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**LINER SHIPPING ROUTE STUDY**

**FINAL REPORT**

VOLUME XIV

**DOMESTIC SHIPPING COST & RATE ANALYSIS**

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## FOREWORD

The Liner Shipping Route Study (LSRS) and the MARINA and SHIPPERCON STUDY (MARSH Study) were conducted, during 1993-1994, under the Philippine Sea Transport Consultancy (PSTC). The Final Report of the LSRS comprises 14 volumes and the Final Report of the MARSH Study comprises 5 volumes.

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## 1. INTRODUCTION

### Objectives of Report Volume

The Domestic Shipping Costs and Rates Report (DOSCARR) comprises Volumes XIII and XIV of the Liner Shipping Route Study (LSRS) Final Report. Volume XIII presents the study's Domestic Shipping Operating Cost Model (DOSOCOMO), and this Volume XIV presents the LSRS Domestic Shipping Costs and Rates Analysis. DOSOCOMO actually contains two operating cost models - one to allocate actual (reported) costs by type of traffic and voyage leg, and a theoretical cost model to identify what costs should be expected to be for any vessel type and size, operating on any route and to any service schedule. Both of these models are employed for cost analysis in this second volume of DOSCARR.

During 1989-1993, a number of actions were taken by MARINA to deregulate rates for liner shipping services. As a result, in 1994, fares for first and second class passenger services are not regulated, and only the fares for third class passenger services remain regulated. Where cargo services are concerned, the rates for cargo shipments in reefer and ventilated containers are no longer regulated, nor are the rates for livestock shipments. The rates on any type of transit cargo (i.e., the interisland legs of import-export shipments) are also unregulated. The rates that remain regulated are now expressed as "fork tariffs", that permit charging within a range of plus 10 percent to minus 15 percent of reference points that vary with shipment distance and cargo class. Because of these measures already taken by the Maritime Industry Authority (MARINA) toward rate deregulation, the scope of the LSRS cost and rate analysis is less broad than might otherwise have been desirable. In particular, it is not necessary that the LSRS conduct cost and rate analysis for the accommodation of perishable commodities, livestock, and first and second class passengers.

There nevertheless remain several cost and rate issues in regard to Philippine interisland shipping services, and this second volume of DOSCARR is concerned with these issues. Specifically, the objectives of this second volume are to investigate the desirability of:

- ▶ Establishing route-by-route liner shipping service rates for cargo.
- ▶ Establishing freight-all-kinds (f.a.k.) rates for containers, either on an industry-wide basis or on a route-specific basis.
- ▶ Establishing lane-meter rates for vehicle accommodation aboard roll-on roll-off (RORO) ferries.

- ▶ Adjusting, on a one-time-only basis, the levels of third class passenger fares, to eliminate any undercharging there might be in comparison to the costs of accommodation of these passengers.
- ▶ Establishing separate criteria and methodology for the specification of appropriate third class passenger fares for liner shipping and for ferry services.
- ▶ Identifying the conditions under which it is preferable that grains be accommodated in domestic shipping by trampers, and the implications that rationalization of grains accommodation might have for cargo classification.

### Organization of Report Volume

After this brief first chapter, this volume of DOSCARR comprises of five chapters and several annexes, as described below:

- Chapter 2 discusses the possibility of going from industry-wide to route-by-route liner shipping cargo service rates. The concept of the Cargo Services Revenue Potential Index is introduced. Annex A is associated with this discussion, and presents cargo classifications and estimates of the proportions of cargo on various routes which fall within the different MARINA classifications.
- Chapter 3 discusses the logic behind establishing freight-all-kinds (f.a.k.) containerized cargo rates. Annex B is associated with this discussion, and shows the results of the DOSOCOMO computations of the actual costs of accommodating containers, in 1992, on several routes. The theoretical cost model is also employed to identify how costs might be expected to change with changes in vessel capacities, shipment distances, and service schedules.
- Chapter 4 discusses the possibility of going from vehicle-type charges for RORO ferry transport to lane-meter rates. Annex C is associated with this discussion, and presents the results of the DOSOCOMO computations of the actual costs of accommodating vehicles aboard RORO ferries, in 1992, on various routes. Because ferry operator reports submitted to MARINA are often incomplete, it is necessary to also use the theoretical cost model in order to identify lane-meter costs.
- Chapter 5 discusses the costs of passenger accommodation by both ferries and liner shipping, and the possibilities that one-time-only adjustments of third class passenger

fares might be needed for ferry and/or liner services to generate satisfactory returns on the provision of passenger services. Annex D is associated with this discussion, and presents the results of DOSOCOMO computations of the actual costs, in 1992, of accommodating passengers on various liner shipping and ferry routes.

- Chapter 6 discusses the alternative means and costs of the accommodation of unmilled corn. Only the General Santos-Manila route is considered in this case. Annex E presents both the DOSOCOMO computations of the actual 1992 costs of accommodating corn as containerized and non-containerized liner shipping cargo on this route, and the estimated costs of corn accommodation by alternative types of tramper vessel.

PORT OF ZAMBOANGA



*Cargo handling operations at the quay.*



## 2. CARGO ROUTE-BY-ROUTE RATES

### Background

MARINA has been identifying appropriate rates for most liner shipping cargo and for third class passenger services on an industry-wide basis, i.e., by using the average costs of the liner shipping industry for cargo and passenger accommodation. The Interisland Liner Shipping Rate Rationalization Study (SRRS), conducted for MARINA in 1991, identified that the wide variation of operator costs above and below the industry's mean average costs made desirable:

- ▶ The abolishing of the lowest-paying cargo class, called Class C (Basic), and the reclassification of cargoes in that group.
- ▶ The widening of MARINA's fork tariffs for liner services, which were plus and minus 5 percent of reference points at the time of SRRS conduct.
- ▶ The establishment of route-by-route rates for cargo and passenger services.

In 1994, the Class C (Basic) commodity group has been abolished, and MARINA fork tariffs are plus 10 percent and minus 15 percent of reference points. The fork tariffs continue to be identified on an industry-wide basis, however, and no route-specific rates have been identified.

It is especially where cargo services are concerned that route-by-route rates might be desirable. This is mainly due to the following:

- ▶ Whereas passenger volumes are normally in fairly good balance in two directions, the same is not always the case for cargo flows. The unit costs per ton of cargo accommodated tend to rise as capacity utilization rates fall, and large imbalances of traffic in two directions usually mean that high capacity utilization rates cannot be achieved. Thus, the cargo service rates that are appropriate to a route with good flow balance in two directions are probably not appropriate to routes with large imbalances of traffic in two directions.
- ▶ From December 1993, there remain three commodity classifications for the purpose of specification of liner shipping rates for cargo services, viz., Class A, Class B, and Class C, with the commodities formerly constituting Class C (Basic) now reclassified as Class C

cargo. Class A commodities are liable to the highest charges for liner cargo services, over any given shipment distance, and the reference points for Classes B and C are, respectively, 80 percent and 65 percent of the reference point levels for Class A. Routes that have high percentages of Class A and Class B commodities and low percentages of Class C commodities have a higher cargo service earnings potential, other things being equal, than do routes where the reverse is true, i.e., routes where Class C commodities represent high proportions of total cargo traffic.

### **Cargo Services Revenue Potential Index**

When cargo flow imbalances and cargo mixes are considered together, the difference in the cargo services earning potentials among routes can become quite large. To take these differences into account, and to determine whether the identification of route-specific rates for cargo services is desirable, the LSRS is recommending the development and adoption by MARINA's Domestic Shipping Office (DSO) of a Cargo Services Revenue Potential Index (CARSREPI). This index would take into account both the cargo flow imbalance in two directions and the mix of Class A, Class B and Class C commodities. These characteristics of the cargo market would be expressed as two factors:

- **Rate Level Factor (RLF).** This factor takes into account the differences in cargo services earnings potentials among routes that are due to differences in the mixes of Class A, Class B and Class C commodities. The RLF would have a value of 1.0 if all cargo on a route were Class A cargo, and the lowest possible value for the RLF is 0.65, which would occur only if all cargo were Class C cargo. With equal amounts of Class A, Class B and Class C cargo, the RLF becomes 0.817, i.e.,  $(1.0 + 0.8 + 0.65)/3$ .
- **Traffic Imbalance Factor (TIF).** This factor takes into account the differences in cargo services earning potentials among routes that are due to differences in the degree of cargo flow imbalances in two directions. Values of the TIF must fall in the range of 1.0 to 0.5, with the former value representing a perfect balance of cargo flows in two directions, and the latter value representing a perfect imbalance, i.e., all cargo on a route would be moving in one direction only. With half as much cargo in the "light" direction, as in the "heavy" direction, the TIF value would be 0.75, i.e.,  $(1.0 + 0.5)/2$ .

The CARSREPI value for any route would be the RLF x the TIF x

100. Maximum earning potential from cargo services would be when a route had only Class A cargo and there was a perfect balance of cargo flows in two directions, in which case the CARSREPI value would be 100, i.e.,  $1.0 \times 1.0 \times 100$ . The lowest possible CARSREPI value, with all Class C cargo and a perfect imbalance of cargo flows, is 32 (rounded), i.e.,  $0.65 \times 0.5 \times 100$ . From this range of possible CARSREPI values, it is clear that market characteristics inherent to liner shipping routes can conceivably make the earnings potential on some routes three times the earnings potential on other routes, if the same set of cargo rates are applicable to all routes.

The word "conceivably" is underlined above, because realistically the extremes of route imbalance and cargo mixes do not exist on liner routes (although the lower extreme might well apply to some tramp operations, i.e., tramps might accommodate only Class C cargo and operate loaded in just one direction). Although the extremes may not realistically occur, the prevailing fork tariff, in 1994, has a "spread" of only 29 percent (for any given shipment distance and commodity class), and it is realistic to expect that CARSREPI values among routes will vary by a range of more than 29 percent, which would mean that the fork tariffs could not be appropriate for all routes.

If CARSREPI values vary by more than 29 percent among routes, then either of two approaches (or a combination of the two) might be used to ensure that cargo service rates are appropriate to all domestic liner shipping routes:

- The fork tariffs might be further widened. MARINA has had under consideration, during 1991-1994, the possibility of further widening the fork tariffs for cargo. The SRRS recommended that this be done in conjunction with combining Class A and Class B, and also in conjunction with the establishment of f.a.k. rates for cargo accommodation in containers. This might be the appropriate strategy if the DSO learns that CARSREPI values vary over a range that is only slightly wider than 29 percent. A fork tariff of plus 15 percent and minus 20 percent of reference points would have a spread of about 44 percent from the lower limit, i.e.,  $115/80 = 1.44$ , and might be appropriate if all or nearly all routes have CARSREPI values within a similar, fairly narrow range.
- Route-specific fork tariffs could be identified. This approach would be desirable if there are a few to several routes that have CARSREPI values which are far above or below the average CARSREPI value for the liner shipping industry. To the extent that there are routes with CARSREPI values far above the norm, the MARINA-specified cargo service rates would tend to result in overcharging

on the route, from the standpoint that charges would bear little relationship to the costs of cargo traffic accommodation on the route. At the other extreme, shipping operators would find it difficult to operate profitably if the CARSREPI value for a route were far below the norm. In such cases, shippers would be likely to suffer from insufficient services (over time, but not necessarily at all points of time), rather than from high prices for service.

The LSRS was not expected (by its terms of reference) to do cost and rate analysis for the majority of liner shipping routes in the Philippines, and the appropriate CARSREPI value will also not be identified in this report for every shipping route. The CARSREPI concept, however, is used throughout this volume of DOSCARR, and values are identified in the following section of this chapter for a number of the more important liner routes.

The annual reports that shipping operators submit to MARINA do not identify the Class A, B, and C cargo mixes that the operators are accommodating. As a proxy for such information from the operators, the LSRS has converted the cargo classification of the National Statistics Office (NSO) to the MARINA cargo classifications (this is designated by the LSRS as "Commodity Summary Classification A"), and has applied the MARINA commodity groupings to the NSO national sea trade origin-destination (O-D) information for 1991 and 1992. This procedure permits the identification of the Class A, Class B and Class C commodity mixes between every two ports. Since the NSO information includes cargoes accommodated by tramper vessels, however, and the RLFs are intended to apply only to liner shipping cargoes, an effort must be made to extract the tramper cargoes from the port pair totals before deriving the RLFs. In 1994, this extraction is "an inexact science", but accuracy could be achieved, in time, through the use of information already being generated by the Philippine Ports Authority (PPA) on individual vessel loadings at ports.

CARSREPI values do not reflect the extent of route cargo capacity utilization in the "heavy" traffic direction. As the LSRS is proposing CARSREPI, it reflects cargo market characteristics only, and does not attempt to reflect the extent to which the supply of cargo capacity is optimal for the accommodation of heavy direction demand. Shipping operators (and MARINA) can do something about heavy direction oversupply of capacity, i.e., capacity can be calibrated (by the industry, by the individual operators, by MARINA, and by market forces) to bring capacity supply in line with heavy direction demand, but nothing can be done (except in the medium to long term, by the productive sector) about improving the inherent characteristics of the cargo markets on individual shipping routes.

There is less need to consider route earnings potential

differentials where passenger traffic is concerned. The inherent route characteristics are nearly the same for the large majority of routes in the Philippines: passenger flows are nearly in balance in two directions, and third class passengers predominate over passengers traveling by first or second class accommodation. It may be, however, that the operating cost differences between ferry services and liner shipping passenger services justify using different approaches to the identification of third class fares for these two types of services, as discussed in Chapter 5 of this DOSCARR volume.

### 1991-1992 CARSREPI Values

Annex A of this report volume presents the cargo classifications of the National Statistics Office (NSO) and of MARINA (for the purpose of differentiation of applicable liner shipping cargo rates), in Tables A.1 and A.2, respectively. Also presented, as Table A.3, is the Commodity Summary Classification A, which represents the LSRS attempt to group NSO commodity codes into the three classes of MARINA. The attempt to convert NSO commodity groups to MARINA groups was not altogether successful, because many NSO commodities could not be identified in the listing of MARINA, and were therefore left in an "unassigned" group. Summary A was then applied to the NSO 1991 and 1992 cargo flows between port pairs to derive the proportions of cargo on each route which belong to each of the three MARINA classifications. Table A.4 shows these proportions. Table A.5 shows the derivation of RLF and TIF values for ten principal liner shipping routes.

These RLF and TIF values are also shown in Table 1, and CARSREPI values are derived for each route. From these values, the Manila-General Santos route has a low potential for profitability in comparison to the routes connecting Manila to Zamboanga and Cagayan de Oro, if industry-wide cargo rates must apply. Zamboanga is an intermediate port-of-call for the routes being operated between Manila and General Santos, and may be essential to the attainment of cargo service profitability on those routes.

