development expenditures relative to its sodium nitrate operation during 1979-81, January-September 1981, and January-September 1982. Such expenditures are presented in the following tabulation:

	<u>Research and development expenditures 1/ (1,000 dollars)</u>
1979-----	***
1980-----	***
1981-----	***
January-September--	
1981-----	***
1982-----	***

1/ Excludes research and development expenses for the development of sodium nitrate salts.

#### The Question of the Causal Relationship Between LTFV Imports and the Alleged Injury

##### U.S. imports and market penetration of imports

The official statistics of the Department of Commerce showing imports of sodium nitrate are presented in table 12. With respect to imports from Chile, Commerce statistics include sodium nitrate that is ultimately exported from the United States to Canada. To adjust for this "overstatement" of U.S. imports in official statistics, data on market penetration are calculated using import statistics provided by CNS.

U.S. imports from Chile, as reported by CNS, increased by \* \* \* percent in 1980 over 1979 and by \* \* \* percent in 1981 over 1980. Imports rose from \* \* \* short tons in 1979 to \* \* \* short tons in 1981 (table 2). U.S. imports declined sharply in January-September 1982, falling \* \* \* percent compared with those in the corresponding period of 1981.

The ratio of U.S. imports of sodium nitrate to apparent U.S. consumption is presented in the following tabulation:

<u>Period</u>	<u>Apparent U.S. consumption (short tons)</u>	<u>U.S. imports (short tons)</u>	<u>Ratio of U.S. imports to apparent U.S. consumption (percent)</u>
1979-----	***	***	***
1980-----	***	***	***
1981-----	***	***	***
Jan.-Sept.--			
1981-----	***	***	***
1982-----	***	***	***

Table 12.--Sodium nitrate: U.S. imports for consumption, by principal sources  
and by quarters, January 1979-December 1982

Period	Quantity				Value 1/				Average unit value			
	Total		Chile		Total		Chile		Total		Chile	
	-----Short tons-----		-----		-----1,000 dollars-----		-----		-----Per short ton-----		-----	
1979:												
Jan.-Mar-----	40,947		40,947	0	3,555		3,555		\$86.82		\$86.82	
Apr.-June-----	32,648		32,648	0	2,600		2,600		79.63		79.63	
July-Sept-----	37,267		37,267	0	3,274		3,274		87.85		87.85	
Oct.-Dec-----	5,468		5,468	0	590		590		107.99		107.99	
Total-----	116,330		116,330	0	10,019		10,019		86.13		86.13	
1980:												
Jan.-Mar-----	57,705		57,604	101	5,088		5,082		88.18		88.23	\$56.49
Apr.-June-----	59,906		59,906	0	5,853		5,853		97.71		97.71	
July-Sept-----	11,403		11,403	0	958		958		84.00		84.00	
Oct.-Dec-----	29,474		29,474	0	3,197		3,197		108.46		108.46	
Total-----	158,488		158,387	101	15,096		15,090		95.25		95.27	56.49
1981:												
Jan.-Mar-----	38,377		38,377	0	3,875		3,875		100.97		100.97	
Apr.-June-----	63,387		63,387	0	6,622		6,622		104.47		104.47	
July-Sept-----	26,117		26,117	0	3,195		3,195		122.32		122.32	
Oct.-Dec-----	31,498		31,498	0	3,832		3,832		121.65		121.65	
Total-----	159,379		159,379	0	17,523		17,523		109.95		109.95	
1982:												
Jan.-Mar-----	33,717		33,717	0	3,804		3,804		112.83		112.83	
Apr.-June-----	49,844		49,844	0	5,393		5,393		108.20		108.20	
July-Sept-----	23,253		23,250	3	2,683		2,681		115.38		115.32	252.00
Oct.-Dec-----	24,191		24,183	8	2,783		2,781		115.04		115.00	248.00
Total-----	131,005		130,994	11	14,663		14,660		111.93		111.91	249.09
1/ Customs import value.												

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

As shown in the tabulation, the ratio of U.S. imports to apparent U.S. consumption increased between 1979 and 1981, rising to \* \* \* percent in 1980 and \* \* \* percent in 1981. However, the ratio fell to \* \* \* percent in January-September 1982.

The ratio of imports of industrial-grade sodium nitrate to apparent consumption of industrial-grade sodium nitrate is presented in the following tabulation:

<u>Period</u>	<u>U.S. consumption (short tons)</u>	<u>U.S. imports (short tons)</u>	<u>Ratio of U.S. imports to apparent U.S. consumption (percent)</u>
1979-----	***	***	***
1980-----	***	***	***
1981-----	***	***	***
Jan.-Sept.--			
1981-----	***	***	***
1982-----	***	***	***

As shown in the tabulation, the ratio of imports of industrial-grade sodium nitrate to apparent U.S. consumption rose from \* \* \* percent in 1979 to \* \* \* percent in 1981. The ratio fell from \* \* \* percent in January-September 1981 to \* \* \* percent in January-September 1982.

As mentioned earlier in this report in the section entitled "Inventories," CNS maintains significant inventories of Chilean sodium nitrate in the United States. The level of these inventories held by CNS has fluctuated sharply during 1978-82. Accordingly, the preceding discussion on U.S. market penetration by imports of sodium nitrate from Chile overstates penetration in periods when imports were placed in inventory and not sold to customers, and understates penetration in periods when inventories were being drawn down. Data on U.S. market penetration based on a comparison of U.S. shipments of Chilean sodium nitrate (i.e., imports adjusted for changes in inventories) are shown as follows:

	<u>U.S. shipments of Chilean sodium nitrate (short tons)</u>	<u>Ratio of U.S. shipments of Chilean sodium nitrate to apparent U.S. consumption (percent)</u>
1979:		
Industrial grade-----	***	***
Agricultural grade-----	***	***
Total-----	***	***
1980:		
Industrial grade-----	***	***
Agricultural grade-----	***	***
Total-----	***	***
1981:		
Industrial grade-----	***	***
Agricultural grade-----	***	***
Total-----	***	***
Jan.-Sept. 1981:		
Industrial grade-----	***	***
Agricultural grade-----	***	***
Total-----	***	***
Jan.-Sept. 1982:		
Industrial grade-----	***	***
Agricultural grade-----	***	***
Total-----	***	***

Olin does not produce a grade of sodium nitrate designated for agricultural use, but does sell off-grade industrial sodium nitrate to local consumers. This off-grade product does not meet the specifications required of Olin's synthetic sodium nitrate and would otherwise be discarded. CNS imports an agricultural-grade sodium nitrate particularly for use as a fertilizer and in effect supplies virtually all U.S. demand for sodium nitrate used in an agricultural capacity.

The replacement of industrial-grade sodium nitrate by the imported agricultural grade is technically feasible in a limited number of industrial applications. CNS sells agricultural-grade sodium nitrate to end users involved in charcoal briquette manufacturing, lead refining, water treatment and ice melting. 1/ Of these, the only industrial application utilizing significant quantities of the lower grade sodium nitrate is the charcoal briquette industry. 2/ Most industrial end users require the consistency in purity level delivered by the industrial-grade sodium nitrate, and are reluctant to introduce any new material or contaminants that could affect the

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1/ Post-hearing brief on behalf of CNS, p. 4.

2/ Transcript of the proceedings of the Commission's hearing, p. 98.

quality of their end product. But in an effort to trim production costs, certain industrial users of sodium nitrate are testing the agricultural grade to see if it would be a cost-effective substitute; and what, if any, alterations in the manufacturing process might be required if such a substitution were to be implemented.

Industrial-grade sodium nitrate offers no comparative advantage over the agricultural grade in its use as a fertilizer. Consequently, considering the significant price difference between the two, the industrial grade would not be expected to be used as a fertilizer unless availability of the agricultural grade became a factor.

### Prices

Price data received from the sole domestic producer, Olin, and the sole importer, CNS, show that prices of sodium nitrate increased less than the increase in prices of related products during January 1979-September 1982. Prices of domestically produced sodium nitrate increased on the average by \* \* \* to \* \* \* percent for the industrial grade. In contrast, the Bureau of Labor Statistics' Producers' Price Index show that prices of chemicals and allied products increased by 86 percent, agricultural chemicals increased by 89 percent, and industrial chemicals increased by 116 percent. Imported sodium nitrate prices increased on the average by \* \* \* to \* \* \* percent for the industrial grade and by \* \* \* to \* \* \* percent for the agricultural grade.

The Commission requested price data from the domestic producer, the importer, and 54 purchasers for both the agricultural and industrial grades shipped in bags and in bulk, on f.o.b. and delivered bases. The Commission staff computed weighted average prices and margins of underselling for the domestic producer and the importer and weighted average prices for purchasers' prices.

### Pricing policies

Both the domestic producer and the importer sell sodium nitrate on the basis of price lists. Olin quotes prices on delivered and f.o.b. bases; CNS quotes prices on an f.o.b. warehouse basis only. Terms of sales are net 30 days from date of invoice. Approximately \* \* \* percent of sales are made under contracts negotiated for future delivery of 3 to 12 months.

Olin and CNS sell the industrial-grade product to distributors and end users. More than \* \* \* percent of sales are made to end users with the balance going to distributors. Olin generally does not compete in the agricultural grade, although it reported sales of this grade during the period of investigation.

The domestic producer has two warehouses, one in Norcross, Ga., and the other in Newark, N.J. The importer has 17 warehouses; 8 are located at ports in the east, west, and gulf areas, and 9 are located in other eastern and southeastern locations. The relative proximity of the importer's warehouses to consumption centers gives it transportation and other locational advantages.

tages--for example, shorter delivery time. However part of its transportation cost advantage is counterbalanced by the cost of keeping and administering these warehouses.

Price is a major factor determining substitution of other products for sodium nitrate as well as the substitution of the industrial grade for the agricultural grade. Most end uses of the industrial grade require a higher degree of purity (over 98 percent) than found in the agricultural grade. Substitution of the industrial grade for the agricultural grade is technically feasible but not economical because of the large price differential.

### Price trends

The domestic producer's prices of sodium nitrate followed a generally upward trend from 1979 through mid-1981. Prices peaked in April-June 1981, then dropped during the remainder of that year. In 1982, prices remained stable through July-September.

Olin's f.o.b. prices of the industrial-grade sodium nitrate in bags increased from \* \* \* to \* \* \* per ton, or by \* \* \* percent, from January 1979 to September 1982; bulk prices increased from \* \* \* to \* \* \* per ton, or by \* \* \* percent (table 13). Prices of the industrial grade delivered in bags increased from \* \* \* to \* \* \* per ton, or by \* \* \* percent; bulk prices increased from \* \* \* to \* \* \* per ton, or by \* \* \* percent. The cost of transportation, reflected in the difference between delivered and f.o.b. prices, ranged from \* \* \* to \* \* \* in 1979 and increased during the remainder of the period to between \* \* \* and \* \* \* per ton of sodium nitrate in bags or in bulk.

Table 13.--Sodium nitrate: Domestic producer's and importer's f.o.b. and delivered average prices of the industrial grade, in bulk and in bags, by quarters, January 1979-September 1982

\* \* \* \* \*

The importer's prices increased from January 1979 to December 1980 but remained relatively stable from January 1981 to September 1982. The importer's f.o.b. prices of the industrial grade in bags increased from \* \* \* to \* \* \*, or by \* \* \* percent, from January 1979 to September 1982; bulk prices increased from \* \* \* to \* \* \*, or by \* \* \* percent. The importer's delivered prices of the industrial grade in bags increased from \* \* \* to \* \* \*, or by \* \* \* percent; bulk prices increased from \* \* \* to \* \* \*, or by \* \* \* percent per ton. The importer's cost of transportation ranged from \* \* \* to \* \* \* per ton. These costs were considerably higher for sodium nitrate in bags than for bulk shipments.

Although Olin does not produce sodium nitrate specifically for the agricultural market, it submitted f.o.b price data of this grade in bulk. These prices ranged from an average of \* \* \* to \* \* \* per ton, well below the

importer's prices for the same product, which ranged from \* \* \* to \* \* \* per ton (table 14). The producer stated that these sales were of "scrappings, sweepings, and runoffs" made to local farmers who load this material on their own trucks.

Table 14.--Sodium nitrate: Domestic producer's and importer's f.o.b. and delivered average prices of the agricultural grade, in bulk and in bags, by quarters, January 1979-September 1982

\* \* \* \* \*

#### Margins of underselling

Imported sodium nitrate of the industrial grade undersold the domestic product on both f.o.b. and delivered bases, in bulk and in bags, during most of the period under investigation (table 15). Margins of underselling based on f.o.b. prices, in bags, ranged from \* \* \* to \* \* \* per ton, or \* \* \* to \* \* \* percent; margins for bulk ranged from \* \* \* to \* \* \* per ton, or \* \* \* to \* \* \* percent. Margins of underselling based on delivered prices, in bags, ranged from \* \* \* to \* \* \* per ton, or \* \* \* to \* \* \* percent in 10 out of the 15 quarters under investigation. In 1980 and January-March 1981 importer's delivered prices were higher than domestic prices by margins ranging from \* \* \* to \* \* \* per ton, or \* \* \* to \* \* \* percent. Margins of underselling for bulk shipments ranged from \* \* \* to \* \* \* per ton, or \* \* \* to \* \* \* percent.

Table 15.--Sodium nitrate: Importer's margins of underselling of the industrial grade, by quarters, January 1979-September 1982

\* \* \* \* \*

#### Purchasers' prices

Usable price data were submitted by 24 purchasers of domestically produced and imported sodium nitrate for the period January 1980-September 1982 (table 16).

Table 16.--Sodium nitrate: Purchasers' weighted average prices of the domestic and imported industrial grade on f.o.b. and delivered bases, in bags and in bulk, January 1980-September 1982

\* \* \* \* \*

Purchasers submitted comparable f.o.b. and delivered price data for the domestically produced and imported industrial grade only. Prices reported by purchasers were generally higher than, but consistent with, prices reported by the domestic producer and the importer. This is probably attributable to the producer and importer reporting transactions to their three largest customers; in such cases prices tend to be lower due to quantity discounts.

Prices paid for purchases of the domestic industrial grade followed an upward trend, rising from January 1980 to September 1982 by \* \* \* percent for f.o.b. shipments in bags and by \* \* \* percent for f.o.b. shipments in bulk, and by \* \* \* percent for delivered shipments in bags and by \* \* \* percent for delivered shipments in bulk. Domestic prices peaked in April-June 1981, then declined in January-March 1982, except for bulk shipments, which rose by \* \* \* per ton. Prices fluctuated during April-September 1982, reaching a lower level than that of October-December 1981, except for delivered bag prices, which rose to match the same price level of October-December.

Prices paid for purchases of imports also trended upward during the period, but at a lower rate. Prices rose by \* \* \* percent for f.o.b. shipments in bags, \* \* \* percent for f.o.b. shipments in bulk, \* \* \* percent for delivered shipments in bags and \* \* \* percent for delivered shipments in bulk. Purchasers' prices of imports peaked in July-September 1981, then declined in January-September 1982 to a level lower than a year earlier.

Effect of the Chilean peso's depreciation on U.S. import prices  
of sodium nitrate

According to the International Monetary Fund, Chile allows its currency to float independently of the U.S. dollar and of any other currencies. The peso depreciated from 35 per dollar in January-March 1979 to 55 in July-September 1982, and to 69 pesos per dollar in October-December 1982. An index of exchange rates of the peso in terms of the U.S. dollar is shown in the following tabulation (January-March 1979=100.0):

Period	1979	1980	1981	1982
January-March-----	100.0	89.2	89.2	89.2
April-June-----	96.4	89.2	89.2	85.7
July-September-----	89.2	89.2	89.2	64.2
October-December-----	89.2	89.2	89.2	<u>1/</u> 50.0

1/ Based on data for October-November.