An alternative to going to route-by-route cargo service rates to take into account the wide divergence of CARSREPI values would be the adoption of f.a.k. rates for containerized cargo. This measure would make the RLF factors for containerized cargo all the same, so that only the TIF factors might be significantly different among routes for containerized cargo. The CARSREPI factors for breakbulk cargo might be considerably different than those for total cargo on any given route; especially if f.a.k. rates are instituted for containerized cargo, it would be likely that greater proportions of Class A and Class B cargo would be containerized than the containerized proportions of Class C cargo. In 1994, however, it is not possible to identify separately the CARSREPI

**Table 1**  
**Estimated CARSREPI Values for Ten Principal Liner Routes**

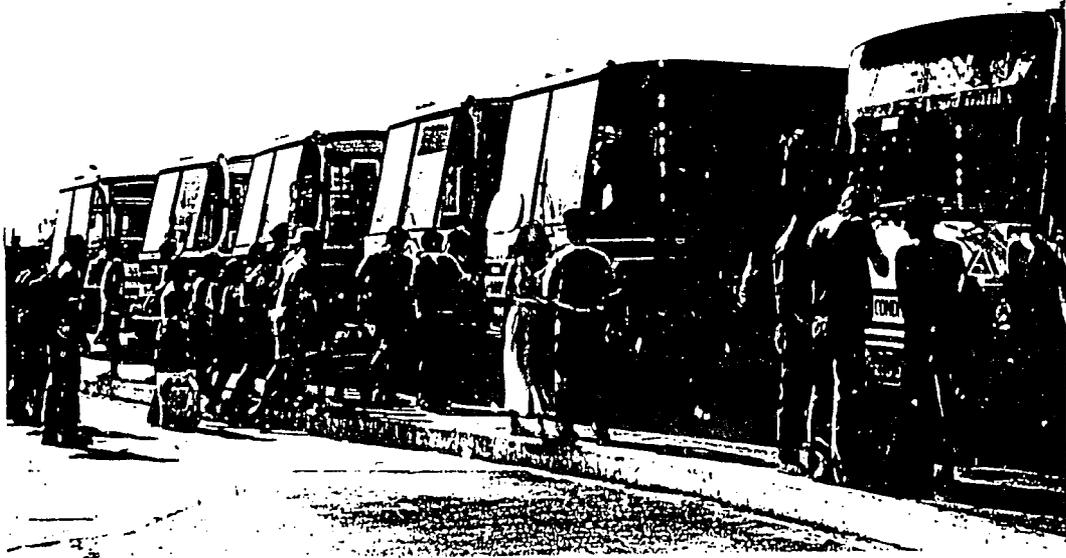
PORT PAIRS (TWO-DIRECTIONAL CARGO FLOWS)		RLF	TIF	CARSREPI
MANILA NORTH HARBOR	TAGBILARAN	0.88	0.58	51.06
MANILA NORTH HARBOR	CEBU	0.79	0.75	59.10
MANILA NORTH HARBOR	SASA WHARF, DAVAO	0.75	0.73	54.72
MANILA NORTH HARBOR	TACLOBAN	0.87	0.57	49.86
MANILA NORTH HARBOR	CAGAYAN DE ORO	0.79	0.95	74.56
MANILA NORTH HARBOR	PUERTO PRINCESA , PALAWAN	0.79	0.84	66.96
MANILA NORTH HARBOR	ILOILO	0.85	0.73	61.43
MANILA NORTH HARBOR	MAKAR WHARF, GEN. SANTOS	0.75	0.54	40.86
MANILA NORTH HARBOR	ZAMBOANGA	0.81	0.94	76.64
CEBU	CAGAYAN DE ORO	0.72	0.67	42.01
CEBU	ILOILO	0.73	0.75	54.90
CEBU	SASA WHARF, DAVAO	0.73	0.59	42.65

Note : Computation of the RLFs and TIFs is presented in Annex A of this report volume, Table A.5.

values for containerized and breakbulk cargo on any route, since no data are available on containerized cargo by commodity type. (It would probably not be difficult to amend the NSO cargo origin-destination compilation procedures so that sub-matrices of liner containerized cargo, empty containers, liner breakbulk cargo, and tramper/industrial cargo could be produced in every year. Without this type of information, it is not possible to accurately estimate CARSREPI values, even for total cargo, much less separately for containerized and breakbulk cargo.)

The possibility that the institution of containerized cargo f.a.k. rates might be desirable is examined in Chapter 3 of this report volume. Should such rates not be instituted, it would probably be desirable to take into account the range of cargo service revenue generation potential among liner shipping routes, and to separately identify appropriate route-by-route cargo rates for those routes with very high and very low CARSREPI values. This would tend to avoid overcharging on the former group of routes, while making it possible for operators to attain profitability on those routes that have both high proportions of low-paying cargo and a large imbalance of cargo flows in two directions.

PORT OF BATANGAS



*Buses lined up at the port to pick-up passengers arriving at Batangas port bound for Manila.*



*Passenger and vehicle traffic upon vessel arrival.*

### 3. CONTAINER F.A.K. RATES

#### Basis for Institution of f.a.k. Rates

Rates for the accommodation of cargo in reefer (refrigerated) containers were deregulated in November 1990, and rates for the accommodation of perishable commodities in ventilated containers were deregulated in December 1993. Rates for transit cargoes, most of which are accommodated in standard (closed) containers, were also deregulated in November 1990, as were the rates for shipments of livestock (whether or not moved in livestock vans). Thus, rates for a significant proportion of interisland movements of containerized cargo are no longer regulated.

In 1991, the SRRS identified that the containerization of domestic cargo was more costly than the accommodation of those same cargoes as breakbulk cargo. To bring the rates of cargo accommodation in containers more closely in line with costs, the SRRS recommended the institution of f.a.k. container rates, with a concomitant widening of the fork tariffs applicable to containerized cargo.

The arguments against the institution of f.a.k. rates for containerized cargo are related to the original objectives that led to the development of a commodity classification system in the first place:

- ▶ The economic objective of the classification system is to maximize the marketing opportunities for low-value commodities, particularly unprocessed agricultural commodities, through the provision of affordable interisland shipping services.
- ▶ The transport objective of the classification system is to maximize total interisland cargo movements, by charging only "what the traffic can bear".

The institution of f.a.k. rates for containerized cargo would not eliminate the possibility of shipping low-value cargo at lower than average rates since: (i) the breakbulk shipment option would still be available to shippers on all routes, although not all operators are willing to accommodate breakbulk cargo, so that the frequency of lower-than-average-cost services would be reduced somewhat; and (ii) the f.a.k. rates would be in the form of fork tariffs (perhaps wider than at present), and it is in the interest of shipping operators to maximize cargo volumes by charging "what the traffic can bear", provided only that the incremental revenue of each container exceeds the incremental cost of its accommodation.

The arguments in favor of instituting f.a.k. rates for containerized cargo are:

- ▶ Costs of accommodating cargo in conventional containers are about the same regardless of the commodities they are loaded with, except to the extent that some commodities can have harmful effects on the containers, such as causing corrosion. With the institution of f.a.k. rates, then, operators tend to treat all containerizable commodities as equally desirable to attract and accommodate. Thus, f.a.k. rates could bring an end to the problem that has plagued shippers of agricultural commodities for many years, viz., that liner shipping operators do not find the accommodation of their cargoes attractive, and may refuse them completely, or, more commonly, give them low priority or impose quotas on the amounts that are accepted per voyage.
- ▶ The liner shipping industry as a whole has little incentive to replace its conventional containers if incremental revenue cannot be earned from the investment, although individual operators may invest in new containers to maintain their market shares. The LSRS has identified in other volumes of this Final Report that large numbers of containers in domestic shipping require near-term replacement because they are currently in unsatisfactory to unserviceable condition. A possible inducement to operators to replace their containers would be the institution of f.a.k. rates that would reflect the costs of containerizing cargo.
- ▶ A policy of continuous pricing of transport services significantly above the cost of providing those services, as when the accommodation of manufactured commodities must subsidize the accommodation of unprocessed commodities, can lead to the development of own-account transport options that will remove the overcharged goods from the commercial transport service market. The Distribution Management Association of the Philippines (DMAP) indicated to the LSRS, in 1993, that it had, as one of its institutional goals, the development of the financial capacity to set up any transport and/or related services its members require, should service inadequacies and/or charges make such measures desirable. One of the DMAP members, San Miguel Corporation (SMC), has greatly reduced its reliance on commercial services by setting up its own tug/barge transport operation and by decentralizing its bottling operations and production of dairy products.
- ▶ Subsidization of liner shipping cargo services for low-paying commodities through the overcharging of other

commodities can also affect the modal split, and some of the demand for interisland air cargo services in the Philippines is probably due to the high liner shipping charges for some commodities, which the commodity classification system makes necessary.

- ▶ Virtually all shippers recognize that they are being provided with a superior service when their goods are containerized versus when they are not; specifically, shippers want their cargoes to be containerized because containerization greatly reduces the pilferage, loss, damage, and spillage of their cargoes that, otherwise, commonly occurs. By the same token that all passengers of transport conveyances recognize the legitimacy of fare increments for air-conditioned comfort, shippers should recognize the legitimacy of cargo charge increments for cargo container accommodation.
- ▶ Cargo vehicles accommodated aboard RORO ferries are effectively being charged f.a.k. rates, since charges are the same regardless of the type of commodity they are loaded with. Thus, there is a precedent for f.a.k. rates in the Philippine domestic shipping sector.

An alternative approach to the institution of f.a.k. rates, for bringing containerization revenues more closely in line with costs, would be to add on an "equipment charge" to regular cargo rates, to take into account the cost of the containers. However, equipment charges would face the difficulty of being without precedent in the Philippines, and, once instituted (if that were finally accomplished), they might prove difficult to get rid of. This is of concern because improvements in container handling and containership annual utilization rates could (and should) lower the costs of containerized cargo accommodation to be competitive with the costs of breakbulk cargo accommodation.

### 1992 Container f.a.k. Rates

The results of using DOSOCOMO to obtain 1992 container accommodation costs on some of the principal routes for containers in the Philippines, are shown in Annex B of this volume. (The model would require 1994 unit prices to identify how the 1992 f.a.k. rates might desirably be adjusted to become appropriate to 1994.) As indicated in Annex B discussion, the average cost figures obtained with the DOSOCOMO actual cost model for several routes are reasonable, as checked out using the theoretical cost model of DOSOCOMO. However, individual vessel costs, used to arrive at the average cost figures, are in many cases considerably above or considerably below the averages, giving a high standard error of the mean, and casting doubt on the computations despite

their reasonableness.

The LSRS considers that the values given by the theoretical cost model provide a satisfactory basis for the determination of appropriate rates provided that f.a.k. rates are instituted. If f.a.k. rates are not instituted, then appropriate rates must take into account the containerized commodity mix on each route.

Based on the theoretical model computations, a containership of 4000 DWT, making a round-trip voyage every ten days between Manila and Davao, and obtaining an average two-directional load factor of 60 percent, would require a container f.a.k. rate of approximately P7,700 per loaded TEU in order to break even (including risk return to vessel ownership, but not to vessel operation), whereas a 6000 DWT containership, with the same load factor and service frequency, would require an f.a.k. rate of only P7,000. Average cost soars if smaller containerships on the order of 2000 DWT are employed to serve the Manila-Davao route.

By increasing voyage frequency to a once-a-week schedule between Manila and Davao (which is the schedule maintained by large passenger/cargo and passenger/container vessels serving the route), average costs per TEU drop by nearly ten percent for both the 4000 DWT and the 6000 DWT vessels, and unit costs decline by slightly more than ten percent for smaller vessels.

Table 2 presents the index values representing the relative costs of container accommodation with changes in vessel size, voyage distance and service frequency. As shown in the table, twice a week operation between Manila and Iloilo reduces TEU accommodation costs by more than 20 percent in comparison to operation only once a week on the route, and accommodation by a 6000 DWT containership, in comparison to a containership of only 2000 DWT, produces cost savings per TEU on the order of 40 percent. The cost comparisons shown make clear the potential for reducing sea transport container accommodation costs through the operation of relatively large containships to a relatively few large, efficient ports. The other side of the equation, of course, is that the average inland transport distance and cost tends to rise as number of seaports utilized reduces. The LSRS has recommended in other volumes of the Final Report that this trade-off be computed for the ports of Panay Island, to ascertain the extent to which the port of Iloilo might satisfactorily serve the island of Panay where international trade and domestic containerized cargo traffic are concerned.

Table 2

**INDEX VALUES OF RELATIVE COST OF LOADED TEU ACCOMMODATION  
BY CONTAINERSHIP, WITH CHANGES IN VESSEL SIZE, VOYAGE  
DISTANCE & FREQUENCY OF SERVICE \***  
(6000 DWT Containership, 340 n.m. distance & 100 voyages/year = 100)

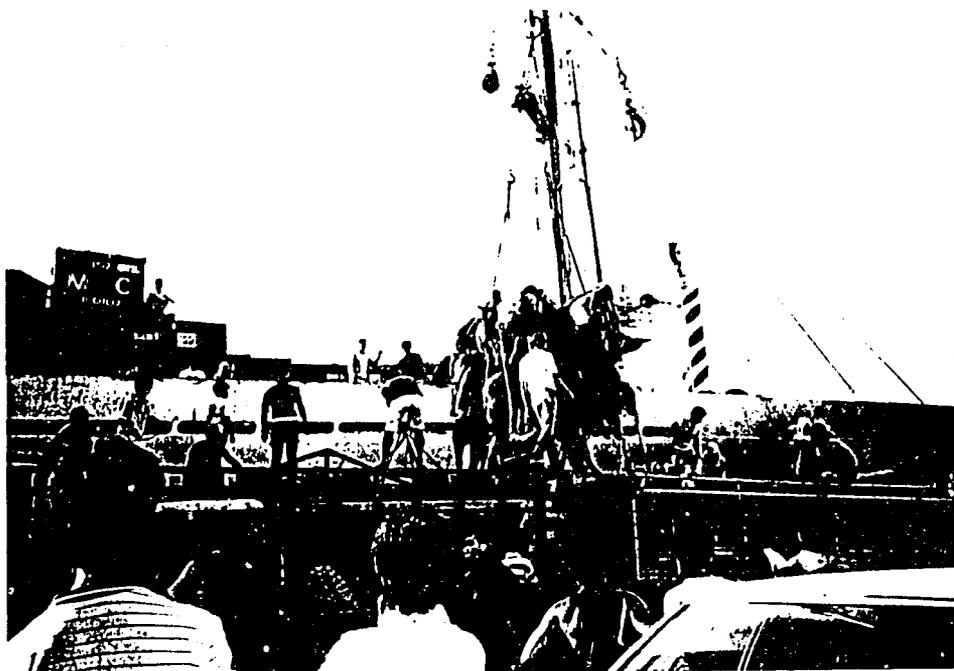
Container Size & Voyage Frequency	Liner Shipping Route & Single-direction Coyage Distance		
	Manila-Iloilo (340 n.m.)	Manila-Cag. de Oro (504 n.m.)	Manila-Davao (842 n.m.)
<b><u>2000 DWT Containership</u></b>			
100 voyages / year	164	220 **	336 ***
50 voyages / year	211	367	383
34 voyages / year	203	311	427
<b><u>4000 DWT Containership</u></b>			
100 voyages / year	110	149 **	230 ***
50 voyages / year	139	178	259
34 voyages / year	166	205	286
<b><u>6000 DWT Containership</u></b>			
100 voyages / year	100	136 **	209 ***
50 voyages / year	126	161	235
34 voyages / year	150	186	259

\* Computed by using the DOSOCOMO theoretical cost model. See Table B.6 of Annex B.

\*\* Service frequency possible only with vessel having cruising speed of 15 knots or above.

\*\*\* Theoretical value only, as service frequency is unrealistic.

DUMAGUETE PORT



#### 4. RORO FERRY LANE-METER RATES

##### Basis for Institution of Lane-Meter Rates

Currently the DSO specifies rates for accommodation of vehicles aboard RORO ferries by type of vehicle. MARINA has been giving consideration to altering this rate identification approach, and setting lane-meter charges that would be applicable to all vehicle types. Some considerations in deciding which approach to adopt in setting rates for vehicle accommodation on RORO ferries are:

- ▶ Cargo movements can derive large benefits from RORO operations, by avoiding handling at two ports, and the time losses and value losses deriving from time spent at ports. Provided that irrational arrastre and stevedoring charges can be avoided, fairly high RORO service charges can be imposed without significantly impeding the growth of cargo vehicle traffic.
- ▶ Passengers traveling by commercial passenger vehicles do not derive large benefits from the accommodation of their vehicles aboard RORO ferries since transfers to other vehicles at the destination ferry terminal involves little time and cost. If commercial passenger vehicles are charged the same amounts as trucks of the same lengths, therefore, the requisite increments to passenger fares may exceed the benefits to passengers.
- ▶ Private passenger vehicles are lighter, lower, and narrower than large vehicles, and the ratio of heavy vehicle length to light vehicle length would tend to understate the proportion of RORO vessel capital and operating costs which derive from the need to accommodate heavy vehicles. A vessel with six lanes appropriate to the accommodation of large vessels might alternatively have eight lanes appropriate to the accommodation of only small vehicles. Similarly, a vessel with a single vehicle deck suitable for the accommodation of high-loaded trucks might alternatively have two vehicle decks satisfactory for only the accommodation of small vehicles.
- ▶ If trucks are charged according to the number of wheels they have, that can have a very undesirable effect on the road network. That is, government policies should tend to encourage the truck owner/operators to acquire trucks and tractors with tandem axles rather than single axles, because of the adverse effects of the latter on road pavements. If the lane-meter approach were adopted, that would largely end the penalty some trucking operators

must currently pay when utilizing RORO ferry services for obtaining goods vehicles with appropriate wheel configurations.