The value of the peso declined by 11 percent 1/ from January-March to July-September 1979. During this period, Chilean f.o.b. prices of sodium

1/ A decline in the index shows a depreciation of the peso in terms of the U.S. dollar.



nitrate in bags increased by \* \* \* percent and prices in bulk increased by \* \* \* percent. The peso then remained unchanged from July-September 1979 to January-March 1982. During this period, f.o.b. prices of sodium nitrate in bags increased by \* \* \* percent and prices in bulk increased by \* \* \* percent. From April-June to July-September 1982, the value of the peso declined by 25 percent and Chilean prices of bag shipments increased by \* \* \* percent and bulk prices remained unchanged. From January 1979 through September 1982, the peso depreciated in terms of the dollar by 36 percent; 1/ Chilean f.o.b. prices of sodium nitrate shipments in bags increased by \* \* \* percent and prices of shipments in bulk increased by \* \* \* percent. The peso continued to decline in value in October-November 1982 to 50 percent of its January-March 1979 level.

#### Purchasing patterns

Questionnaires were sent to 54 firms that were identified by Olin and/or CNS as purchasers of sodium nitrate during the January 1, 1979, to September 30, 1982, period. Responses were received from 39 of these firms, with 2 indicating that they had not purchased any sodium nitrate during the term specified.

One firm indicated that they bought a food-grade sodium nitrate from Olin. This premium grade was used as a tobacco additive in its proprietary processing formulation. Food grade is a very high purity sodium nitrate produced upon order to a customer's specifications. CNS has not reported any imports or sales of this premium grade.

Four firms reported purchases of agricultural-grade sodium nitrate. All were fertilizer distributors selling to the farm market. Only one distributor reported purchasing from Olin and these were small quantities of off-spec material bought by a local distributor. The remaining three fertilizer distributors purchased sodium nitrate exclusively from CNS.

Sodium nitrate imports from Chile, known as Chilean soda, have been sold in the United States since the 1800's. Chilean soda is a traditional fertilizer preferred by tobacco and certain vegetable, fruit, and nut farmers. An estimated 90 percent of the demand for sodium nitrate fertilizer is concentrated in the States of North Carolina, South Carolina, and Georgia.

The nitrogen ion supplied by sodium nitrate is the element beneficial to crop growth. The level of nitrogen delivered divided by its cost determines a fertilizer's nitrogen value. Both the synthetic sodium nitrate and the lower grade agricultural-grade sodium nitrate from Chile deliver the same level of nitrogen per unit. But the imported material is \* \* \* to \* \* \* per ton less expensive than domestic sodium nitrate. Consequently, the nitrogen value of the imported agricultural grade is superior to Olin's sodium nitrate.

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1/ This depreciation is based on nominal exchange rates unadjusted to Chilean rates of inflation. Chile's consumer prices soared by tenfold from 1975-79, and then increased from an index of 100 in 1979 to 184 in September and to 209 in November 1982.

Purchases of industrial-grade sodium nitrate were reported by 30 firms, of which 25 were end users and 5 were distributors. Each was asked to rate factors, on a scale of 1 (low) to 5 (high), important in their decision to purchase sodium nitrate from a particular supplier. Those factors rated as most important (rating of 5) are presented in the following tabulation:

<u>Factor</u>	<u>Number of times the factor was rated high</u>
Quality of product-----	28
Price-----	22
Alternative source-----	12
Delivery time-----	12
Availability of service-----	7
Proximity of vendor firm-----	5
Financing terms-----	1
U.S. source-----	1

Twenty-two firms reported some purchases of imported industrial grade sodium nitrate. Each of these was asked to list in order of importance the factors that led to the decision to buy imported sodium nitrate. Price was the factor mentioned as being most important by 16 firms, and 6 mentioned quality of the imported material as being the most important factor. Although not rated as being most important, two additional factors--alternative source of supply and vendor proximity--were cited as important.

Twelve firms indicated that they had made some purchases from a higher priced rather than a lower priced source. The factors listed as influencing their decision to pay a higher price are presented in the following tabulation:

<u>Factor</u>	<u>Number of firms indicating this factor</u>
U.S.-produced material-----	6
Ability to deliver immediately-----	3
Maintain alternate source-----	2
Quality of material-----	2
Specification required premium-----	1

Each firm was asked to identify any products that they considered substitutable for the sodium nitrate utilized in their industrial end use. Calcium nitrate and potassium nitrate were each mentioned by three firms. Only one firm reported having made the substitution and this was on a limited basis. Most firms had researched or were conducting research on possible substitutes for sodium nitrate. As would be expected, a substitution for sodium nitrate in an industrial application involves a reformulation or some kind of adjustment to the manufacturing process. Therefore, there is a cost assigned when making such a change and, at present, the price differential of sodium nitrate relative to the price of the substitute has not been sufficient to induce substitution to any significant degree.

Lost sales

The Commission requested the sole U.S. producer to provide information concerning sales lost to imports of sodium nitrate and information citing instances in which it was forced to reduce prices because of competition from Chile.

Olin specified 15 instances during 1980-82 where sales were allegedly lost to Chilean competition. These lost sales involved 13 customers for a total of 8,499 short tons, valued at \$1,728,000. In these alleged lost sales Olin did not cite specific transactions lost to imports, but instead provided estimates of total lost tonnage to individual customers during a given year.

All 13 firms were contacted and summaries of their responses are discussed in the following sections. 1/

\*\*\*.--\*\*\*. Examining the period 1980-82, \*\*\*'s companywide purchases of sodium nitrate decreased from \*\*\* tons in 1980, to \*\*\* tons in 1981, and to \*\*\* tons in 1982, or by 44 percent. Chilean nitrate supplied 67 percent of the total in 1980, 84 percent in 1981, and 82 percent in 1982. The remaining shares of sodium nitrate were supplied by Olin. Price was stated as the primary reason for the rising share being supplied by the Chileans. \*\*\* considered the quality of the imported material equal to Olin's for its purposes, while the imported material undersold the domestic product by \*\*\* percent. Another reason given by \*\*\* influencing its decision to buy imported sodium nitrate was the more flexible delivery terms offered by CNS. At \*\*\*'s \*\*\* plant, the importer agreed to offer frequent light-car loads. This enabled \*\*\* to reduce material loss during storage and other costs associated with maintaining a large inventory.

\*\*\*.--\*\*\*. \*\*\* purchased \*\*\* tons of sodium nitrate in 1980, \*\*\* tons in 1981, and \*\*\* tons in 1982. Chilean nitrate accounted for 64 percent of these purchases in 1980, 75 percent in 1981, and 77 percent in 1982. Dual sourcing and price were stated as the factors influencing its decision to buy imported material. Sodium nitrate from Chile undersold the domestic product by a range of \*\*\* to \*\*\* per ton during 1980-82.

\*\*\*.--\*\*\*. Its total purchases of sodium nitrate declined during the period under investigation from a high of \*\*\* tons in 1979 to \*\*\* tons in 1981, or by 22 percent. This decline in sodium nitrate usage is attributed to decreased demand for explosives due to the recession. During this period, purchases from Olin as a share of total sodium nitrate purchases increased from 56 percent to 59 percent. For January-September 1982, \*\*\* purchased 64 percent of its sodium nitrate from the sole domestic producer.

\*\*\* began buying Chilean nitrate in the mid-1970's when Olin could not supply the total tonnage it required. Ever since then, \*\*\* has continued to purchase a significant share of its sodium nitrate needs from CNS in order to maintain dual sources of supply.

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1/ One firm, a chemicals distributor, did not provide sufficient information with respect to sodium nitrate sourcing to enable a lost-sale analysis.

\*\*\*.--\*\*\*. This firm's purchases of sodium nitrate totaled \*\*\* tons in 1980, declining to \*\*\* tons in 1982, or by 36 percent. During this period, \*\*\* closed one of its \*\*\* plants due to a decline in demand for its end product. CNS supplied an increasing share of \*\*\*'s total sodium nitrate purchases during these years, rising from 70 percent in 1980 to 95 percent in 1982. Price was mentioned as the primary inducement to buying the imported material, with underselling reaching \*\*\* per ton at times. Maintaining dual sourcing is also a factor in purchasing from both Olin and CNS.

\*\*\*.--\*\*\*. During the period 1979 to September 1982, CNS supplied 100 percent of \*\*\*'s sodium nitrate requirements. \*\*\* purchased \*\*\* tons in 1979, \*\*\* tons in 1980, and \*\*\* tons in 1981. Prior to 1979, Olin supplied approximately 50 percent of the sodium nitrate purchased by \*\*\* but thereafter, \*\*\* could not justify paying the \*\*\* per ton differential for the domestic material.

\*\*\*.--\*\*\*. Both the \*\*\* and \*\*\* plants used imported sodium nitrate exclusively during 1979-82. Only the \*\*\* plant reported any purchases of domestic material. Of the \*\*\* tons purchased at this plant in 1979, 54 percent was supplied by Olin. In 1980, Olin supplied 47 percent of the \*\*\* tons required by \*\*\* plant. In 1981 and 1982, \*\*\* did not purchase any domestic sodium nitrate, switching entirely to CNS for its sodium nitrate needs. Price was given as the most important factor influencing \*\*\* to purchase the imported material, with underselling averaging \*\*\* per ton.

\*\*\*.--\*\*\*. Olin supplied 100 percent of the sodium nitrate purchased by \*\*\* in 1979 and 1980, which amounted to \*\*\* and \*\*\* tons, respectively. In 1981, \*\*\* began dual sourcing sodium nitrate, with Olin supplying 60 percent of the \*\*\* tons it required that year. The remaining 40 percent was Chilean sodium nitrate purchased from local distributors. In January-September 1982, Chilean nitrate made up 66 percent of the total sodium nitrate purchased by \*\*\*.

The need for an alternate source of supply was stated as the primary reason for buying imported sodium nitrate in 1981. \*\*\* had experienced some erratic delivery from Olin's Louisiana facility, which was unacceptable to \*\*\*'s production schedule of 24 hours per day, seven days per week. The Chilean material's quality and lower price were also considered to be positive factors influencing increased purchases of imported sodium nitrate.

\*\*\*.--\*\*\*. Olin supplied 100 percent of \*\*\*'s sodium nitrate requirements in 1979 and 1980, which amounted to \*\*\* and \*\*\* tons, respectively. Beginning in 1981, \*\*\* purchased Chilean nitrate from local distributors. Imported sodium nitrate accounted for 20 percent of the \*\*\* tons of sodium nitrate purchased by \*\*\* in 1981. In January-September 1982, \*\*\* bought a total of \*\*\* tons of sodium nitrate, all of it being imported material.

Price was indicated as the primary factor influencing purchases of Chilean nitrate, once \*\*\* concluded that the material's quality was consistent and suitable for its production process. From the price data reported in its questionnaire response, imported sodium nitrate under \$300 the domestic product by \*\*\* to \*\*\* per ton.

\*\*\*.--\*\*\*. Its total purchases of sodium nitrate fluctuated during 1979-82, but averaged \*\*\* tons a year. From 1979 to 1981, Olin supplied 100 percent of the sodium nitrate required by \*\*\*. In 1982, \*\*\* began to source part of its sodium nitrate from CNS. By the end of the year, Olin's share dropped to 85 percent with the remainder supplied by CNS. \*\*\* indicated that price was the primary factor influencing its purchases of the imported material.

\*\*\*.--\*\*\*. The contact at \*\*\* would not provide a historical breakdown by source for their sodium nitrate purchases. He did indicate that they purchase from both Olin and CNS and that the split between domestic and imported sodium nitrate has remained constant during 1979-82. \*\*\* reportedly purchased \*\*\* tons of sodium nitrate a year.

\*\*\*.--\*\*\*. A company spokesman estimated its purchases of sodium nitrate to be about \*\*\* tons a year. Up through 1981, Olin supplied 100 percent of its sodium nitrate purchases. In 1982, \*\*\* sourced sodium nitrate from Olin and from CNS, with Olin's share declining to 90 percent of total purchases. Price was stated as the primary factor in sourcing from CNS, with a \*\*\* to \*\*\* percent price differential reported between domestic and imported nitrate.

\*\*\*.--\*\*\*. They estimated declining purchases of sodium nitrate during 1980-82, from \*\*\* tons in 1980, to \*\*\* tons in 1981, and to \*\*\* tons in 1982. This decline of 71 percent was attributed to decreased customer demand due to the sluggish U.S. economy. Throughout this period of reduced sodium nitrate purchases, the shares supplied by Olin and CNS remained constant.

#### Lost revenues

The Commission asked Olin to provide information citing instances where it had to reduce prices or rollback announced price increases so as to avoid losing sales to competitors selling sodium nitrate.

The petitioner provided 305 instances of alleged price suppression involving 125,638 tons of sodium nitrate during 1981 and 1982. Once again Olin did not cite specific transactions where price suppression took place, but rather provided aggregate tonnage by firm during a given year where prices were lowered in order to secure the sale. While it was difficult to match tonnage and price figures detailed by Olin, it was apparent from purchaser questionnaire data that Olin did reduce delivered prices in many instances during the period under investigation. At times \*\*\* were reportedly absorbed by Olin in order to reduce the delivered price to customers.

In addition, Olin reduced its list price by \*\*\* to \*\*\* per ton in May 1981. Prior to that, Olin had raised its list price \*\*\* times during 1979-81.



APPENDIX A

NOTICE OF INVESTIGATION BY THE INTERNATIONAL  
TRADE COMMISSION

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[Investigation No. 731-TA-91 (Final)]

**Sodium Nitrate From Chile**

**AGENCY:** United States International Trade Commission.

**ACTION:** Institution of final antidumping investigation and scheduling of a hearing to be held in connection with the investigation.

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**EFFECTIVE DATE:** November 9, 1982.

**SUMMARY:** As a result of an affirmative preliminary determination by the U.S. Department of Commerce that there is a reasonable basis to believe or suspect that imports from Chile of sodium nitrate, provided for in item 480.25 of the Tariff Schedules of the United States, are being, or are likely to be, sold in the United States at less than fair value (LTFV) within the meaning of section 731 of the Tariff Act of 1930 (19 U.S.C. 1673), the United States International Trade Commission hereby gives notice of the institution of investigation No. 731-TA-91 (Final) under section 735(b) of the act (19 U.S.C. 1673d(b)) to determine whether 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 of such merchandise. Unless the investigation is extended, the Department of Commerce will make its final dumping determination in the case on or before January 22, 1983, and the Commission will make its final injury determination by March 8, 1983 (19 CFR 207.25).

**FOR FURTHER INFORMATION CONTACT:** Mr. Lawrence Rausch (202-523-0286), Office of Investigations, U.S. International Trade Commission.

**SUPPLEMENTARY INFORMATION:**

*Background.*—On May 19, 1982, the Commission determined, on the basis of the information developed during the course of its preliminary investigation, that there was a reasonable indication that an industry in the United States



was materially injured or threatened with material injury by reason of allegedly LTFV imports of sodium nitrate from Chile. The preliminary investigation was instituted in response to a petition filed on April 12, 1982, by counsel for Olin Corp., the sole domestic producer of sodium nitrate.