- ▶ The adoption of a lane-meter, or similar, approach to setting RORO ferry charges for vehicle accommodation would largely eliminate some of the current problems with defining a small number of vehicle types. For example, the cargo jeepneys, which constitute one of the principal groups of users of the Calapan-Batangas ferry services, are elongated, with capacities for five or more tons of cargo, and are not what MARINA has in mind when specifying a "jeepney" charge for that RORO ferry route.

### 1992 Ferry Lane-Meter Rates

Annex C of this DOSCARR volume presents the results of using DOSOCOMO to obtain vehicle accommodation costs on two of the principal RORO ferry routes in the Philippines, viz., Calapan-Batangas and Cebu-Bohol. On the basis of these route investigations, estimates can be made of what industry-wide lane-meter rates might have been appropriate in 1992. DOSCARR does not provide any recommendations in regard to these rates, however, not only because of the need to update them for 1994 unit prices, but primarily because of the considerations identified above, i.e., it remains to be determined whether goods and passenger vehicles of the same sizes ought to pay the same RORO ferry accommodation charges, and light vehicle RORO charges determined solely on the basis of relative vehicle length would tend to result in "overcharges" for these vehicles.

MARINA receives virtually no information in the annual reports of RORO ferry operators on the vehicular traffic which they accommodate, and the Philippine Ports Authority (PPA) also does not keep statistics on the numbers of road vehicles that are accommodated by RORO ferries at PPA ports. Most RORO ferries are not even identified as such in MARINA's records. A table in Annex C presents the very limited information from the DSO database on RORO ferry operation, but the information is entirely insufficient for the purposes of computing RORO ferry lane-meter costs and appropriate rates.

By using the DOSOCOMO theoretical cost model, however, it is possible to approximate the RORO ferry costs per lane-meter for any size and capacity of vessel, any route, and any service schedule. These calculations are made in Annex C for the two ferry routes being looked at in this discussion. (The cost analysis done for the Batangas-Calapan route also applies to a third route, viz., Matnog-Allen, which has the same route length.) On the basis of Annex C computations an appropriate lane-meter charge for the Batangas-

Calapan route would have been, in 1992, on the order of P450, inclusive of return to operator investment risk, on the basis of a 60 percent load factor and an operating schedule of two round-trips per day.

Table 3 presents the index values of relative lane-meter costs, with changes in route, RORO ferry size and capacity (lane meters), and service frequency. Five round-trips per day is not actually possible on either route, and neither is four round-trips per day on the Cebu-Tagbilaran route. Three round-trips per day would require 24-hour operation between Cebu and Tagbilaran, but would be more easily possible on the Batangas-Calapan route, and probably should be operated by ferries on that route during the peak season. The important point to be noted, however, is the very sharp reduction in costs that occurs when ferry operation is converted from one round-trip per day to two round-trips per day.

The National Transport Planning Project (NTPP) identified that ferries were generally being underutilized in the Philippines at the beginning of the 1980s, and the LSRS considers that this continues to be the case. On most ferry routes, if ferries are operating only a single round-trip per day, their operating costs are considerably higher, on a per-traffic-unit basis, than they need to be. When MARINA uses a revenue-deficiency approach for determining whether or not ferry operator requested rate increases are justified, a justification might be found, despite the fact that the operators have the potential for appreciably reducing their unit costs by increasing service frequency. Appropriate rates for the Batangas-Calapan route, for example, might desirably be based on two round-trips per day; in 1993-1994, only some of the ferries plying the Batangas-Calapan route, and other routes between Batangas and Mindoro north coast ports, are operating two round-trips per day.

Table 3

**INDEX VALUES OF RELATIVE LANE-METER COST OF RORO FERRIES WITH  
CHANGES IN FERRY SIZE, ROUTE DISTANCE & SERVICE FREQUENCY \***  
(1500 GRT RORO Ferry, 24 n.m. distance & 5 trips/day = 100)

Vessel Size & Service Frequency	Ferry Route & Single-direction Voyage Distance	
	Cebu-Tagbilaran (41n.m.) Cost/lane-meter	Batangas-Calapan (24 n.m.) Cost/lane-meter
<b>1500 GRT (1800 DWT) RORO Ferry</b>		
1 round-trip/day	381	337
2 round-trips/day	248	204
3 round-trips/day	203	159
4 round-trips/day	181	137
5 round-trips/day	167	124
<b>750 GRT (1100 DWT) RORO Ferry</b>		
1 round-trip/day	311	276
2 round-trips/day	201	166
3 round-trips/day	164	129
4 round-trips/day	145	111
5 round-trips/day	134	100

\* Larger vessel has capacity for 700 passengers and has 204 lane-meters to accommodate vehicles, based on a 68-meter LOA and 13.5 meter breadth. The 1992 assessed value was approximately P40 million. Smaller vessel has capacity for 400 passengers and has 165 lane-meters to accommodate vehicles, base on 55-meter LOA and 12.5 meter breadth. Assessed 1992 value was approximately P20 million, which means that capital cost per passenger space and per-lane meter is significantly lower for this vessel than for the larger vessel, which would not always be the case between RORO Ferries of these two sizes. The higher frequencies shown in the table are not actually possible, but are shown only to demonstrate how cost reduction would theoretically continue with increasing service frequency.

## 5. THIRD CLASS PASSENGER RATE ADJUSTMENT

### Basis for Possible Rate Adjustment

It is not certain whether any third class passenger rate adjustment is necessary. The SRRS, in 1991, identified that, except for the accommodation of passengers aboard containerhips (which do not come close to recovering the costs of such accommodation), passengers pay nearly what would be required to cover the full costs of their accommodation. In Annex D and Chapter 5 of this report volume, the LSRS uses DOSOCOMO to estimate the average cost of passenger accommodation on three of the principal routes for liner shipping passenger traffic in the Philippines: Manila-Cebu, Cagayan de Oro-Cebu, and Davao-Manila. The identified average costs of passenger accommodation, in 1992, should not necessarily be lower than 1992 third class rates, since first and second class passengers would be generating incremental revenue in comparison with the hypothetical case that all passengers would travel third class. As a rough estimate of the need for a one-time-only third class passenger rate adjustment, if passenger services are to cover costs, the average costs identified for 1992 would need to be lower than the 1993 passenger rates (instituted in January 1993).

The LSRS examines the possibility that passenger accommodation costs are significantly different between liner shipping services and ferry services, even on a per-nautical-mile basis. On the one hand, liner shipping needs to invest more per passenger to ensure greater comfort and freedom to move about the vessel on long voyages in comparison to short voyages. On the other hand, liner shipping ratios of sea time to in-port time may be higher than the same ratios for many ferry services. To ascertain the cost differential between ferry service and liner shipping for the accommodation of passengers, the LSRS considers four principal ferry routes in the Philippines, viz., Iloilo-Bacolod, Cebu to both Tagbilaran and Ormoc, and Calapan-Batangas. The average costs per passenger-n.m. for these four ferry routes are compared to the average costs obtained for the three liner shipping routes identified above, to determine whether a distinction between ferry services and liner services, other than only distance, needs to be made for the purposes of third class passenger rate identification. (The LSRS has generally found that the liner operators adhere to MARINA fork tariffs for third class passage, but that ferry operators frequently "overcharge"; an objective of the Chapter 5 discussion is to identify whether there is an operating cost basis for the imposition of higher per-nautical-mile charges for ferry services. To whatever extent ferry operators are imposing higher third class passenger fares than what MARINA specifies for ferry routes, the need for higher fares may be due to underutilization of ferries, as suggested in the discussion of lane-meter charges in

### 1992 Passenger Accommodation Costs

In Annex D, the LSRS attempts to identify the average cost of passenger accommodation on the basis of reported actual 1992 costs. Estimates are obtained for the liner shipping routes connecting Cebu to Manila and Cagayan de Oro, and for the Cebu-Ormoc route, which is on the borderline between being a liner shipping or ferry route, but is being operated, during 1992-1994, as a liner route, with service in each direction on alternate days. The data in the DSO database are not satisfactory for obtaining average passenger accommodation costs for routes to Davao, from either Cebu or Manila. Annex C, which discusses RORO ferry operation, provides passenger accommodation cost estimates derived from use of the DOSOCOMO theoretical cost model. The routes for which cost estimates were obtained are discussed below.

**Manila-Cebu Route.** Costs and traffic information for a single operator provide an average cost estimate of P511 per accommodated passenger on the Manila-Cebu route, in 1992. This compares to the MARINA third class fork tariff of P312-P431 for this route, in 1993, and actual fares, in September 1993, of P395 for third class passengers, P435-P480 for second class passengers, and P530-P700 for first class passengers. Although none of the operators (on this or any other route) provide breakdowns of the passengers they accommodate by class, the large majorities of passengers on every route are third class passengers. Thus, the average 1993 fare on the route is unlikely to have reached even 90 percent of the estimated 1992 average cost on the route. More complete cost information (from other operators on the route) and information on the breakdown of passengers by class is needed before a definite conclusion can be reached, however, on the desirability of instituting a one-time-only sizable increase in third class fares.

**Cebu-Ormoc Route.** The cost and traffic information of the operator regularly serving the Cebu-Ormoc route (during 1992-1994) produce a 1992 average passenger accommodation cost of P134. In comparison, the MARINA 1993 third class passenger fork tariff for this route was P62-P80. The LSRS did not obtain from any of its surveys information on the first and second class fares for this route. Based on the relationships of first and second class fares to third class fares on other routes, however, the first class fare was probably in the neighborhood of the average cost level, and the average fare was probably approximately two-thirds of the average cost level. This could argue for a sizable rate increase, except that the operator was providing only single-direction service per day. Operation of a round-trip per day, perhaps with a smaller vessel than that the operator was employing on the route in 1992, would result in a sizable cost reduction per unit of capacity, and

probably a large reduction per traffic unit as well.

**Cebu-Cagayan de Oro Route.** The DSO database contains much more complete information on this route than on most other routes, and an average 1992 passenger accommodation cost of P78 was derived from information provided by four operators on the route. In comparison, MARINA's third class passenger fork tariff for the route was P118-P153, in 1993. In September 1993, most operators were actually charging P145 for third class passage on the route, but one of the operators was charging only P121. Second class fares ranged from P180 to P225, during the same period, and the range of first class fares was P180-P295. On the basis of this information, passenger services being operated between Cebu and Cagayan de Oro appear to have been highly profitable in 1992.

**Cebu-Tagbilaran Route.** The passenger accommodation cost estimates for this route had to be obtained with the DOSOCOMO theoretical cost model, since very little cost or traffic information was available from ferry operator reports. With only a single round-trip operated per day, the cost per accommodated passenger, at a 60 percent average load factor, ranges from P54 to P58, within a ferry size range of 750-1500 GRT. With two round-trips per day, unit costs fall to the range of P31-P35 per accommodated passenger. In comparison, the actual third class fare of both operators on the route, in September 1993, was P50, and first and second class fares were, respectively, P60-P75 and P55-P75. The MARINA 1993 fork tariff for the route permitted a third class fare as high as P53. It appears, therefore, that actual fares and MARINA's fork tariff for third class passage have been in line with unit costs of passenger accommodation on this route (although actual average load factors attained in 1992 and 1993 cannot be identified from information available at MARINA).

**Batangas-Calapan Route.** The passenger accommodation cost, at a 60 percent load factor, is estimated to have been approximately P30, in 1992, provided that two round-trips per day were being operated by vessels on the route. Unit costs rose to the range of P48-P52 per accommodated passenger for those ferries which were performing only one round-trip per day. The MARINA 1993 fork tariff for third class passage between Batangas and Calapan was P23-P30, and operators were charging P30 in May and June 1993, when LSRS passenger surveys on the route were conducted. First class fares at that time ranged from P35 to P60, and no second class fares were identified. Thus, fares and costs appear to be closely aligned on this route, except for those vessels which are underutilized (i.e., perform only one round-trip per day).

Table 4 presents index values of the relative cost levels of accommodating passengers aboard RORO ferries, with changes in vessel size, voyage distance, and frequency of service. The least costs are obtained at unrealistically high service frequencies, but an entirely realistic frequency of three round-trips per day

between Calapan and Batangas would cut unit costs by half in comparison with operating only one round-trip per day, and would even reduce costs in comparison with twice-a-day service by 20 percent or slightly more. The LSRS is recommending in other volumes of this report that ferries on this route be permitted to operate seasonal schedules during periods of peak travel, which would essentially mean going to three-times-a-day service for two to three months, during the March-June period, and at Christmas time.

The Cebu-Tagbilaran route could theoretically be operated three times a day, with round-the-clock ferry operation. In this case, however, the comparison says more for the advantage of the Tubigon terminal over Tagbilaran, since Cebu-Tubigon could easily be operated three times a day by vessels plying that route.

Table 4

INDEX VALUES OF RELATIVE PASSENGER ACCOMMODATION OF RORO FERRIES,  
WITH CHANGES IN FERRY SIZE, ROUTE DISTANCE & SERVICE FREQUENCY \*  
( 150 GRT RORO Ferry, 24 n. m. distance & 5 trips / day = 100 )

Vessel Size & Service Frequency	Ferry Route & Single-direction Voyage Distance	
	Cebu-Tagbilaran (41 n.m.) Cost/passenger	Batangas-Calapan (24 n. m.) Cost/passenger
<b><u>1500 GRT (1800 DWT) RORO Ferry</u></b>		
1 round-trip/day	318	282
2 round-trips/day	206	171
3 round-trips/day	171	129
4 round-trips/day	147	112
5 round-trips/day	141	100
<b><u>750 GRT (1100 DWT) RORO Ferry</u></b>		
1 round-trip/day	341	306
2 round-trips/day	182	182
3 round-trips/day	182	141
4 round-trips/day	159	124
5 round-trips/day	147	112

- \* Larger vessel has capacity for 700 passengers and has 204 lane-meters to accommodate vehicles, based on a 68-meter LOA and 13.5 meter breadth. The 1992 assessed value was approximately P40 million. Smaller vessel has capacity for 400 passengers and has 165 lane-meters to accommodate vehicles, base on 55-meter LOA and 12.5-meter breadth. Assessed 1992 value was approximately P20 million, which means that capital cost per passenger space and per lane-meter is significantly lower for this vessel than for the larger vessel, which would not always be the case between RORO Ferries of these two sizes. The higher frequencies shown in the table are not actually possible, but are shown only to demonstrate how cost reduction would theoretically continue with increasing service frequency.

BATANGAS PORT



## 6. DOMESTIC SHIPPING ACCOMMODATION OF CORN

### Corn Shipping Accommodation Options

There are eight possible options for the accommodation of corn by interisland shipping, of which just six options are available in 1994. These options are identified below, and discussed briefly in the following paragraphs:

- ▶ Movement as bulk cargo by dry bulk carriers.
- ▶ Movement as bulk cargo by liner shipping.
- ▶ Movement as bulk cargo by tug/barge sets.
- ▶ Movement as breakbulk cargo by tug/barge sets.
- ▶ Movement as breakbulk cargo by liner shipping.
- ▶ Movement as liner shipping containerized cargo.
- ▶ Movement by tramp conventional vessel.
- ▶ Movement as goods vehicle cargo aboard RORO ferries.

**Dry Bulk Carrier Accommodation.** This option is not currently available in the Philippines. It is desirable, though not essential, for this option that investment in dry bulk carriers be accompanied by investment in bulk grain terminals at two or more ports, to permit rapid loading and unloading of the dry bulk carriers. The port of Manila is the principal receiving port in the Philippines for both domestic and international shipments of grains, and no bulk grain terminal is yet available at the port. Plans are afoot, however, to provide three such terminals: an ashore terminal at the port, an afloat terminal at the port, and a second ashore terminal at the entrance to Manila Bay. The presence of one or more of these terminals will improve the chances that a bulk grains terminal will be feasible at one or more ports of Mindanao. Cebu and Batangas are the other receiving ports where it may eventually be feasible to provide bulk grain terminals, to receive both international and domestic grain shipments.