**Participation in the investigation.**—Persons wishing to participate in this investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's Rules of Practice and Procedure (19 CFR 201.11, as amended by 47 FR 6189, February 10, 1982), not later than 21 days after the publication of this notice in the Federal Register. Any entry of appearance filed after this date will be referred to the Chairman, who shall determine whether to accept the late entry for good cause shown by the person desiring to file the entry.

Upon the expiration of the period for filing entries of appearance, the Secretary shall prepare a service list containing the names and addresses of all persons, or their representatives, who are parties to the investigation, pursuant to § 201.11(d) of the Commission's rules (19 CFR 201.11(d), as amended by 47 FR 6189, February 10, 1982). Each document filed by a party to this investigation must be served on all other parties to the investigation (as identified by the service list), and a certificate of service must accompany the document. The Secretary will not accept a document for filing without a certificate of service (19 CFR 201.16(c), as amended by 47 FR 33682, August 4, 1982).

**Staff report.**—A public version of the staff report containing preliminary findings of fact in this investigation will be placed in the public record on January 17, 1983, pursuant to § 207.21 of the Commission's rules (19 CFR 207.21).

**Hearing.**—The Commission will hold a hearing in connection with this investigation beginning at 10 a.m. on February 1, 1983, at the U.S. International Trade Commission Building, 701 E Street NW., Washington, D.C. 20436. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission not later than the close of business (5:15 p.m.) on January 6, 1983. All persons desiring to appear at the hearing and make oral presentations should file prehearing briefs and attend a prehearing conference to be held at 10 a.m. on January 11, 1983, in room 117 of the U.S. International Trade Commission Building. The deadline for filing prehearing briefs is January 27, 1983.

Testimony at the public hearing is governed by § 207.23 of the Commission's rules (19 CFR 207.23, as amended by 47 FR 33682, August 4, 1982). This rule requires that testimony be limited to a nonconfidential summary and analysis of material contained in prehearing briefs and to information not available at the time the prehearing brief was submitted. All legal arguments, economic analyses, and factual materials relevant to the public hearing should be included in prehearing briefs in accordance with § 207.22 (19 CFR 207.22, as amended by 47 FR 33682, August 4, 1982). Posthearing briefs must conform with the provisions of section 207.24 (19 CFR 207.24, as amended by 47 FR 6191, February 10, 1982) and must be submitted not later than the close of business on February 9, 1983.

**Written submissions.**—As mentioned, parties to this investigation may file prehearing and posthearing briefs by the dates shown above. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before February 9, 1983. A signed original and fourteen (14) true copies of each submission must be filed with the Secretary to the Commission in accordance with section 201.8 of the Commission's rules (19 CFR 201.8, as amended by 47 FR 6188, February 10, 1982, and 47 FR 13791, April 1, 1982). All written submissions except for confidential business data will be available for public inspection during regular business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary to the Commission.

Any business information for which confidential treatment is desired shall be submitted separately. The envelope and all pages of such submissions must be clearly labeled "Confidential Business Information." Confidential submissions and requests for confidential treatment must conform with the requirements of § 201.6 of the Commission's rules (19 CFR 201.6).

For further information concerning the conduct of the investigation, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, Part 207, Subparts A and C (19 CFR Part 207, as amended by 47 FR 6190, February 10, 1982, and 47 FR 33682, August 4, 1982), and Part 201, Subparts A through E (19 CFR Part 201, as amended by 47 FR 6188, February 10, 1982; 47 FR 13791, April 1, 1982; and 47 FR 33682, August 4, 1982).

This notice is published pursuant to § 207.20 of the Commission's rules (19

CFR 207.20, as amended by 47 FR 6190, February 10, 1982).

By order of the Commission.

Issued: November 23, 1982.

Kenneth R. Mason,

Secretary.

[FR Doc. 82-32817 Filed 11-30-82; 8:45 am]

BILLING CODE 7020-02-M



APPENDIX B

LIST OF WITNESSES APPEARING AT COMMISSION'S HEARING

TENTATIVE CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject : Sodium Nitrate from Chile

Inv. No. : 731-TA-91 (Final)

Date and time: February 1, 1983 - 10:00 a.m.

Sessions were held in connection with the investigation in the Hearing Room of the United States International Trade Commission, 701 E Street, N.W., in Washington.

In support of the petition:

Beveridge & Diamond--Counsel  
Washington, D.C.  
on behalf of

Olin Corporation

Patrick N. Baker, Manager, Commercial Development

Alexander W. Sierck )  
Andrew E. Mishkin )--OF COUNSEL

In opposition to the petition:

Busby, Rehm and Leonard--Counsel  
Washington, D.C.  
on behalf of

Sociedad Quimica y Minera de Chile, S.A. (SQM)  
and Chilean Nitrate Sales Corporation (CNSC)

Rodrigo Duran, President, Chilean Nitrate Sales Corp.

Richard Dean, Assistant General Sales Manager, Chilean Nitrate Sales Corp.

John G. Reilly, Principal, ICF Incorporated

P. Lance Graef, Project Manager, ICF Incorporated

Will E. Leonard )  
Ms. Ruth H. Bale )--OF COUNSEL

APPENDIX C  
COMMERCE'S FINAL LTFV DETERMINATION

**ACTION:** Notice of final determination of sales at less than fair value.

**SUMMARY:** We have determined that sodium nitrate from Chile is being sold in the United States at less than fair value. The U.S. International Trade Commission (ITC) will determine within 45 days of publication of this notice whether these imports are materially injuring, or are threatening to materially injure, a U.S. industry.

**EFFECTIVE DATE:** January 28, 1983.

**FOR FURTHER INFORMATION CONTACT:** Steven Morrison, Office of Investigations, Import Administration, U.S. Department of Commerce, 14th Street and Constitution Ave., NW., Washington, D.C. 20230 (202-377-3965).

**SUPPLEMENTARY INFORMATION:**

**Case History**

On April 12, 1982, we received a petition from Olin Corporation of Stamford, Connecticut, the domestic producer of sodium nitrate. The petition alleged that sodium nitrate from Chile is being, or is likely to be, sold in the United States at less than fair value, and that such sales are materially injuring, or are threatening to materially injure, a United States industry. The petitioner also alleged sales in the home market at prices below the cost of production, and that "critical circumstances," as defined in section 733(e) of the Tariff Act of 1930, as amended (the Act), exist in this case.

After reviewing the petition, we determined it contained sufficient grounds to initiate an antidumping investigation. We notified the ITC of our action and initiated the investigation on May 8, 1982 (47 FR 19569). On June 3, 1982, the ITC subsequently found that there was a reasonable indication that imports of sodium nitrate from Chile were materially injuring or were threatening to materially injure a United States industry (47 FR 24234). Although the ITC treated sodium nitrate as a single product in its preliminary determination, it recognized in the opinion that the respondent made sodium nitrate in two different grades: "In the event that this case returns to the Commission for a final investigation, we will want to explore further the substitutability among grades of sodium nitrate," (47 FR 24234). On August 10, 1982, we published a notice determining that this case was "extraordinarily complicated," as defined in section 733(c) of the Act (47 FR 34612). Therefore, we extended the period for making the preliminary determination

Questions were presented to Sociedad Quimica y Minera de Chile, S.A. (SQM), the respondent in this case, and to its attorney, on May 7, 1982. A response was received on July 2, 1982. SQM and its wholly owned U.S. subsidiary, CNSC, answered supplemental questions on August 18 and September 9, 1982, respectively. Verifications were conducted at the accounting offices of SQM in Antofagasta, Chile from August 30, 1982 through September 3, 1982 and at the headquarters of CNSC in Norfolk, Virginia on September 22, 1982, and September 23, 1982.

On November 8, 1982, we preliminarily determined that sodium nitrate from Chile is being, or is likely to be, sold in the United States at less than fair value (47 FR 51460). In the same publication we also made a negative determination of critical circumstances. Under § 353.40 of the Department's regulations one prerequisite to a finding of critical circumstances is that there have been massive imports of the class or kind of merchandise which is the subject of the investigation over a relatively short period. We checked recent importations of sodium nitrate from Chile through the date of publication of our preliminary determination and they are substantially level to that date. Because there have not been massive imports of the kind of merchandise which is subject to this investigation, we adhere to our negative determination.

In making the preliminary determination we used best evidence available where information in the response pertaining to adjustments was believed by the Department of Commerce to be incomplete, inaccurate or unverified. On November 10, 1982, we asked SQM and CNSC for additional information which would allow us to rely on verified business records. We used as much of their response as we could verify in the remaining time available prior to this final determination. See 19 CFR 353.51(b).

Our notice of preliminary determination provided interested parties with an opportunity to submit views orally and in writing. On December 2, 1982, we held a public hearing.

**Scope of the Investigation**

The following product, manufactured in two grades, is covered by this investigation:

Agricultural grade sodium nitrate (less than 98 percent pure) and industrial grade sodium nitrate (98 percent pure).

**Sodium Nitrate From Chile; Final Determination of Sales at Less Than Fair Value**

**AGENCY:** International Trade Administration

Sodium nitrate is classified under item 480.25 of the TSUS and is duty-free from all sources. SQM manufactures and exports all the sodium exported from Chile to the United States.

Sodium nitrate ( $\text{NaNO}_3$ ) is a white solid which is moderately hygroscopic, i.e., capable of absorbing and retaining moisture, and is very soluble in an aqueous solution. Commercial sodium nitrate is manufactured from natural sources or synthetically. Although natural and synthetic sodium nitrates are produced by completely different processes, their chemical composition is almost identical and, for most users, the two are fungible. There are many applications for sodium nitrate. The chief use of the agricultural grade natural sodium nitrate is as a speciality fertilizer; the chief use of industrial grade is as an oxidizer and densifier in the manufacture of explosives.

Natural sodium nitrate, also known as Chile saltpeter or Chilean nitrate, occurs in nature, usually in deposits associated with sodium chloride, sodium sulfate, and other salts. Although many parts of the world may contain small deposits of natural sodium nitrate, the largest known deposit is located in northern Chile.

The period of investigation for Chilean sodium nitrate sold in the United States is from November 1, 1981 to April 30 1982.

#### Methodology of Fair Value Comparisons

To determine whether sales of the subject merchandise in the United States were made at less than fair value, we compared the United States price with the foreign market value.

#### United States Price

As provided in section 772 of the Act, we used the Exporter's Sales Price (ESP) because SQM sold all of its merchandise to unrelated parties in the U.S. after the date of importation.

We calculated ESP on the basis of f.o.b. U.S. warehouse packed or unpacked prices, as appropriate, to unrelated purchasers. Where appropriate, we made deductions for insurance, ocean freight, inland freight, brokerage charges and discounts. We made additional deductions, where appropriate, for credit costs, warehousing costs, advertising, and general, selling and administrative expenses (such as salesmen's salaries, depreciation of office equipment, telephone, and postage, etc.) incurred by the related subsidiary on U.S. sales, but apportioned them only over reported sales of sodium and potassium nitrate in the United States.

Ocean freight and stevedoring and handling-in charges to the U.S. were aggregated by CNSC for all East and Gulf Coast ports and averaged over all East and Gulf Coast tonnage imported by CNSC. We requested and received actual ocean freight and stevedoring costs for each port and for each shipment. We deducted these actual costs rather than the average costs in our calculation of the U.S. price for each sale. Similarly, we requested and received handling-in charges by port of entry and deducted these rather than an overall average.

In Chile, where nitrate was shipped to coastal ports by vessel, SQM claimed indirect selling expenses for the department which procured ocean transportation and for inventory losses. These department expenses were also applicable to the expense of transporting nitrates to be sold in the United States. We deducted the expenses in the marked in proportion to the ratio of Chilean sales to worldwide sales of the product during the investigative period. We multiplied the same freight department expenses by the ratio of total U.S. sales for the agricultural grade and for the industrial grade in proportion to total world sales in the same period as in the home market.

Inventory losses (Castigo Existencias), which occur when bulk nitrates are dispersed by wind during loading and unloading or are left in the holds of ships or in railcars, were experienced in Chile on the transfer of merchandise from the factory via rail and ocean freight. Inventory losses also occur in bringing the nitrates from the factory to the U.S. market using the same means of transport. In Chile, this loss was applicable only to agricultural grade since industrial grade is sold ex-factory or shipped via truck. In the United States it was applicable to both grades. The United States price includes adjustments for a pro-rata share of the ocean freight department and the inventory losses discussed above as expenses incident to bringing the merchandise from the place of shipment in the country of exportation of the place of delivery in the United States.

CNSC submitted supplementary documentation which revealed it paid for inventory loss expense in addition to the allocated amount. These were deducted pro-rata from the U.S. price for both grades. This will be discussed further in the "Respondents' Comments" section of this notice.

#### Foreign Market Value

The same grades of sodium nitrate were sold in the Chilean and U.S.

markets in approximately the same quantities. We used home market prices to determine foreign market value. The petitioner alleged that sales in the home market were at prices below the cost of producing the two grades of sodium nitrate. We examined production costs for industrial and agricultural grade sodium nitrate which included all appropriate costs for materials, fabrication and general expenses. We included the costs for agricultural grade sodium nitrate produced at the Maria Elena plant, medical and voluntary severance expenses incurred at the Maria Elena and Pedro de Valdivia plants, and the Santiago office which were applicable to sodium nitrate. Financing costs were amended to include a pro rata part of interest expense which accrued from debt and which could not positively be identified with sales. We found there were sufficient sales of agricultural and industrial grade sodium nitrate made at or above cost to use them for price-to-price comparisons with sales in the U.S. market.

For agricultural grade sodium nitrate, home market prices were based on the delivered prices to unrelated purchasers except for one sugar growing cooperative. This firm was owned by the same holding company that owned SQM. However, we included its purchases because it purchased sodium nitrate at then current home market prices for unrelated purchasers. We made deductions where appropriate, for ocean and inland freight, advertising expenses, credit costs, commissions, discounts and rebates, except for warranty rebates. In addition, indirect selling expenses, which were less than the United States indirect selling expenses, were deducted.

For industrial grade sodium nitrate, home market prices were based on delivered or f.o.b. factory prices to unrelated purchasers, as appropriate. We made no deductions from home market prices for advertising, insurance, certain freight costs, credit costs, commissions, and certain indirect expenses. SQM had none of these expenses for this product in the home market. Where appropriate, an adjustment was made for differences in U.S. and home market packaging costs for agricultural and industrial grade sodium nitrate.

SQM identified nine discrete expenses which they requested that we treat as indirect selling expenses in the home market. The expense for data collection and processing (Secretaria, Estadistica Sup.) was not deducted from foreign market value because we did not have

evidence that it was for an expense related to sodium nitrate sales rather than simply a general expense. Seven expenses relating to selling, shipping and technical advice on nitrate applications were included as part of the home market indirect selling expense. The expense for billing and collecting (Gastos Administracion Santiago) was also included as part of the market indirect selling expense.

We did not include home market warranty sales in calculating weighted-average home market prices. We were told that these were sales where the sodium nitrate became unfit for use after it was stored too long and for which rebates in varying amounts were given. These sales did not represent transactions at customary prices in the ordinary course of trade during the investigative period.

The original SQM response said that when industrial grade was sold bagged, it was packaged in 50 kilogram bags. During verification, while checking home market invoices, we found some instances of packaged industrial grade nitrate being sold in 80 kilogram bags. Fifty kilogram bag packaging costs more than 80 kilogram bag packaging. Although we know that some sales are packaged in 50 kilogram bags, we cannot make this distinction with the information available. Therefore, where there are packaging costs (sales other than bulk rates) for the industrial grade in home market, the packaging expenses associated with the 80 kilogram bags have been used in lieu of the greater expenses associated with the 50 kilogram bags.