**Liner Shipping Bulk Grain Accommodation.** This option is also not available in 1994. An advantage of this option vis-a-vis the dry bulk carrier option is that the liners would also carry other cargo, which would enable them to operate continuously, regardless of the variation in the level of demand for the accommodation of grains. This option might be impossible to implement prior to full deregulation of liner shipping cargo rates, since liner operators will probably not find it worthwhile to convert any portion of

their vessel capacities to be used solely for the accommodation of low-paying commodities.

**Tug/Barge Set Bulk Grain Accommodation.** This option is commonly used at present, although it is not performed efficiently. One aspect of this inefficiency, i.e., the slow unloading of barges, is reportedly considered by consignees to be an advantage of shipment by barge, since it effectively affords them "free" storage for some period (but low equipment utilization must be reflected in the transport service charges). A tug/barge set normally includes two 1200 DWT barges, and can accommodate more than 2,000 tons of corn per voyage. Costs are much higher than they would need to be if barges were loaded and unloaded rapidly, or even if the tugs were permitted to operate with two sets of barges (Philippine maritime regulations require that the tugs remain with their barges).

**Tug/Barge Set Breakbulk Grain Accommodation.** Corn normally arrives at the port of loading in bags. These can be, and sometimes are, loaded on the barges, but because of consignee preference to receive grains in bulk, the bags are usually broken open at the loading site, and their contents dumped into the barges.

**Liner Shipping Breakbulk Grain Accommodation.** On low density grain shipment routes, grains are frequently accommodated as breakbulk cargo aboard liner vessels.

**Liner Shipping Containerized Grain Accommodation.** Large volumes of grain are moved in the Philippines by this mode, primarily because containerized grain shipments are being subsidized by the containerized movement of higher-paying cargoes, as well as by liner breakbulk cargoes.

**Tramp Conventional Vessel Accommodation.** The LSRS has identified some grains accommodation by tramp conventional vessel, including accommodation as containerized cargo.

**Road Goods Vehicle Cargoes.** Where this option exists, it has become the primary means of moving grain. The large rice surpluses of Mindoro are mostly moved by truck and cargo jeepney aboard RORO ferries to the port of Batangas. Eventually, the rice shipments from Panay to Negros and Cebu are likely to be moved in this manner, but high-capacity RORO services do not presently exist either between Panay and Negros or between Negros and Cebu. For longer distance shipments, however, as from Mindanao to Manila, Batangas and Cebu, the RORO ferry option is less attractive.

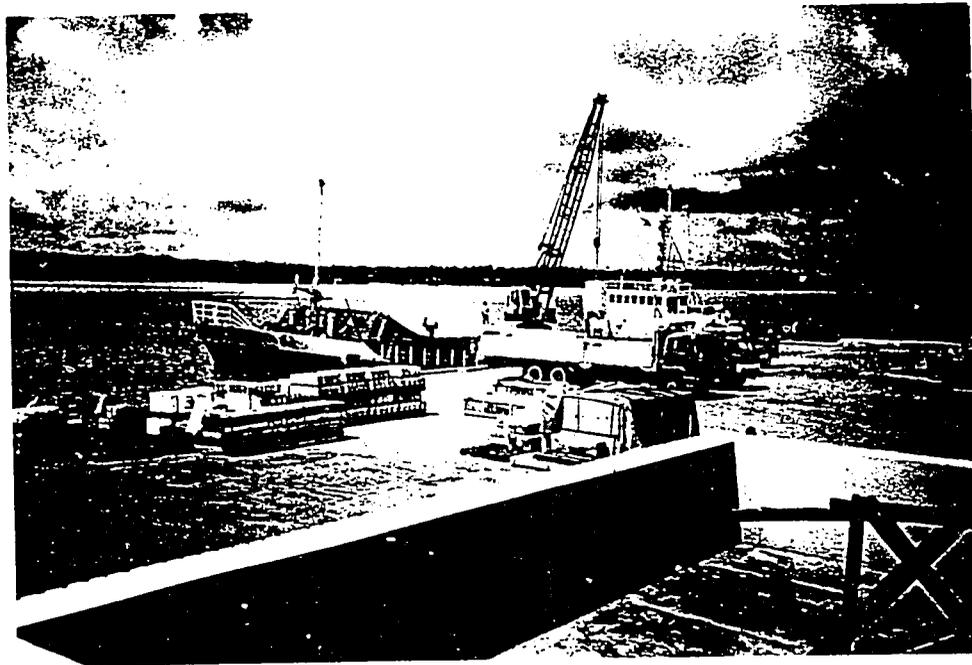
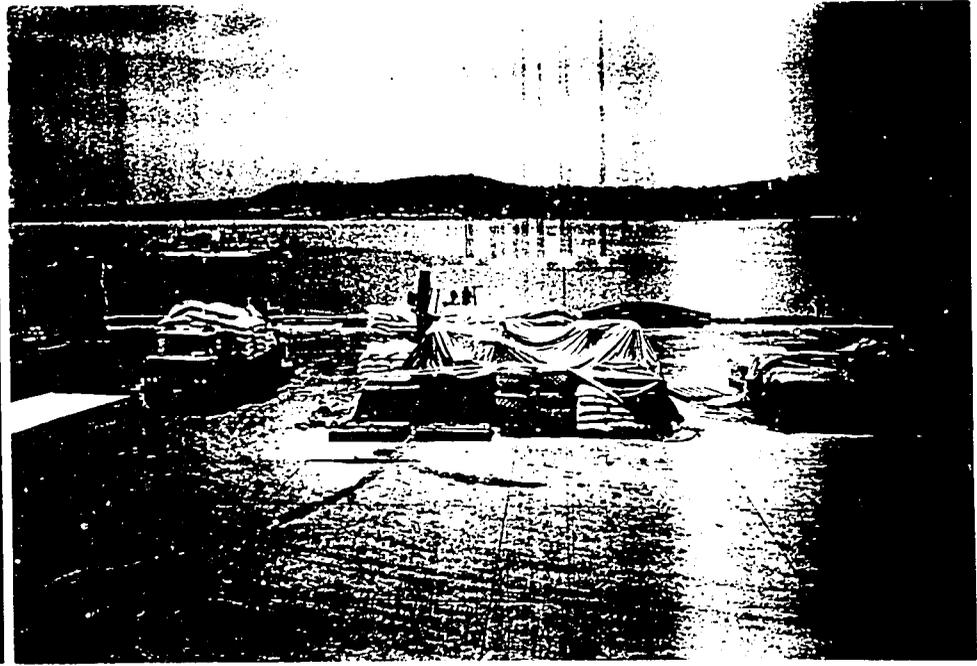
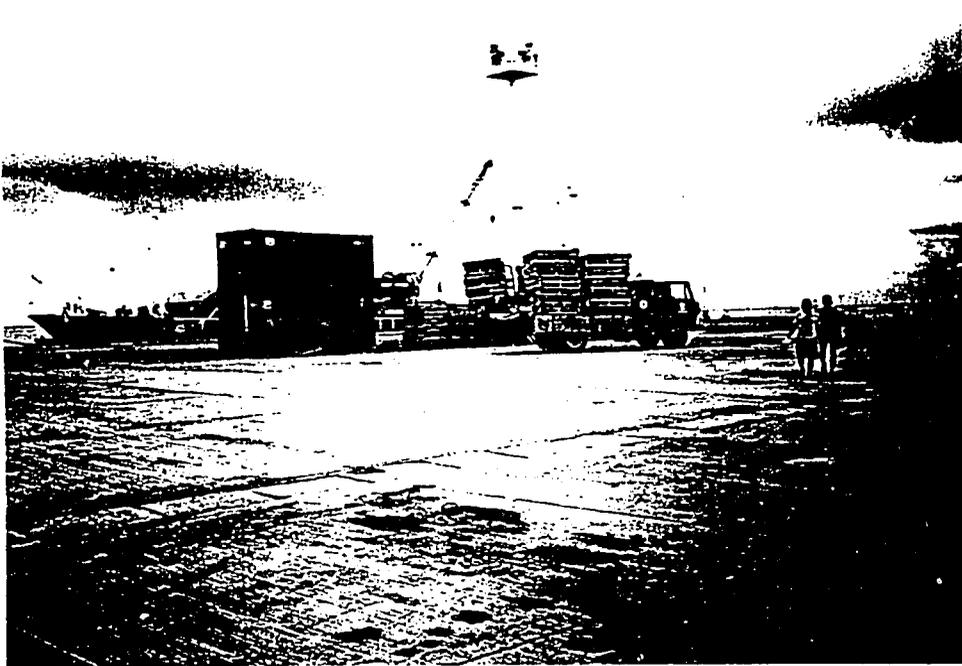
## 1992 Corn Accommodation Costs

The costs discussed in Annex B and in Chapter 3 for containers are appropriate for all types of commodities to be accommodated in conventional containers, and are not discussed again in Chapter 6. Similarly, RORO ferry vehicle accommodation costs are discussed in Chapter 4 and Annex C. Annex E of this report provides a discussion of the cost of dry bulk carrier and tug/barge set accommodation of cargo, and presents the limited information available in the DSO database on the accommodation of breakbulk cargo by liner vessels on the Manila-General Santos route.

The bulk carrier costs presume rapid turnaround, which will only be possible when grains terminals are provided at two or more ports. The tug/barge sets are likely to continue to accommodate most tramper cargo for some period of time, and they are likely to continue to be operated with slow loading/unloading operations and with the tug limited to serving only a single pair of barges. To the extent that backhaul cargoes can be found, the cost per ton accommodated can be lowered, but backhaul cargoes between the same two port pairs are uncommon for trampers. A northbound shipment of corn from General Santos to Manila can be accommodated at a somewhat lower cost, however, if a southbound shipment of rice from Manila or Batangas is carried as far as Zamboanga or even only to Cebu.

Generally tramper charges for the accommodation of grains are somewhat higher than the charges imposed for liner accommodation, even containerized liner accommodation, because of the regulation of rates which liner operators may impose for grain accommodation. Whereas liners can only charge within the respective fork tariffs for Class C cargo between the various port pairs, tramper operators, whose rates are unregulated, frequently charge rates that are comparable to Class B cargo, in the off-peak season, and even higher after the onset of the grains harvest season. In 1993, the LSRS identified that trampers were charging P19-P20 per 50 kg. bag of corn from Polloc to Manila.

MARINA's database contains insufficient information to accurately estimate the cost of breakbulk cargo accommodation between General Santos and Manila, but information provided by one shipping line that was providing general cargo service between Manila and General Santos, in 1992, suggests that average costs varied among vessels within the range of P360 and P820 per ton, with load factors of only 12 to 23 percent on the route.



Tagbilaran Port

# ANNEXES

## ANNEX A

### COMPUTATION OF RELATIVE LINER SHIPPING ROUTE CARGO REVENUE POTENTIALS

This annex presents the first several steps involved with the computation of Cargo Services Revenue Potential Index (CARSREPI) values, to identify the relative potential for earnings among liner shipping routes. The objective of computing CARSREPI values is to identify the extent to which it may be desirable to approve route-specific official cargo service fork tariffs, rather than to derive approved rates on the basis of industry-wide costs, with cargo rate reference points varying only with distance and commodity class.

This annex includes the following tables:

- Table A.1, which is the commodity classification employed by the National Statistics Office (NSO) to develop nation-wide cargo origin-destination information.
- Table A.2, which is the MARINA commodity classification employed for the purpose of specification of appropriate fork tariffs.
- Table A.3, which is the LSRS "commodity classification summary A", representing a not-entirely-successful attempt to place the NSO commodity codes within the MARINA system, in order that it becomes possible to identify the Class A, Class B and Class C commodity mixes between every pair of ports.
- Table A.4, which identifies the proportions of Class A, B, and C cargo on all routes having at least 10,000 tons of cargo in two directions per annum, during 1991-1992, and on which liner shipping Class A, B, and C cargo represented 50 percent or more of total cargo, i.e., excluding commodities normally only carried by tankers or by tramper vessels.
- Table A.5, which shows the computation of the RLF and the TIF for each of ten principal liner shipping routes.

CARSREPI values are shown computed in Table 1 of the main text of this volume for ten principal liner shipping routes.

TABLE A.1

## NSO COMMODITY CLASSIFICATION

NSO NUMBERS	COMMODITY
00111	BOVINE ANIMALS, LIVE, PURE BRED, FOR BREEDING
00119	BOVINE ANIMALS, LIVE, OTHER THAN PURE BRED BREEDING STOCK
00122	GOATS, LIVE
00131	SWINE, LIVE, PURE BRED FOR BREEDING
00139	SWINE, LIVE, OTHER THAN PURE BRED FOR BREEDING
00141	POULTRY, LIVE, WEIGHING NOT MORE THAN 185 GRAMS
00149	POULTRY, LIVE, WEIGHING MORE THAN 185 GRAMS
00151	HORSES, LIVE
00190	LIVE ANIMALS, N.E.S.
01111	MEAT OF BOVINE ANIMALS, FRESH OR CHILLED, WITH BONE-IN
01121	MEAT OF BOVINE ANIMALS, FROZEN, WITH BONE-IN
01213	MEAT OF GOATS, FRESH, CHILLED OR FROZEN
01221	MEAT OF SWINE, FRESH OR CHILLED
01222	MEAT OF SWINE, FROZEN
01231	POULTRY NOT CUT IN PIECES, FRESH OR CHILLED
01232	POULTRY NOT CUT IN PIECES, FROZEN
01234	POULTRY CUTS AND OTHER OFFAL, FRESH OR CHILLED
01235	POULTRY CUTS AND OFFAL (OTHER THAN LIVER), FROZEN
01291	MEAT AND EDIBLE MEAT OFFAL OF RABBITS OR HARES, FRESH, CHILLED
01299	OTHER MEAT AND EDIBLE MEAT OFFAL, FRESH, CHILLED OR FROZEN
01611	HAM, SHOULDERS AND CUTS THEREOF, WITH BONE-IN, OF SWINE, DRIED
01612	BELLIES (STREAKY) AND CUTS THEREOF, OF SWINE, DRIED, SALTED
01619	OTHER MEAT OF SWINE, DRIED, SALTED OR SMOKED
01681	MEAT OF BOVINE ANIMALS, SALTED, IN BRINE, DRIED OR SMOKED
01689	OTHER MEAT AND EDIBLE MEAT OFFAL, OTHER THAN MEAT OF SWINE
01720	SAUSAGES AND SIMILAR PRODUCTS, OF MEAT, MEAT OFFAL OR BLOOD;
01730	LIVER OF ANY ANIMAL, PREPARED OR PRESERVED, N.E.S.
01740	MEAT AND OFFAL (OTHER THAN LIVER), OF POULTRY OF SUBGROUP 001
01750	MEAT AND OFFAL (OTHER THAN LIVER), OF SWINE, PREPARED
01760	MEAT AND OFFAL (OTHER THAN LIVER), OF BOVINE ANIMAL, PREPARED
01790	OTHER PREPARED OR PRESERVED MEAT OR MEAT OFFAL
02211	MILK OF A FAT CONTENT, BY WEIGHT, NOT EXCEEDING 1%
02212	MILK AND CREAM, OF A FAT CONTENT, BY WEIGHT, EXCEEDING 1%
02221	MILK, IN SOLID FORM, OF A FAT CONTENT, BY WEIGHT
02222	MILK AND CREAM, SOLID FORM, OF A FAT CONTENT, BY WEIGHT
02223	MILK AND CREAM, NOT IN SOLID FORM, NOT CONTAINING ADDED SUGAR
02224	MILK AND CREAM, NOT IN SOLID FORM, CONTAINING ADDED SUGAR
02231	YOGURT, WHETHER OR NOT CONCENTRATED OR CONTAINING ADDED SUGAR
02232	BUTTERMILK, CURDLED MILK AND CREAM, KEPHIR AND OTHER FERMENTED
02233	ICE CREAM AND OTHER EDIBLE ICE WHETHER OR NOT CONTAINING COCO
02241	WHEY; WHETHER OR NOT CONCENTRATED OR CONTAINING ADDED SUGAR
02249	PRODUCTS CONSISTING OF NATURAL MILK CONSTITUENTS, N.E.S.
02300	BUTTER AND OTHER FATS OILS DERIVED FROM MILK
02420	PROCESSED CHEESE, NOT GRATED OR POWDERED
02491	FRESH CHEESE (INCLUDING WHEY CHEESE) NOT FERMENTED, AND CURD
02499	OTHER CHEESE
02510	BIRDS' EGGS, IN SHELL, FRESH, PRESERVED OR COOKED
03411	FISH, LIVE
03412	SALMONIDAE, FRESH OR CHILLED (EXCLUDING LIVERS AND ROES)
03413	FLAT FISH, FRESH OR CHILLED (EXCLUDING LIVERS AND ROES)
03414	TUNAS, SKIPJACK OR STRIPE-BELLIED BONITO, FRESH OR CHILLED
03415	HERRINGS, SARDINES, SARDINELLA, BRISLINGS OR SPRATS, FRESH
03416	COD, FRESH OR CHILLED (EXCLUDING LIVERS AND ROES)
03417	MACKEREL (SCOMBRIDS), FRESH OR CHILLED
03418	OTHER FISH, FRESH OR CHILLED (EXCLUDING LIVERS AND ROES)
03513	FISH, DRIED, WHETHER OR NOT SALTED, N.E.S.
03529	OTHER FISH, SALTED BUT NOT DRIED OR SMOKED, AND FISH IN BRINE
03530	FISH (INCLUDING FILLETS), SMOKED, WHETHER OR NOT COOKED
03611	SHRIMPS AND PRAWNS, FROZEN
03619	OTHER CRUSTACEANS, FROZEN
03620	CRUSTACEANS, OTHER THAN FROZEN
03631	OYSTERS, FRESH, CHILLED, FROZEN, DRIED, SALTED OR IN BRINE
03633	CUTTLEFISH, OCTOPUS AND SQUID, FRESH OR CHILLED
03635	OTHER MOLLUSCS AND AQUATIC INVERTEBRATES, FRESH OR CHILLED
03637	CUTTLEFISH, OCTOPUS AND SQUID, FROZEN, DRIED, SALTED

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
03639	OTHER MOLLUSCS AND AQUATIC INVERTEBRATES, FROZEN, DRIED, SALT
03711	SALMON, WHOLE OR IN PIECES, BUT NOT MINCED
03712	HERRINGS, SARDINES, SARDINELLA AND BRISLINGS OR SPRATS, WHOLE
03713	TUNAS, SKIPJACK AND ATLANTIC BONITO, WHOLE OR IN PIECES,
03714	MACKEREL, WHOLE OR IN PIECES, BUT NOT MINCED
03715	OTHER FISH, WHOLE OR IN PIECES, BUT NOT MINCED
03716	OTHER FISH, PREPARED OR PRESERVED, N.E.S.
03721	CRUSTACEANS, PREPARED OR PRESERVED, N.E.S.
03722	MOLLUSCS AND OTHER AQUATIC INVERTEBRATES, PREPARED OR PRESERVED
04120	OTHER WHEAT (INCLUDING SPELT) AND MESLIN, UNMILLED
04210	RICE IN THE HUSK (PADDY OR ROUGH RICE)
04231	RICE, SEMI-MILLED OR WHOLLY MILLED, WHETHER OR NOT POLISHED,
04410	MAIZE SEED (NOT INCLUDING SWEET CORN), UNMILLED
04490	OTHER MAIZE (NOT INCLUDING SWEET CORN), UNMILLED
04520	OATS, UNMILLED
04530	GRAIN SORGHUM, UNMILLED
04592	BUCKWHEAT, UNMILLED
04593	CANARY SEED, UNMILLED
04599	CEREALS, UNMILLED, N.E.S.
04610	FLOUR OF WHEAT OR OF MESLIN
04620	GROATS, MEAL AND PELLETS, OF WHEAT
04721	GROATS AND MEAL OF MAIZE (CORN)
04722	GROATS AND MEAL OF OTHER CEREALS
04729	PELLETS OF CEREALS OTHER THAN WHEAT
04811	PREPARED FOODS OBTAINED BY THE SWELLING OR ROASTING OF CEREAL
04812	CEREALS OTHER THAN MAIZE (CORN), IN GRAIN FORM, PRE-COOKED
04813	OTHER ROLLED OR FLAKED CEREAL GRAINS, EXCEPT RICE OF SUBGROUP
04814	OTHER WORKED CEREAL GRAINS (E.G., HULLED, PEARLED, CLIPPED
04815	GERM OF CEREALS, WHOLE, ROLLED, FLAKED OR GROUND
04820	MALT WHETHER OR NOT ROASTED (INCLUDING MALT FLOUR)
04830	MACARONI, SPAGHETTI AND SIMILAR PRODUCTS (PASTA UNCOOKED.)
04841	CRISPBREAD, RUSKS, TOASTED BREAD AND SIMILAR PRODUCTS
04842	SWEET BISCUITS, WAFFLES AND WAFERS, GINGERBREAD AND THE LIKE
04849	OTHER BREAD, PASTRY, CAKES, BISCUITS AND OTHER BAKERS' WARES,
04850	MIXES AND DOUGHS FOR THE PREPARATION OF BAKERS' WARES OF SUBGROUP
05410	POTATOES, FRESH OR CHILLED (NOT INCLUDING SWEET POTATOES)
05421	PEAS, DRIED, SHELLED, WHETHER OR NOT SKINNED OR SPLIT
05422	CHICKPEAS (GARBANZOS), DRIED, SHELLED, WHETHER OR NOT SKINNED
05423	BEANS, OTHER THAN BROAD BEANS AND HORSE BEANS, DRIED, SHELLED
05440	TOMATOES, FRESH OR CHILLED
05451	ONIONS AND SHALLOTS, FRESH OR CHILLED
05452	GARLIC, LEEKS AND OTHER ALLIACEOUS VEGETABLES, FRESH OR CHILLED
05453	CABBAGE AND SIMILAR EDIBLE BRASSICAS, FRESH OR CHILLED
05454	LETTUCE AND CHICORY (INCLUDING ENDIVE), FRESH OR CHILLED
05455	CARROTS, TURNIPS, SALAD BEETROOT, SALSIFY, CELERIAC, RADISHES
05456	CUCUMBERS AND GHERKINS, FRESH OR CHILLED
05457	LEGUMINOUS VEGETABLES, FRESH OR CHILLED
05458	MUSHROOMS AND TRUFFLES, FRESH OR CHILLED
05459	OTHER VEGETABLES, FRESH OR CHILLED
05481	MANIOC (CASSAVA), FRESH OR DRIED, WHETHER OR NOT SLICED
05483	ARROWROOT, SALEP, JERUSALEM ARTICHOKEs, SWEET POTATOES
05488	SUGARCANE, FRESH OR DRIED, WHETHER OR NOT GROUND
05489	VEGETABLE PRODUCTS OF A KIND USED CHIEFLY FOR HUMAN FOODS
05642	FLAKES OF POTATO
05645	TAPIOCA AND SUBSTITUTE THEREFOR PREPARED FROM STARCH
05646	FLOUR AND MEAL OF THE DRIED LEGUMINOUS VEGETABLES OF SUBGROUP
05647	FLOUR AND MEAL OF SAGO, ROOTS OR TUBERS OF ITEMS 054.81
05648	FLOUR, MEAL AND POWDER OF THE PRODUCTS OF ANY OF THE GROUP 05
05669	OTHER VEGETABLES AND MIXTURES OF VEGETABLES, PREPARED OR PRESERVED
05671	VEGETABLES, FRUIT, NUTS AND OTHER EDIBLE PARTS OF PLANTS
05672	TOMATOES, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR
05673	TOMATOES, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR
05674	MUSHROOMS AND TRUFFLES, PREPARED OR PRESERVED
05676	POTATOES, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR
05677	SWEET CORN, PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR
05679	OTHER VEGETABLES, PREPARED OR PRESERVED
05711	ORANGES, FRESH OR DRIED

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
05721	LEMONS AND LIMES, FRESH OR DRIED
05729	CITRUS FRUIT, N.E.S., FRESH OR DRIED
05730	BANANAS (INCLUDING PLANTAINS), FRESH OR DRIED
05740	APPLES, FRESH
05751	GRAPES, FRESH
05752	GRAPES, DRIED (E.G., RAISINS)
05771	COCONUTS, FRESH OR DRIED, WHETHER OR NOT SHELLED OR PEELED
0J773	CASHEW NUTS, FRESH OR DRIED, WHETHER OR NOT SHELLED OR PEELED
0J779	EDIBLE NUTS (EXCLUDING MIXTURES), FRESH OR DRIED, N.E.S.,
0S791	MELONS (INCLUDING WATER MELONS) AND PAPAWS (PAPAYAS), FRESH
05795	PINEAPPLES, FRESH OR DRIED
05797	AVOCADOS, GUAVAS, MANGOES AND MANGOSTEENS, FRESH OR DRIED
05798	OTHER FRESH FRUIT
05799	FRUIT, DRIED, N.E.S., AND MIXTURES, N.E.S., OF NUTS OR DRIED
05810	JAMS, FRUIT JELLIES, MARMALADES, FRUIT OR NUT PUREE AND FRUIT
05821	FRUIT AND NUTS PROVISIONALLY PRESERVED (E.G., BY SULPHUR DIOX
05892	NUTS, GROUNDNUTS AND OTHER SEEDS, PREPARED OR PRESERVED, N.E.
05893	PINEAPPLES, OTHERWISE PREPARED OR PRESERVED, N.E.S.,
05894	CITRUS FRUIT, OTHERWISE PREPARED OR PRESERVED, N.E.S.,
05896	FRUITS OR EDIBLE PARTS OF PLANTS, PREPARED OR PRESERVED, N.E.
05897	MIXTURES OF FRUITS OR OTHER EDIBLE PARTS OF PLANTS, PREPARED
05910	ORANGE JUICE, UNFERMENTED AND NOT CONTAINING ADDED SPIRIT
05930	JUICE OF ANY OTHER SINGLE CITRUS FRUIT
05991	PINEAPPLE JUICE
05992	TOMATO JUICE
05993	GRAPE JUICE (INCLUDING GRAPE MUST)
05994	APPLE JUICE
05995	JUICE OF ANY SINGLE FRUIT OR VEGETABLE
05996	MIXTURES OF FRUIT OR VEGETABLE JUICES
06111	CANE SUGAR, RAW, NOT CONTAINING ADDED FLAVORING OR COLORING
06112	BEEF SUGAR, RAW, NOT CONTAINING ADDED FLAVORING OR COLORING
06121	OTHER BEET OR CANE SUGAR AND CHEMICALLY PURE SUCROSE IN SOLID
06129	OTHER BEET OR CANE SUGAR AND CHEMICALLY PURE SUCROSE IN SOLID
06151	CANE MOLASSES
06159	BEEF SUGAR MOLASSES AND OTHER MOLASSES (E.G., CORN MOLASSES)
06193	GLUCOSE (DEXTRORSE) AND GLUCOSE SYRUP, NOT CONTAINING FRUCTOSE
06194	GLUCOSE AND GLUCOSE SYRUP, CONTAINING, IN THE DRY STATE
06199	OTHER SUGARS IN SOLID FORM (INCLUDING INVERT SUGAR); SUGAR
06221	CHEWING GUM, WHETHER OR NOT SUGAR COATED
06229	OTHER SUGAR CONFECTIONERY (INCLUDING WHITE CHOCOLATE), NOT COATED
07111	COFFEE, NOT ROASTED, NOT DECAFFEINATED
07112	COFFEE, NOT ROASTED, DECAFFEINATED
07113	COFFEE HUSKS AND SKINS
07120	COFFEE, ROASTED
07131	EXTRACTS, ESSENCES AND CONCENTRATES OF COFFEE AND PREPARATION
07210	COCOA BEANS, WHOLE OR BROKEN, RAW OR ROASTED
07220	COCOA POWDER NOT CONTAINING ADDED SUGAR OR OTHER SWEETENING
07310	COCOA POWDER CONTAINING ADDED SUGAR OR OTHER SWEETENING
07330	OTHER FOOD PREPARATIONS CONTAINING COCOA, IN BLOCKS, SLABS
07390	FOOD PREPARATIONS CONTAINING COCOA, N.E.S.
07411	GREEN TEA (NOT FERMENTED) IN IMMEDIATE PACKINGS OF A CONTENT
07413	BLACK TEA (FERMENTED) AND PARTLY FERMENTED TEA
07432	EXTRACTS, ESSENCES AND CONCENTRATES OF TEA OR MATE, AND PREP
07511	PEPPER NEITHER CRUSHED OR GROUND
07512	PEPPER, CRUSHED OR GROUND
07521	VANILLA
07527	GINGER (EXCLUDING GINGER PRESERVED IN SUGAR OR CONSERVED
07528	THYME, SAFFRON AND BAY LEAVES
07529	OTHER SPICES; MIXTURES OF TWO OR MORE OF THE PRODUCTS OF DIFF
08111	CEREAL STRAW AND HUSKS, UNPREPARED, WHETHER OR NOT CHOPPED
08119	VEGETABLE RESIDUES AND BY-PRODUCTS, VEGETABLE MATERIALS
08124	BRAN, SHARPS AND OTHER RESIDUES, WHETHER OR NOT IN THE FORM
08125	BRAN, SHARPS AND OTHER RESIDUES, WHETHER OR NOT IN THE FORM
08131	OIL-CAKE AND OTHER SOLID RESIDUES (EXCEPT DREGS)
08137	OIL-CAKE AND OTHER SOLID RESIDUES (EXCEPT DREGS)
08139	OIL-CAKE AND OTHER SOLID RESIDUES (EXCEPT DREGS)
08141	FLOURS, MEALS AND PELLETS, OF MEAT OR MEAT OFFAL