We did not average the commissions paid by SQM over the volume sold as suggested by SQM in their response. We computed commissions based on verified commission rates paid on agricultural grade sodium nitrate sales for March through October, 1981, for November, 1981 through January, 1982, and for February, 1982 to the end of the home market period.

Bad debts were allowed as an indirect selling expense and not as a circumstance of sale, as claimed by the respondent. Bad debt expenses after February 1, 1982, were disallowed in the preliminary determination because we believed that the risk of debt loss after February 1 was borne exclusively by independent dealers. SQM has subsequently submitted documentation to show that the risk was SQM's both before and after February 1. Accordingly, we allowed for these costs as indirect selling expenses.

After the publication of the preliminary determination, we rechecked our computer print-out and

observed that an allowable credit expense for the agricultural grade sodium nitrate sold in the home market was not accounted for. We notified the parties of the omission and have included this expense in the calculation of the final determination for the agricultural grade.

#### Verification

In accordance with section 778(a) of the Act, we verified the information from SQM and CNSC which was used in this determination. We verified the information received on cost of production, sales, and adjustments claimed. We were granted access to the books and records of both SQM and CNSC. We used standard verification procedures, including examination of accounting records, financial statements and selected documents containing relevant information.

#### Results of Investigation

We made fair value comparisons on all U.S. sales reported by CNSC. For agricultural grade (less than 98 percent pure) sodium nitrate, we have found that the foreign market value exceeded the United States price on 15.6 percent of the tons sold. These margins ranged from 0.96 to 13.4 percent. The overall weighted-average margin on all agricultural grade sales is \$0.45 per short ton.

For industrial grade (98 percent or more pure) sodium nitrate, we have found that the foreign market value exceed the United States price on 100 percent of the tons sold. These margins ranged from 16.1 to 101.7 percent. The overall weighted-average margin on all industrial grade sales is \$39.08 per short ton.

#### Petitioner's Comments

##### Comment 1

The Department of Commerce (DOC) should not have allowed the total amount claimed by SQM as indirect expenses applicable to agronomists in the home market and deducted in calculating the foreign market value. These expenses should be apportioned to sodium nitrate sales throughout the world because the agronomists' information benefits all users of sodium nitrate.

##### DOC Position

We do not have any evidence that application information developed by SQM agronomists in Chile is used outside the home market. Sodium nitrate has been used for agricultural purposes for over a century. Beyond information on application to specific crops in

specific soils, we are not aware of the activities that these agronomists could provide to users of sodium nitrate that have not been developed already.

##### Comment 2

The DOC overstated the U.S. price because it apparently apportioned total general, selling and administrative costs according to a formula proffered by CNSC. This procedure excessively shifted these costs to iodine and away from nitrates.

##### DOC Position

We have not used the proffered formula. We allocated general, selling and administrative expenses to iodine in proportion to total iodine sales by CNSC divided by total sales by CNSC. These sales figures were taken from CNSC's most recent audited financial statement and appear to be most reasonable way of making this allocation from verifiable data.

##### Comment 3

CNSC printout of sales in the United States is unreliable because: (a) reports of a shipment of agricultural grade sodium nitrate from Chile on February 10, 1981 to the United States and sold in the investigative period were omitted from the original submission, (b) a substantial number of sales in the U.S. to unrelated parties preceded the stated date of export from the home market, (c) a significant number of sales in the U.S. were made less than two weeks after the date of export, and (d) there was a resubmission of data which revised, but did not eliminate, the errors alleged above. CNSC's only explanation was that the new submission was based on "lifo layering." This explanation did not satisfactorily explain away the original errors.

##### DOC Position

We agree with the petitioner's observations. The non-confidential version of the most recently submitted printout had export date inconsistencies which were explained in a second resubmission on January 10, 1983, as being derived from the data originally submitted.

On December 10, 1982, respondents' counsel wrote DOC and said in part:

Some of the dates of exportation corresponding to sales of sodium nitrate in the United States were incorrect. Upon review, it was discovered that some sales in the United States correspond to a shipment of agricultural sodium nitrate which was exported from Tocopilla, Chile, on board the M/S Unity, on February 10, 1981.



of investigation of home market sales of agricultural grade.

We will provide a corrected computer printout for the above sales in the United States. The only changes from the original printout will be in the columns for the dates for exportation and importation, the customs entry numbers, and the ocean freight charges. There are no changes to the handling-in charges. Each changed transaction will be identified on the new printout.

Although the changes in the transactions do not appear to have been identified in the new submission, a brief cross check with the initial CNSC submission of July 2, 1982, confirmed that columns of data, other than those mentioned above, were unchanged. However, ocean freight in the new submission was substantially less than the amounts we previously had verified. Furthermore, the data submitted did not have any export dates which preceded the dates originally submitted. In particular, there were no exports listed which were traceable to the M/S Unity of February 10, 1981.

We do not believe that the newly revised U.S. sales submission is more reliable than the original data submission under these circumstances. We are using the originally submitted data of July 2, 1982, for our final computation. The initial submission does represent the best information we have available. Nevertheless, we will need to reexamine the appropriateness of respondent's export date methodology and ocean freight computation if we have to conduct an administrative review in this case under section 751 of the Act.

#### Respondents' Comments

##### Comment 1

DOC incorrectly calculated the packaging costs for industrial grade sodium nitrate sold in the home market.

##### DOC Position

We observed during verification that for the industrial grade sodium nitrate which was packaged and sold in the home market, both higher cost 50 kg. packaging and lower cost 80 kg. packaging were used. The original response claimed that industrial grade packaging was only done in 50 kg. bags. We requested additional invoice documentation to determine which packaged industrial grade sales were in each size bags; SQM did not provide this information. In the absence of documentation on the size of bags used for each packaged industrial grade sodium nitrate sale in the home market, we cannot allow an adjustment for more than the lower cost package.

##### Comment 2

DOC stated in the preliminary determination that CNSC's general selling, administrative and advertising expenses were apportioned over agricultural and industrial grades of sodium nitrate sold in the United States and not over all nitrates sold in the U.S. and Canada (CNSC's territory). This should be corrected to reflect a proper allocation of these expenses over all the merchandise for which they were incurred.

##### DOC Position

During verification, CNSC represented that its shipments records corresponded with sales data for the ESP period. We cross-checked this representation and found it to be incorrect. CNSC recently compiled its overall sales data for the ESP period pursuant to our request. We sampled fifteen invoices of sales of industrial grade sodium nitrate, allegedly to destinations in Canada. Five of the fifteen were to U.S. destinations. Four of the five had not been reported as U.S. sales of sodium nitrate and one of the five was twice counted, once as a U.S. sale and also as a Canadian sale. We have sampled invoices from the more than 3000 sales that were reported as sodium nitrate sales in the United States during the investigative period and found no inconsistencies for the sale date, quantity, and price. Based on this we believe that those U.S. sodium nitrate sales which were reported are, for the most part, complete.

Similarly, we have sampled invoices of potassium nitrate and found them to compare with CNSC reports of its sales of this product substantially accurately. We have included U.S. sales of potassium nitrate in determining the basis over which general, selling and administrative expenses are allocated and for determining the basis over which advertising expense for agricultural grade sodium nitrate is allocated. However, we cannot allow the above-stated expenses to be allocated over a broader base of alleged sales in view of the Canadian sales anomalies found. A more extensive sampling of invoices will be required if we have to conduct an administrative review in this case under section 751 of the Act.

##### Comment 3

DOC should allow an adjustment in the home market for higher commissions attributable to credit sales after February 1, 1982.

##### DOC Position

The information which the respondent requests us to incorporate into our calculations was recently received by DOC. We have verified that these commissions were paid at the stated rate by sampling dealer invoices. We made the adjustment requested.