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
08142	FLOURS, MEALS AND PELLETS, OF FISH OR OF CRUSTACEANS
08151	RESIDUES OF STARCH MANUFACTURE AND SIMILAR RESIDUES
08152	BEET-PULP, BAGASSE AND OTHER WASTE OF SUGAR MANUFACTURE
08195	DOG OR CAT FOOD, PUT UP FOR RETAIL SALE
08199	PREPARATIONS OF A KIND USED FOR ANIMAL FOOD, N.E.S.
09101	MARGARINE, EXCLUDING LIQUID MARGARINE
09109	OTHER MARGARINE; EDIBLE MIXTURES OR PREPARATIONS OF ANIMAL
09841	SOYA SAUCE
09842	TOMATO KETCHUP AND OTHER TOMATO SAUCES
09844	VINEGAR AND SUBSTITUTES FOR VINEGAR OBTAINED FROM ACETIC ACID
09849	OTHER SAUCES AND PREPARATION THEREFOR; MIXED CONDIMENTS
09850	SOUPS AND BROTHS AND PREPARATIONS THEREFOR THEREFOR
09860	YEASTS (ACTIVE OR INACTIVE); OTHER SINGLE-CELL MICRO-ORGANISM
09892	EDIBLE PRODUCTS OF ANIMAL ORIGIN, N.E.S.
09893	FOOD PREPARATIONS FOR INFANT USE, PUT UP FOR RETAIL SALE
09894	MALT EXTRACT; FOOD PREPARATIONS OF FLOUR, MEAL, STARCH OR MAL
09899	OTHER FOOD PREPARATIONS, N.E.S.
11101	WATERS (INCLUDING NATURAL OR ARTIFICIAL MINERAL WATERS
11102	WATERS (INCLUDING MINERAL WATERS AND AERATED WATERS)
11220	FERMENTED BEVERAGES, N.E.S. (E.G., CIDER, PERRY AND MEAD)
11230	BEER MADE FROM MALT (INCLUDING ALE, STOUT AND PORTER)
11241	WHISKY
11242	SPIRITS OBTAINED BY DISTILLING GRAPE WINE OR GRAPE MARC WINE
11243	COMPOUND ALCOHOLIC PREPARATIONS OF A KIND USED FOR THE MANUFACTURE
11244	RUM AND TAFIA
11245	GIN AND GENEVA
11249	SPIRITS AND DISTILLED ALCOHOLIC BEVERAGES, N.E.S. BEVERAGES,
12110	TOBACCO, UNMANUFACTURED, NOT STEMMED/STRIPPED STEMMED/STRIPPE
12120	TOBACCO, UNMANUFACTURED, WHOLLY OR PARTLY STEMMED/ STRIPPED P
12130	TOBACCO REFUSE
12220	CIGARETTES CONTAINING TOBACCO
12231	CIGARS, CHEROOTS, CIGARILLOS AND CIGARETTES, OF TOBACCO SUBST
12239	MANUFACTURED TOBACCO, EXTRACT AND ESSENCES, N.E.S. ESSENCES,
21111	HIDES AND SKINS (EXCLUDING THOSE OF SUBGROUP 211.2) OF BOVINE
21112	OTHER HIDES AND SKINS OF BOVINE ANIMALS, OTHERWISE PRESERVED
21113	HIDES AND SKINS OF EQUINE ANIMALS, RAW (FRESH, OR SALTED, DRI
21120	WHOLE HIDES AND SKINS OF BOVINE ANIMALS, WEIGHING PER SKIN NO
21140	GOAT SKINS AND KID SKINS (EXCEPT YEMEN, MONGOLIAN OR TIBETAN
21199	HIDES AND SKINS, N.E.S., RAW (FRESH, OR SALTED, DRIED, LIMED,
22211	GROUNDNUTS (PEANUTS), NOT ROASTED OR OTHERWISE COOKED, IN SHE
22212	GROUNDNUTS (PEANUTS), NOT ROASTED OR OTHERWISE COOKED, SHELE
22220	SOYA BEANS
22250	SESAME (SESAMUM) SEEDS
22310	COPRA
22320	PALM NUTS AND PALM KERNELS
22350	CASTOR OIL SEEDS
22370	OIL SEEDS AND OLEAGINOUS FRUITS, N.E.S
22390	FLOURS AND MEALS OF OIL SEEDS OR OLEAGINOUS FRUITS (EXCLUDING
23110	NATURAL RUBBER LATEX, WHETHER OR NOT PREVULCANIZED PREVULCANI
23129	OTHER NATURAL RUBBER, IN PRIMARY FORMS (OTHER THAN LATEX) OR
23130	BALATA, GUTTA-PERCHA, GUAYULE, CHICLE AND SIMILAR NATURAL GUM
23219	OTHER SYNTHETIC RUBBERS AND FACTICE DERIVED FROM OILS, IN PRI
23221	RECLAIMED RUBBER IN PRIMARY FORMS OR IN PLATES, SHEETS OR STR
23222	WASTE, PARINGS AND SCRAP OF UNHARDENED RUBBER AND POWDERS AND
24402	CORK, NATURAL, DEBACKED OR ROUGHLY SQUARED, OR IN RECTANGULAR
24404	WASTE CORK; CRUSHED, GRANULATED OR GROUND CORK GROUND CORK
24501	FUEL WOOD, IN LOGS, IN BILLETS, IN TWIGS, IN FAGGOTS OR IN SI
24502	WOOD CHARCOAL (INCLUDING SHELL OR NUT CHARCOAL), WHETHER OR N
24611	WOOD IN CHIPS OR PARTICLES, CONIFEROUS
24615	WOOD IN CHIPS OR PARTICLES, NON-CONIFEROUS NON-CONIFEROUS
24620	SAWDUST AND WOOD WASTE AND SCRAP, WHETHER OR NOT AGGLOMERATED
24730	WOOD IN THE ROUGH (WHETHER OR NOT STRIPPED OF BARK OR SAPWOOD
24740	WOOD, OF CONIFEROUS SPECIES, IN THE ROUGH (WHETHER OR NOT STR
24752	WOOD, OF OTHER NON-CONIFEROUS SPECIES, IN THE ROUGH (WHETHER
24811	RAILWAY OR TRAMWAY SLEEPERS (CROSS-TIES) OF WOOD, NOT IMPREGN
24819	OTHER RAILWAY OR TRAMWAY SLEEPERS (CROSS-TIES) OF WOOD (CROSS
25113	WASTE AND SCRAP OF PAPER OR PAPERBOARD MADE MAINLY OF MECHAN

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
25119	WASTE AND SCRAP OF OTHER PAPER OR PAPERBOARD (INCLUDING UNSOR
25141	CHEMICAL WOOD PULP, SODA OR SULPHATE, OTHER THAN DISSOLVING G
25142	CHEMICAL WOOD PULP, SODA OR SULPHATE, OTHER THAN DISSOLVING G
25192	PULPS OF OTHER FIBROUS CELLULOSIC MATERIAL MATERIAL
26130	RAW SILK (NOT THROWN)
26310	COTTON (OTHER THAN LINTERS), NOT CARDED OR COMBED OR COMBED
26320	COTTON LINTERS
26331	COTTON YARN WASTE: (INCLUDING THREAD WASTE) WASTE)
26339	OTHER COTTON WASTE
26340	COTTON, CARDED OR COMBED
26410	JUTE AND OTHER TEXTILE BAST FIBERS, RAW OR RETTED OR RETTED
26490	JUTE AND OTHER TEXTILE BAST FIBERS, PROCESSED BUT NOT SPUN; T
26521	TRUE HEMP, RAW OR RETTED
26529	TRUE HEMP (CANNABIS SATIVA L), PROCESSED BUT NOT SPUN; TOW AN
26541	SISAL AND OTHER TEXTILE FIBERS OF THE GENUS AGAVE, RAW GENUS
26549	SISAL AND OTHER TEXTILE FIBERS OF THE GENUS AGAVE, PROCESSED
26551	ABACA (MANILA HEMP OR MUSA TEXTILIS NEE), RAW NEE), RAW
26559	ABACA (MANILA HEMP OR MUSA TEXTILIS NEE), PROCESSED BUT NOT S
26571	COCONUT FIBERS (COIR), RAW
26579	COCONUT FIBERS (COIR), PROCESSED BUT NOT SPUN AND WASTE (INCL
26581	VEGETABLE TEXTILE FIBERS, N.E.S., RAW
26589	VEGETABLE TEXTILE FIBERS, N.E.S., PROCESSED BUT NOT SPUN; WAS
26639	SYNTHETIC STAPLE FIBERS, NOT CARDED, COMBED OR OTHERWISE PROC
26679	SYNTHETIC STAPLE FIBERS, CARDED, COMBED OR OTHERWISE PROCESSE
26721	WASTE (INCLUDING NOILS, YARN WASTE AND GARNETTED STOCK), OF S
26722	WASTE (INCLUDING NOILS, YARN WASTE AND GARNETTED STOCK), OF A
26901	CLOTHING, CLOTHING ACCESSORIES, TRAVELING RUGS AND BLANKETS,
26902	USED OR NEW RAGS, SCRAP TWINE, CORDAGE, ROPE AND CABLES AND W
27210	ANIMAL OR VEGETABLE FERTILIZERS, WHETHER OR NOT MIXED TOGETHE
27220	SODIUM NITRATE
27231	NATURAL CALCIUM PHOSPHATES; NATURAL ALUMINUM CALCIUM PHOSPHAT
27232	NATURAL CALCIUM PHOSPHATES; NATURAL ALUMINUM CALCIUM PHOSPHAT
27311	SLATE, WHETHER OR NOT ROUGHLY TRIMMED OR MERELY CUT, BY SAWIN
27312	MARBLE, TRAVERTINE, ECAUSSINE AND OTHER CALCAREOUS MONUMENTAL
27313	GRANITE, PORPHYRY, BASALT, SANDSTONE AND OTHER MONUMENTAL OR
27322	LIMESTONE FLUX AND CALCAREOUS STONE COMMONLY USED FOR THE MAN
27323	GYPSUM AND ANHYDRITE
27324	PLASTERS (CONSISTING OF CALCINED GYPSUM OR CALCINED SULPHATE)
27331	SILICA SANDS AND QUARTZ SANDS
27339	OTHER SANDS, NATURAL, OF ALL KINDS, WHETHER OR NOT COLORED (O
27340	PEBBLES, GRAVEL, BROKEN AND CRUSHED STONE, OF A KIND USED FOR
27419	SULPHUR (OTHER THAN SUBLIMED, PRECIPITATED OR COLLOIDAL SULPH
27420	IRON PYRITES, UNROASTED
27722	PUMICE STONE; EMERY; NATURAL CORUNDUM, NATURAL GARNET AND OTH
27822	GRAPHITE, NATURAL
27823	DOLOMITE, WHETHER OR NOT CALCINED; DOLOMITE, ROUGHLY TRIMMED
27824	NATURAL MAGNESIUM CARBONATE (MAGNESITE)
27825	FUSED MAGNESIA; DEAD-BURNED (SINTERED) MAGNESIA; OTHER MAGNES
27827	BENTONITE
27829	OTHER CLAYS, NOT INCLUDING EXPANDED CLAYS OF SUBGROUP 663.5;
27830	SODIUM CHLORIDE, PURE, AND COMMON SALT (INCLUDING TABLE SALT
27840	ASBESTOS
27851	QUARTZ (OTHER THAN NATURAL SAND); QUARTZITE, WHETHER OR NOT R
27853	FELSPAR; LEUCITE, NEPHELINE AND NEPHELINE SYENITE NEPHELINE S
27861	GRANULATED SLAG (SLAG SAND) FROM THE MANUFACTURE OF IRON OR S
27862	SLAG, DROSS (OTHER THAN GRANULATED SLAG), SCALINGS AND OTHER
27869	SLAG AND ASH, N.E.S., INCLUDING SEAWEED ASH (KELP) ASH (KELP)
27891	CHALK
27892	NATURAL BARIUM SULPHATE (BARYTES); NATURAL BARIUM CARBONATE (
27894	NATURAL BORATES AND CONCENTRATES THEREOF (CALCINED OR NOT) BU
27895	SILICEOUS FOSSIL MEALS (E.G., KIESELGUHR, TRIPOLITE AND DIATO
27896	BITUMINOUS SHALE AND TAR SANDS
27897	BITUMEN AND ASPHALT, NATURAL; ASPHALTITES AND ASPHALTIC ROCKS
27898	VERMICULITE, PERLITE AND CHLORITES, UNEXPANDED UNEXPANDED
27899	MINERAL SUBSTANCES, N.E.S.
28140	ROASTED IRON PYRITES (PYRITE CINDERS), WHETHER OR NOT AGGLOME
28210	WASTE AND SCRAP OF CAST IRON

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
28221	WASTE AND SCRAP OF STAINLESS STEEL
28229	WASTE AND SCRAP OF OTHER ALLOY STEEL
28231	WASTE AND SCRAP OF TINNED IRON OR STEEL
28239	FERROUS WASTE AND SCRAP, N.E.S.
28310	COPPER ORES AND CONCENTRATES
28510	ALUMINUM ORES AND CONCENTRATES
28750	ZINC ORES AND CONCENTRATES
28760	TIN ORES AND CONCENTRATES
28770	MANGANESE ORES AND CONCENTRATES (INCLUDING MANGANIFEROUS IRON
28791	CHROMIUM ORES AND CONCENTRATES
28799	BASE METAL ORES AND CONCENTRATES, N.E.S.
28810	ASH AND RESIDUES (OTHER THAN FROM THE MANUFACTURE OF IRON OR
28821	COPPER WASTE AND SCRAP
28822	NICKEL WASTE AND SCRAP
28823	ALUMINUM WASTE AND SCRAP
28824	LEAD WASTE AND SCRAP
28825	ZINC WASTE AND SCRAP (OTHER THAN DUST)
28826	TIN WASTE AND SCRAP
28919	ORES AND CONCENTRATES OF OTHER PRECIOUS METALS METALS
28929	WASTE AND SCRAP OF PRECIOUS METALS (OTHER THAN GOLD), N.E.S.,
29115	CORAL AND SIMILAR MATERIALS, UNWORKED OR SIMPLY PREPARED BUT
29116	IVORY, TORTOISE-SHELL, WHALEBONE AND WHALEBONE HAIR, HORNS, A
29192	PIGS' HOGS' OR BOARS' BRISTLES AND HAIR; BADGER HAIR AND OTH
29193	GUTS, BLADDERS AND STOMACHS OF ANIMALS (OTHER THAN FISH), WHO
29196	PRODUCTS OF FISH OR CRUSTACEANS, MOLLUSKS OR OTHER AQUATIC IN
29197	NATURAL SPONGES OF ANIMAL ORIGIN
29199	ANIMAL PRODUCTS, N.E.S.
29221	LAC
29229	OTHER NATURAL GUMS, RESINS, GUM-RESINS, AND BALSAMS AND Balsa
29231	BAMBOOS
29232	RATTANS
29239	VEGETABLE MATERIALS, OTHER THAN BAMBOOS OR RATTANS, OF A KIND
29253	SEEDS OF HERBACEOUS PLANTS CULTIVATED PRINCIPALLY FOR THEIR F
29254	OTHER VEGETABLE SEEDS, OF A KIND USED FOR SOWING FOR SOWING
29259	SEEDS, FRUIT AND SPORES, N.E.S., OF A KIND USED FOR SOWING KI
29261	BULBS, TUBERS, TUBEROUS ROOTS, CORMS, CROWN AND RHIZOMES, DOR
29269	OTHER LIVE PLANTS (INCLUDING THEIR ROOTS), CUTTINGS AND SLIPS
29271	CUT FLOWERS AND FLOWER BUDS OF A KIND SUITABLE FOR BOUQUETS O
29272	FOLIAGE, BRANCHES AND OTHER PARTS OF PLANTS, WITHOUT FLOWERS
29292	VEGETABLE MATERIALS OF A KIND USED PRIMARILY AS STUFFING OR A
29297	SEAWEEDES AND OTHER ALGAE
29299	VEGETABLE MATERIALS AND VEGETABLE PRODUCTS, N.E.S. PRODUCTS,
32121	BITUMINOUS COAL, WHETHER OR NOT PULVERIZED, BUT NOT AGGLOMERA
32122	OTHER COAL, WHETHER OR NOT PULVERIZED, BUT NOT AGGLOMERATED B
32221	LIGNITE, WHETHER OR NOT PULVERIZED, BUT NOT AGGLOMERATED NOT
32222	LIGNITE, AGGLOMERATED
32500	COKE AND SEMI-COKE (INCLUDING CHAR) OF COAL, OF LIGNITE OR OF
33300	PETROLEUM OILS AND OILS OBTAINED FROM BITUMINOUS MINERALS, CR
33411	MOTOR SPIRIT (GASOLINE) INCLUDING AVIATION SPIRIT AVIATION SP
33421	KEROSENE (INCLUDING KEROSENE TYPE JET FUEL) FUEL)
33430	GAS OILS
33440	FUEL OILS, N.E.S
33450	LUBRICATING PETROLEUM OILS AND OILS OBTAINED FROM BITUMINOUS
33512	PARAFFIN WAX, MICRO-CRYSTALLINE PETROLEUM WAX, SLACK WAX, OZO
33521	TAR DISTILLED FROM COAL, FROM LIGNITE AND FROM PEAT, AND OTH
33525	OILS AND OTHER PRODUCTS, N.E.S, OF THE DISTILLATION OF HIGH T
33541	PETROLEUM BITUMEN AND OTHER RESIDUES OF PETROLEUM OILS OR OF
34420	GASEOUS HYDROCARBONS, LIQUEFIED, N.E.S.
41111	FISH LIVER OILS AND THEIR FRACTIONS, WHETHER OR NOT REFINED,
41113	FATS AND OILS AND THEIR FRACTIONS OF MARINE MAMMALS, WHETHER
41139	ANIMAL OILS AND FATS AND THEIR FRACTIONS, N.E.S., WHETHER OR
42119	SOYA BEAN OIL, REFINED AND ITS FRACTIONS
42139	GROUNDNUT (PEANUT) OIL, REFINED AND ITS FRACTIONS FRACTIONS
42149	OILS AND THEIR FRACTIONS OBTAINED SOLELY FROM OLIVES (OTHER T
42161	MAIZE (CORN) OIL, CRUDE
42169	MAIZE (CORN) OIL, REFINED AND ITS FRACTIONS FRACTIONS
42180	SESAME (SESAMUM) OIL AND ITS FRACTIONS

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
42221	PALM OIL, CRUDE
42229	PALM OIL, REFINED AND ITS FRACTIONS
42231	COCONUT (COPRA) OIL, CRUDE
42239	COCONUT (COPRA) OIL, REFINED AND ITS FRACTIONS FRACTIONS
42241	PALM KERNEL OR BABASSU OIL, CRUDE
42249	PALM KERNEL OR BABASSU OIL, REFINED AND THEIR FRACTIONS THEIR
42250	CASTOR OIL AND ITS FRACTIONS
42299	FIXED VEGETABLE FATS AND OILS, CRUDE, REFINED OR FRACTIONATED
43110	FATS AND OILS AND THEIR FRACTIONS, ANIMAL OR VEGETABLE, BOILE
51111	ETHYLENE
51112	PROPENE (PROPYLENE)
51114	SATURATED ACYCLIC HYDROCARBONS
51119	ACYCLIC HYDROCARBONS, N.E.S.
51122	BENZENE, PURE
51125	STYRENE
51132	TRICHLOROETHYLENE
51137	FLUORINATED, BROMINATED OR IODINATED DERIVATIVES OF ACYCLIC H
51138	HALOGENATED DERIVATIVES OF ACYCLIC HYDROCARBONS CONTAINING TWO
51139	HALOGENATED DERIVATIVES OF HYDROCARBONS, N.E.S. N.E.S.
51140	SULPHONATED, NITRATED OR NITROSATED DERIVATIVES OF HYDROCARBO
51211	METHANOL (METHYL ALCOHOL)
51212	PROPAN-1-OL (PROPYL ALCOHOL) AND PROPAN-2-OL (ISOPROPYL ALCOH
51213	BUTANOLS
51214	OCTANOL (OCTYL ALCOHOL) AND ISOMERS THEREOF THEREOF
51215	UNDENATURED ETHYL ALCOHOL OF AN ALCOHOLIC STRENGTH BY VOLUME
51216	ETHYL ALCOHOL AND OTHER SPIRITS, DENATURED, OF ANY STRENGTH D
51217	FATTY ALCOHOLS, INDUSTRIAL
51219	OTHER MONOHYDRIC ALCOHOLS
51221	ETHYLENE GLYCOL (ETHANEDIOL)
51222	GLYCEROL (GLYCERINE), GLYCEROL WATERS AND GLYCEROL LYES AND G
51229	OTHER ACYCLIC ALCOHOLS
51231	CYCLANIC, CYCLENIC OR CYCLOTERPENIC ALCOHOLS AND THEIR HALOGE
51241	PHENOL (HYDROXYBENZENE), PURE, AND ITS SALTS SALTS
51242	CRESOLS, N.E.S., AND THEIR SALTS
51243	OTHER PHENOLS AND PHENOL-ALCOHOLS
51371	ACETIC ACID AND ITS SALTS
51373	METHACRYLIC ACID AND ITS SALTS AND ESTERS ESTERS
51377	SATURATED ACYCLIC MONOCARBOXYLIC ACIDS, N.E.S., ANHYDRIDES, H
51379	OTHER UNSATURATED ACYCLIC MONOCARBOXYLIC ACIDS; CYCLIC MONOCA
51389	POLYCARBOXYLIC ACIDS, N.E.S., ANHYDRIDES, HALIDES, PEROXIDES
51391	LACTIC ACID, TARTARIC ACID, CITRIC ACID AND THEIR SALTS AND E
51392	OTHER CARBOXYLIC ACIDS WITH ALCOHOL FUNCTION BUT WITHOUT OTHE
51393	SALICYLIC ACID AND ITS SALTS AND ESTERS
51394	OTHER CARBOXYLIC ACIDS WITH PHENOL FUNCTION BUT WITHOUT OTHER
51396	CARBOXYLIC ACIDS WITH ADDITIONAL OXYGEN FUNCTIONS, N.E.S., TH
51451	ACYCLIC MONOAMINES AND THEIR DERIVATIVES; SALTS THEREOF DERIV
51452	ACYCLIC POLYAMINES AND THEIR DERIVATIVES; SALT THEREOF DERIVA
51453	CYCLANIC, CYCLENIC OR CYCLOTERPENIC MONO- OR POLYAMINES, AND
51455	AROMATIC POLYAMINES AND THEIR DERIVATIVES; SALTS THEREOF DERI
51461	AMINO-ALCOHOLS, THEIR ETHERS AND ESTERS (OTHER THAN THOSE CON
51462	AMINO-NAPHTHOLS AND OTHER AMINO-PHENOLS, THEIR ETHERS AND EST
51464	LYSINE AND ITS ESTERS; SALTS THEREOF; GLUTAMIC ACID AND ITS S
51465	AMINO-ACIDS AND THEIR ESTERS (OTHER THAN THOSE CONTAINING MOR
51467	AMINO-ALCOHOL-PHENOLS, AMINO-ACID-PHENOLS AND OTHER AMINO-ACI
51479	OTHER CYCLIC AMIDES (INCLUDING CYCLIC CARBAMATES) AND THEIR D
51482	CARBOXYMIDE-FUNCTION COMPOUNDS (INCLUDING SACCHARIN AND ITS
51484	OTHER NITRILE-FUNCTION COMPOUNDS
51489	COMPOUNDS WITH OTHER NITROGEN FUNCTION
51544	METHIONINE
51549	OTHER ORGANO-SULPHUR COMPOUNDS
51569	HETEROCYCLIC COMPOUNDS WITH OXYGEN HETERO-ATOM(S) ONLY, N.E.S
51612	ACETALS AND HEMIACETALS, WHETHER OR NOT WITH OTHER OXYGEN-FUN
51616	ACYCLIC, CYCLANIC, CYCLENIC, CYCLOTERPENIC AND AROMATIC ETHER
51617	ETHER-ALCOHOLS, ETHER PHENOLS, ETHER-ALCOHOL-PHENOLS; ALCOHOL
51621	ACYCLIC ALDEHYDES WITHOUT OTHER OXYGEN FUNCTION FUNCTION
51622	OTHER ALDEHYDES, WHETHER OR NOT WITH OTHER OXYGEN-FUNCTION; C
51623	ACETONE

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
51624	ETHYL METHYL KETONE (BUTANONE)
51627	CAMPHOR
51628	OTHER CYCLANIC, CYCLENIC OR CYCLOTERPENIC KETONES WITHOUT OTH
51629	AROMATIC KETONES WITHOUT OTHER OXYGEN-FUNCTION; KETONE- ALCOH
51631	PHOSPHORIC ESTERS AND THEIR SALTS (INCLUDING LACTOPHOSPHATES)
51639	ESTERS OF OTHER INORGANIC ACIDS (EXCLUDING ESTERS OF HYDROGEN
51699	OTHER ORGANIC COMPOUNDS
52210	CARBON (INCLUDING CARBON BLACK), N.E.S.
52221	HYDROGEN, RARE GASES, NITROGEN AND OXYGEN OXYGEN
52222	SELENIUM, TELLURIUM, PHOSPHORUS, ARSENIC AND BORON AND BORON
52223	SILICON
52224	CHLORINE
52225	FLOURINE, BRONJNE AND IODINE
52226	SULPHUR, SUBLIMED OR PRECIPITATED; COLLOIDAL SULPHUR COLLOIDA
52227	MERCURY
52228	SODIUM AND OTHER ALKALI METALS
52229	CALCIUM, STRONTIUM AND BARIUM; RARE-EARTH METALS, SCANDIUM AN
52231	HYDROGEN CHLORIDE (HYDROCHLORIC ACID); CHLOROSULPHURIC ACID C
52232	SULPHURIC ACID; OLEUM
52233	NITRIC ACID; SULPHONITRIC ACIDS
52234	DIPHOSPHORUS PENTOXIDE; PHOSPHORIC ACID AND POLYPHOSPHORIC AC
52235	OXIDES OF BORON; BORIC ACIDS
52236	OTHER INORGANIC ACIDS
52237	SILICON DIOXIDE
52238	SULPHUR DIOXIDE
52239	OTHER INORGANIC OXYGEN COMPOUNDS OF NON-METALS NON-METALS
52242	SULPHIDES OF NON-METALS; COMMERCIAL PHOSPHORUS TRISULPHIDE PH
52251	ZINC OXIDE; ZINC PEROXIDE
52252	CHROMIUM OXIDES AND HYDROXIDES
52253	MANGANESE OXIDES
52254	IRON OXIDES AND HYDROXIDES; EARTH COLORS CONTAINING 70% OR MO
52255	COBALT OXIDES AND HYDROXIDES; COMMERCIAL COBALT OXIDES COBALT
52256	TITANIUM OXIDES
52257	LEAD OXIDES; RED LEAD AND ORANGE LEAD
52261	AMMONIA, ANHYDROUS, OR IN AQUEOUS SOLUTION SOLUTION
52262	SODIUM HYDROXIDE (CAUSTIC SODA), SOLID
52263	SODIUM HYDROXIDE IN AQUEOUS SOLUTION (SODA LYE OR LIQUID SODA
52264	POTASSIUM HYDROXIDE (CAUSTIC POTASH); PEROXIDES OF SODIUM OR
52265	HYDROXIDE AND PEROXIDE OF MAGNESIUM; OXIDES, HYDROXIDES AND P
52266	ALUMINUM HYDROXIDE
52268	HYDRAZINE AND HYDROXYLAMINE AND THEIR INORGANIC SALTS INORGAN
52269	OTHER INORGANIC BASES; OTHER METAL OXIDES, HYDROXIDES AND PER
52321	AMMONIUM CHLORIDE
52322	CALCIUM CHLORIDE
52329	OTHER CHLORIDES, CHLORIDE OXIDES AND CHLORIDE HYDPOXIDES; BRO
52331	HYPOCHLORITES; COMMERCIAL CALCIUM HYPOCHLORITE; CHLORITES; HY
52339	OTHER CHLORATES AND PERCHLORATES; BROMATES AND PERBROMATES; I
52341	SODIUM SULPHIDES
52344	SULPHITES; THIOSULPHATES
52345	SODIUM SULPHATES
52349	OTHER SULPHATES; ALUMS
52351	NITRITES
52352	POTASSIUM NITRATE
52359	OTHER NITRATES
52361	PHOSPHINATES (HYPOPHOSPHITES) AND PHOSPHONATES (PHOSPHITES) P
52362	TRIAMMONIUM PHOSPHATE
52363	OTHER PHOSPHATES
52364	SODIUM TRIPHOSPHATE (SODIUM TRIPOLYPHOSPHATE) TRIPOLYPHOSPHAT
52365	OTHER POLYPHOSPHATES
52371	COMMERCIAL AMMONIUM CARBONATE AND OTHER AMMONIUM CARBONATES A
52372	NEUTRAL SODIUM CARBONATE (DISODIUM CARBONATE) CARBONATE)
52373	SODIUM HYDROGENCARBONATE (SODIUM BICARBONATE) BICARBONATE)
52374	POTASSIUM CARBONATES
52375	LEAD CARBONATE
52379	OTHER CARBONATES
52381	CYANIDES, CYANIDE OXIDES AND COMPLEX CYANIDES CYANIDES
52383	SILICATES; COMMERCIAL ALKALI METAL SILICATES SILICATES

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
52384	BORATES; PEROXOBORATES (PERBORATES)
52389	SALTS OF INORGANIC ACIDS OR PEROXOACIDS, N.E.S. N.E.S.
52432	COLLOIDAL PRECIOUS METALS; COMPOUNDS, INORGANIC OR ORGANIC, O
52491	HYDROGEN PEROXIDE, WHETHER OR NOT SOLIDIFIED WITH UREA SOLIDI
52492	PHOSPHIDES, WHETHER OR NOT CHEMICALLY DEFINED (EXCLUDING FERR
52493	CALCIUM CARBIDE, WHETHER OR NOT CHEMICALLY DEFINED CHEMICALLY
52494	CARBIDES (OTHER THAN CALCIUM CARBIDE), WHETHER OR NOT CHEMICA
52495	HYDRIDES, NITRIDES, AZIDES, SILICIDES AND BORIDES, WHETHER OR
52499	INORGANIC COMPOUNDS, N.E.S. (INCLUDING DISTILLED OR CONDUCTIV
52515	URANIUM DEPLETED IN U235 AND ITS COMPOUNDS; THORIUM AND ITS C
52519	RADIOACTIVE ELEMENTS AND ISOTOPES AND THEIR COMPOUNDS, N.E.S.
52595	COMPOUNDS, INORGANIC OR ORGANIC, OF RARE EARTH METALS, OF YTT
53119	OTHER SYNTHETIC ORGANIC COLORING MATTER (INCLUDING MIXTURES O
53221	TANNING EXTRACTS OF VEGETABLE ORIGIN; TANNINS AND THEIR SALTS
53222	COLORING MATTER OF VEGETABLE OR ANIMAL ORIGIN (INCLUDING DYEI
53231	SYNTHETIC ORGANIC TANNING SUBSTANCES
53232	INORGANIC TANNING SUBSTANCES; TANNING PREPARATIONS, WHETHER O
53317	COLORING MATTER AND OTHER PREPARATIONS, N.E.S. N.E.S
53321	PRINTING INK, BLACK
53329	OTHER PRINTING INK
53341	PAINTS AND VARNISHES (INCLUDING ENAMELS AND LACQUERS) BASED O
53342	PAINTS AND VARNISHES (INCLUDING ENAMELS AND LACQUERS) BASED O
53343	OTHER PAINTS AND VARNISHES (INCLUDING ENAMELS AND LACQUERS AN
53344	PIGMENTS (INCLUDING METALLIC POWDERS AND FLAKES) DISPERSED IN
53354	GLAZERS' PUTTY; GRAFTING PUTTY; RESIN CEMENTS, CAULKING COMP
53355	ORGANIC COMPOSITE SOLVENTS AND THINNERS, N.E.S.; PREPARED PAI
54111	PROVITAMINS, UNMIXED
54113	VITAMINS B AND THEIR DERIVATIVES, UNMIXED UNMIXED
54114	VITAMIN C AND ITS DERIVATIVES, UNMIXED
54115	VITAMIN E AND ITS DERIVATIVES, UNMIXED
54116	OTHER VITAMINS AND THEIR DERIVATIVES, UNMIXED UNMIXED
54117	INTERMIXTURES OF PROVITAMINS AND VITAMINS (INCLUDING NATURAL
54139	OTHER ANTIBIOTICS, NOT PUT UP AS MEDICAMENTS MEDICAMENTS
54151	INSULIN AND ITS SALTS, NOT PUT UP AS MEDICAMENTS MEDICAMENTS
54163	ANTISERA AND OTHER BLOOD FRACTIONS; VACCINES VACCINES
54191	WADDING, GAUZE, BANDAGES AND SIMILAR ARTICLES (E.G., DRESSING
54199	OTHER PHARMACEUTICAL GOODS
54211	MEDICAMENTS CONTAINING PENICILLINS OR DERIVATIVES THEREOF, WI
54212	MEDICAMENTS CONTAINING OTHER ANTIBIOTICS, NOT PUT UP IN MEASU
54213	MEDICAMENTS CONTAINING PENICILLINS OR DERIVATIVES THEREOF, WI
54219	MEDICAMENTS CONTAINING OTHER ANTIBIOTICS, PUT UP IN MEASURED
54291	MEDICAMENTS, N.E.S., NOT PUT UP IN MEASURED DOSES OR IN FORMS
54292	MEDICAMENTS CONTAINING VITAMINS OR OTHER PRODUCTS OF SUBGROUP
54293	MEDICAMENTS, N.E.S., PUT UP IN MEASURED DOSES OR IN FORMS OR
55131	ESSENTIAL OILS OF CITRUS FRUIT
55132	OTHER ESSENTIAL OILS
55135	CONCENTRATES OF ESSENTIAL OILS IN FATS, IN FIXED OILS, IN WAX
55141	MIXTURES OF ODORIFEROUS SUBSTANCES AND MIXTURES (INCLUDING AL
55149	OTHER MIXTURES OF ODORIFEROUS SUBSTANCES AND MIXTURES (INCLUD
55310	PERFUMES AND TOILET WATERS
55320	BEAUTY OR MAKE-UP PREPARATIONS FOR THE CARE OF THE SKIN (OTHE
55330	PREPARATIONS FOR USE ON THE HAIR
55340	PREPARATIONS FOR ORAL OR DENTAL HYGIENE, INCLUDING DENTURE FI
55351	PRE-SHAVE, SHAVING OR AFTER-SHAVE PREPARATIONS PREPARATIONS
55352	PERSONAL DEODORANTS AND ANTI-PERSPIRANTS
55353	PERFUMED BATH SALTS AND OTHER BATH PREPARATIONS PREPARATIONS
55354	PREPARATIONS FOR PERFUMING OR DEODORIZING ROOMS (INCLUDING OD
55359	DEPILATORIES AND PERFUMERY, COSMETIC OR TOILET PREPARATIONS,
55411	SOAP AND ORGANIC SURFACE-ACTIVE PRODUCTS AND PREPARATIONS, IN
55415	SOAP AND ORGANIC SURFACE-ACTIVE PRODUCTS AND PREPARATIONS, IN
55419	SOAP IN OTHER FORMS
55421	ORGANIC SURFACE-ACTIVE AGENTS, WHETHER OR NOT PUT UP FOR RETA
55422	SURFACE-ACTIVE, WASHING OR CLEANING PREPARATIONS, N.E.S., PUT
55423	SURFACE-ACTIVE, WASHING OR CLEANING PREPARATIONS, N.E.S., NOT
55431	POLISHES, CREAMS AND SIMILAR PREPARATIONS, FOR FOOTWEAR OR LE
55432	POLISHES, CREAMS AND SIMILAR PREPARATIONS, FOR THE MAINTENANC
55433	POLISHES AND SIMILAR PREPARATIONS FOR COACHWORK, OTHER THAN M