##### Comment 4

DOC should disregard sales of agricultural grade sodium nitrate sold in the home market between February 10 and March 15, 1981. This group of sales was added to the home market period when CNSC revised the dates of export corresponding to U.S. sales. The time period involved is late summer in Chile when sales of agricultural grade sodium nitrate are slack. The change in weighted-average home market sales is *de minimus*.

##### DOC Position

We have disregarded these sales for reasons stated in our response to Petitioner's Comment 3, not because the hundreds of sales reported for this time period were *de minimus*. Both the originally submitted data and the revised data recently submitted disclose no exports of nitrates to the United States in this interval.

##### Comment 5

DOC incorrectly disallowed adjustments to home market prices for billing and collecting and data collection and processing. These two expenses were as much indirect selling expenses as the seven indirect expenses allowed by DOC. They are a necessary part of the sales activity since they are intimately a part of the marketing activity.

##### DOC Position

DOC regulation 19 CFR 353.15(c) allows "all actual selling expenses incurred in the home market." This does not include general expenses such as data processing. We do not have evidence that data processing was a selling and not a general expense. However, we have allowed for the billing and collecting expenses because of the correspondence between billing and collecting and specific sales in the period.

##### Comment 6

DOC should allow certain bad debt expenses in the home market that were disallowed in the preliminary determination computations. The premise that DOC started from, that the independent dealers of agricultural grade sodium nitrate were getting a

higher commission exclusively for carrying the risk of credit sales after February 1, 1982, was incorrect. SQM carried the same bad debt risk both before and after February 1, 1982. The independent dealers were liable as guarantors to SQM for the bad debt of farmers both before and after February 1, 1982. Official court forms, "protestos", were submitted to show this liability for the 1981 bad debts. SQM has had and still has a bad debt expense for agricultural grade sales on credit even though the debts are guaranteed by the dealers.

#### *DOC Position*

In discussing the sales commission, SQM wrote in its narrative response of July 2, 1982, that the two-tier commission was established after February 1, 1982. "A larger commission is given to the sales agents for sales on credit because the sales agent acts as a guarantor for the payment." We understood this to insulate SQM from bad debt risk after February 1, but in view of the earlier protestos showing that the sales agent acted as a guarantor for payments prior to February 1 as well, we now understand that this risk did not change with the initiation of the two-tier commission system. The bad debt expense incurred after February 1, 1982, has therefore been allowed for the final determination calculation.

#### *Comment 7*

DOC attributed to CNSC a pro-rata share of the expenses of the SQM department which procures ocean transportation for sodium nitrate and this was allocated and deducted from CNSC's selling prices in the United States by DOC. Because they were incurred by SQM and not billed to or paid for by CNSC, these are not expenses which should be deducted from the ESP price under section 772(d)(2)(A) as incidental to bringing the merchandise from the place of shipment in the country of exportation to the place of delivery in the United States. The purpose of this section is to require downward adjustment to the U.S. price for variable charges incurred after the merchandise has left the factory, such as loading charges and ocean freight.

#### *DOC Position*

To the extent that the Servicios Maritimos is acting as the agent of CNSC in arranging for merchandise to be shipped by chartered vessels to the United States, it is absorbing a general expense on CNSC's behalf. In order for CNSC to obtain sodium nitrate, this expense must be incurred somewhere in the related corporate structure. The fact

that SQM elected to consolidate this activity in Chile does not shift the proportional allocation of this expense for shipments to the United States of sodium nitrate. This is a general expense of selling in the United States which is not reported on the books of CNSC. However, it has been deducted as another U.S. selling expense in the valuation of ESP because it is a necessary expense of such U.S. sales.

#### *Comment 8*

DOC should not allocate SQM's inventory loss on a pro-rata basis distribution to the U.S. sales of CNSC. This is a fixed, indirect selling expense which must not be deducted as an ESP circumstance of sale adjustment. The expenses of the exporter and importer are separate and distinct. No pro-rata share of these expenses may be imputed to either exporter or importer. CNSC and its Chilean parent have a contract which limits CNSC's liability to a certain fixed maximum per year for inventory loss. SQM absorbs the excess. By a letter dated December 10, 1982 (at page 6), counsel for SQM informed DOC that there were no inventory losses for the agricultural grade and there were losses in excess of the contract amount for the industrial grade.

#### *DOC Position*

There exists an SQM expense category which we verified for worldwide inventory loss in shipping sodium nitrate from Tocopilla, Chile. Some of this loss occurs for shipping merchandise to other ports in Chile and has been allocated to these shipments. The balance of the fund is attributed to worldwide sales and has been allocated pro-rata to U.S. sales. Expenses for bringing the merchandise to the place of delivery are an adjustment to the U.S. price. Contractual payment arrangements between related companies do not preclude DOC from making an adjustment for these expenses. The expenses which CNSC incurred and paid under the contract are in addition to the inventory loss paid by SQM. The contract expresses this as an annual amount.

We divided this in half because the ESP period was for only six months. We allocated it over both agricultural and industrial grade sodium nitrate because we did not receive enough business records to verify how this contractual expense was incurred.

#### *Comments by Both Parties on Cost of Production Methodology*

##### *Respondents' Comment*

DOC overstated the cost of production because it included certain costs that should have been excluded as extraordinary for medical expenses, short-term production at a high cost mine and voluntary severance pay.

##### *Petitioner's Comment*

DOC understated the cost of production because it failed to account for the unreimbursed housing expenses of workers' families at the mines which is a direct labor cost.

##### *DOC Position*

In viewing the general environment (geographic location, extent of government involvement, labor and corporate practices and conditions) in which SQM operates, the DOC concluded that the production of sodium nitrate from the Maria Elena plant, medical expenses, voluntary severance pay, and workers' housing expenses were ordinary, typical and in some instances ongoing activities of SQM business operations. Additionally, events which were not an ongoing activity had been experienced by the company at least on a number of occasions and, because of the general business environment, might be anticipated by management, to recur in the future. Therefore, since such costs were usual in nature and could be expected to recur in the ordinary course of business, the Department included such expenses in the "cost-of-production."

The petitioner alleges that the cost-of-production had been understated because DOC failed to include unreimbursed housing expenses of workers' families at the mines as a direct labor cost. All costs of housing had been included in the initial calculation of cost-of-production. The costs of housing was not cited in the preliminary determination because the respondent had not specifically requested that such costs be excluded from the calculation of production costs.

#### *Final Determination*

Based on our investigation and in accordance with section 735(a) of the Act, we have reached a final determination that sodium nitrate from Chile is being sold in the United States at less than fair value within the meaning of section 731 of the Act.

**Continuation of Suspension of Liquidation**

Liquidation will continue to be suspended on all entries of sodium nitrate that are entered into the United States, or withdrawn from warehouse, for consumption. The U.S. Customs Service will continue to require the posting of a cash deposit, bond, or other security in the amount of \$0.45 for agricultural grade sodium nitrate and \$39.08 for industrial grade sodium nitrate. The security amounts established in our preliminary determination of November 8, 1982, are no longer in effect.

**ITC Notification**

We are notifying the ITC and making available to it all non-privileged and non-confidential information relating to this determination. We will 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. If the ITC determines that material injury or threat of material injury does not exist, this proceeding will be terminated and all securities posted as a result of the suspension of liquidation will be refunded or cancelled. If the ITC determines that such injury does exist, we will issue an antidumping order directing Customs officers to assess an antidumping duty on sodium nitrate from Chile entered, or withdrawn from warehouse, for consumption after the suspension of liquidation, equal to the amount by which the foreign market value exceeds the United States price. This determination is being published pursuant to section 735(d) of the Act (19 U.S.C. 1673(d)).

Dated: January 21, 1983.

Lawrence J. Brady,

*Assistant Secretary for Trade Administration.*

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