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
55434	SCOURING PASTES AND POWDERS AND OTHER SCOURING PREPARATIONS (
55435	POLISHES, CREAMS AND SIMILAR PREPARATIONS FOR GLASS OR METAL
56211	AMMONIUM NITRATE, WHETHER OR NOT IN AQUEOUS SOLUTION AQUEOUS
56213	AMMONIUM SULPHATE
56215	CALCIUM CYANAMIDE
56216	UREA, WHETHER OR NOT IN AQUEOUS SOLUTION
56219	OTHER NITROGENOUS FERTILIZERS (INCLUDING MIXTURES, N.E.S.) MI
56222	SUPERPHOSPHATES
56229	MINERAL OR CHEMICAL FERTILIZERS, PHOSPHATIC, N.E.S. PHOSPHATI
56231	POTASSIUM CHLORIDE
56232	POTASSIUM SULPHATE
56239	MINERAL OR CHEMICAL FERTILIZERS, POTASSIC, N.E.S. POTASSIC, N
56291	FERTILIZERS, N.E.S., CONTAINING THE THREE FERTILIZING ELEMENT
56292	MINERAL OR CHEMICAL FERTILIZERS CONTAINING THE TWO FERTILIZIN
56299	OTHER FERTILIZERS, N.E.S.
57111	POLYETHYLENE HAVING A SPECIFIC GRAVITY OF LESS THAN 0.94, IN
57112	POLYETHYLENE HAVING A SPECIFIC GRAVITY OF 0.94 OR MORE, IN PR
57190	OTHER POLYMERS OF ETHYLENE, IN PRIMARY FORMS FORMS
57211	POLYSTYRENE, EXPANSIBLE, IN PRIMARY FORMS FORMS
57219	OTHER POLYSTYRENE IN PRIMARY FORMS
57299	OTHER POLYMERS OF STYRENE, IN PRIMARY FORMS FORMS
57311	POLYVINYL CHLORIDE NOT MIXED WITH ANY OTHER SUBSTANCES, IN PR
57312	OTHER POLYVINYL CHLORIDE, NON-PLASTICIZED, IN PRIMARY FORMS N
57313	OTHER POLYVINYL CHLORIDE, PLASTICIZED, IN PRIMARY FORMS IN PR
57392	OTHER VINYL CHLORIDE COPOLYMERS, IN PRIMARY FORMS PRIMARY FOR
57399	OTHER POLYMERS OF VINYL CHLORIDE OR OF OTHER HALOGENATED OLEF
57411	POLYACETALS, IN PRIMARY FORMS
57419	OTHER POLYETHERS, IN PRIMARY FORMS
57420	EPOXIDE RESINS, IN PRIMARY FORMS
57432	ALKYD RESINS IN PRIMARY FORMS
57433	POLYETHYLENE TEREPHTHALATE, IN PRIMARY FORMS
57434	OTHER POLYESTERS, UNSATURATED, IN PRIMARY FORMS PRIMARY FORMS
57439	POLYESTERS IN PRIMARY FORMS, N.E.S.
57511	POLYPROPYLENE, IN PRIMARY FORMS
57513	PROPYLENE COPOLYMERS, IN PRIMARY FORMS
57519	POLYMERS OF OTHER OLEFINS, IN PRIMARY FORMS FORMS
57529	OTHER ACRYLIC POLYMERS, IN PRIMARY FORMS
57541	UREA RESINS, THIOUREA RESINS, IN PRIMARY FORMS FORMS
57543	OTHER AMINO-RESINS IN PRIMARY FORMS
57544	PHENOLIC RESINS IN PRIMARY FORMS
57545	POLYURETHANES, IN PRIMARY FORMS
57551	CELLULOSE ACETATES, NON-PLASTICIZED, IN PRIMARY FORMS PRIMARY
57552	CELLULOSE ACETATES, PLASTICIZED, IN PRIMARY FORMS PRIMARY FOR
57553	CELLULOSE NITRATES (INCLUDING COLLODIONS), IN PRIMARY FORMS C
57559	OTHER CELLULOSE AND ITS CHEMICAL DERIVATIVES, N.E.S., IN PRIM
57591	POLYMERS OF VINYL ACETATE, IN PRIMARY FORMS FORMS
57592	POLYMERS OF OTHER VINYL ESTERS; OTHER VINYL POLYMERS VINYL PO
57595	NATURAL POLYMERS AND MODIFIED NATURAL POLYMERS (E.G., HARDENE
57596	PETROLEUM RESINS, COUMARONE-INDENE RESINS, POLYTERPENES, POLY
57990	WASTE, PARINGS AND SCRAP, OF OTHER PLASTICS PLASTICS
58120	TUBES, PIPES AND HOSES, RIGID
58140	OTHER TUBES, PIPES AND HOSES, NOT REINFORCED OR OTHERWISE COM
58150	TUBES, PIPES AND HOSES, NOT REINFORCED OR OTHERWISE COMBINED
58160	OTHER TUBES, PIPES AND HOSES
58170	FITTINGS FOR TUBES, PIPES AND HOSES, OF PLASTICS PLASTICS
58219	OTHER PLATES, SHEETS, FILM, FOIL, TAPE, STRIP AND OTHER FLA
58229	PLATES, SHEETS, FILM, FOIL AND STRIP, OF OTHER PLASTICS, NON-
58291	OTHER PLATES, SHEETS, FILM, FOIL AND STRIP, OF PLASTICS, CELL
58299	OTHER PLATES, SHEETS, FILM, FOIL AND STRIP, OF PLASTICS, OTHE
59110	INSECTICIDES PUT UP IN FORMS OR PACKINGS FOR RETAIL SALE OR A
59120	FUNGICIDES PUT UP IN FORMS OR PACKINGS FOR RETAIL SALE OR AS
59130	WEED KILLERS (HERBICIDES), ANTI-SPROUTING PRODUCTS AND PLANT-
59141	DISINFECTANTS PUT UP IN FORMS OR PACKINGS FOR RETAIL SALE OR
59149	RODENTICIDES AND OTHER PRODUCTS OF GROUP 591, PUT UP IN FORMS
59211	WHEAT STARCH
59212	MAIZE (CORN) STARCH
59213	POTATO STARCH

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
59214	MANIOC (CASSAVA) STARCH
59215	OTHER STARCHES
59224	GELATIN (INCLUDING GELATIN IN RECTANGULAR SHEETS, WHETHER OR
59226	DEXTRINS AND OTHER MODIFIED STARCHES
59227	GLUES BASED ON STARCHES OR ON DEXTRINS OR OTHER MODIFIED STAR
59229	PREPARED GLUES AND OTHER PREPARED ADHESIVES, N.E.S.; PRODUCTS
59311	PROPELLANT POWDERS
59312	PREPARED EXPLOSIVES (OTHER THAN PROPELLANT POWDERS) PROPELLANT
59320	SAFETY FUSES; DETONATING FUSES; PERCUSSION OR DETONATING CAPS
59731	HYDRAULIC BRAKE FLUIDS AND OTHER PREPARED LIQUIDS FOR HYDRAUL
59811	TALL OIL, WHETHER OR NOT REFINED
59814	ROSIN AND RESIN ACIDS, AND DERIVATIVES THEREOF; ROSIN SPIRIT
59864	ACTIVATED CARBON
59869	COMPOSITE DIAGNOSTIC OR LABORATORY REAGENTS, N.E.S. REAGENTS,
59885	OTHER SUPPORTED CATALYSTS
59889	OTHER CATALYSTS AND CATALYTIC PREPARATIONS PREPARATIONS
59893	COMPOUND PLASTICIZERS FOR RUBBER OR PLASTICS, N.E.S.; ANTI-OX
59895	MODELLING PASTES (INCLUDING THOSE PUT UP FOR CHILDREN'S AMUSE
59896	PICKLING PREPARATIONS FOR METAL SURFACES; FLUXES AND OTHER AU
59897	PREPARED ADDITIVES FOR CEMENTS, MORTARS OR CONCRETES OR CONCR
59899	OTHER CHEMICAL PRODUCTS AND PREPARATIONS
61141	OTHER BOVINE LEATHER AND EQUINE LEATHER, TANNED OR RETANNED B
61142	OTHER BOVINE LEATHER AND EQUINE LEATHER, PARCHMENT-DRESSED OR
61183	PATENT LEATHER AND PATENT LAMINATED LEATHER; METALLIZED LEATH
61210	ARTICLES OF LEATHER OR OF COMPOSITION LEATHER OF A KIND USED
61220	SADDLERY AND HARNESS FOR ANY ANIMAL (INCLUDING TRACES, LEADS,
61290	OTHER ARTICLES OF LEATHER OR OF COMPOSITION LEATHER COMPOSITI
62119	OTHER COMPOUNDED RUBBER, UNVULCANIZED, IN PRIMARY FORMS OR IN
62121	"CAMEL-BACK" STRIPS FOR RETREADING RUBBER TIRES RUBBER TIRES
62129	OTHER FORMS (E.G., RODS, TUBES AND PROFILE SHAPES) AND ARTICL
62132	PLATES, SHEETS, STRIP, RODS AND PROFILE SHAPES, OF UNHARDENED
62133	PLATES, SHEETS, STRIP, RODS AND PROFILE SHAPES, OF UNHARDENED
62141	TUBES, PIPES AND HOSES, OF UNHARDENED VULCANIZED RUBBER, NOT
62145	TUBES, PIPES AND HOSES, OF UNHARDENED VULCANIZED RUBBER, WITH
62510	TIRES, PNEUMATIC, NEW, OF A KIND USED ON MOTOR CARS (INCLUDING
62520	TIRES, PNEUMATIC, NEW, OF A KIND USED ON BUSES AND LORRIES BU
62541	TIRES, PNEUMATIC, NEW, OF A KIND USED ON MOTORCYCLES MOTORCYC
62542	TIRES, PNEUMATIC, NEW, OF A KIND USED ON BICYCLES BICYCLES
62551	OTHER PNEUMATIC TIRES, NEW, HAVING A "HERRING-BONE" OR SIMILA
62559	PNEUMATIC TIRES, NEW, N.E.S.
62591	INNER TUBES
62592	RETREADED TIRES
62593	USED PNEUMATIC TIRES
62594	SOLID OR CUSHION TIRES, INTERCHANGEABLE TIRE TREADS AND TIRE
62911	SHEATH CONTRACEPTIVES
62919	OTHER HYGIENIC OR PHARMACEUTICAL ARTICLES OF UNHARDENED VULCA
62921	CONVEYOR OR TRANSMISSION BELTS OR BELTING, OF TRAPEZOIDAL CRO
62929	OTHER CONVEYOR OR TRANSMISSION BELTS OR BELTING, OF VULCANIZE
62991	HARD RUBBER (E.G., EBONITE), IN ALL FORMS (INCLUDING WASTE AN
62992	ARTICLES OF UNHARDENED CELLULAR VULCANIZED RUBBER, N.E.S. VUL
62999	ARTICLES OF UNHARDENED NON-CELLULAR VULCANIZED RUBBER, N.E.S.
63311	CORKS AND STOPPERS, OF NATURAL CORK
63319	OTHER ARTICLES OF NATURAL CORK
63411	VENEER SHEETS AND SHEETS FOR PLYWOOD (WHETHER OR NOT SPLICED)
63412	VENEER SHEETS AND SHEETS FOR PLYWOOD (WHETHER OR NOT SPLICED)
63421	DENSIFIED WOOD, IN BLOCKS, PLATES, STRIPS OR PROFILE SHAPES S
63439	OTHER PLYWOOD CONSISTING SOLELY OF SHEETS OF WOOD, EACH PLY N
63449	PLYWOOD, VENEERED PANELS AND SIMILAR LAMINATED WOOD, N.E.S. L
63491	HOOPWOOD; SPLIT POLES; PILES, PICKETS AND STAKES OF WOOD, POI
63511	PACKING CASES, BOXES, CRATES, DRUMS AND SIMILAR PACKINGS, OF
63531	WINDOWS, FRENCH-WINDOWS AND THEIR FRAMES, OF WOOD FRAMES, OF
63532	DOORS AND THEIR FRAMES AND THRESHOLDS, OF WOOD OF WOOD
63539	OTHER BUILDERS' JOINERY AND CARPENTRY OF WOOD (INCLUDING CELL
63541	WOODEN FRAMES FOR PAINTINGS, PHOTOGRAPHS, MIRRORS OR SIMILAR
63542	TABLEWARE AND KITCHENWARE, OF WOOD
63549	WOOD MARQUETRY AND INLAID WOOD, CASKETS AND CASES FOR JEWELRY
63591	TOOLS, TOOL BODIES, TOOL HANDLES, BROOM OR BRUSH BODIES AND H

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**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
63599	OTHER ARTICLES OF WOOD
64110	NEWSPRINT, IN ROLLS OR SHEETS
64124	WALLPAPER BASE, IN ROLLS OR SHEETS
64129	OTHER PAPER AND PAPERBOARD, UNCOATED, USED FOR WRITING, PRINT
64141	KRAFT LINER, UNCOATED, IN ROLLS OR SHEETS SHEETS
64142	SACK KRAFT PAPER, UNCOATED, IN ROLLS OR SHEETS SHEETS
64152	SULPHITE WRAPPING PAPER, UNCOATED, IN ROLLS OR SHEETS ROLLS O
64153	VEGETABLE PARCHMENT, GREASEPROOF PAPERS, TRACING PAPERS AND G
64154	MULTI-PLY PAPER AND PAPERBOARD, UNCOATED, IN ROLLS OR SHEETS
64155	CIGARETTE PAPER, N.E.S.
64156	FILTER PAPER AND PAPERBOARD, UNCOATED, FELT PAPER AND PAPERBO
64161	SACK KRAFT PAPER, CREPED OR CRINKLED, WHETHER OR NOT EMBOSSED
64162	OTHER KRAFT PAPER, CREPED OR CRINKLED, WHETHER OR NOT EMBOSSE
64164	PAPER AND PAPERBOARD, CORRUGATED (WITH OR WITHOUT GLUED FLAT
64169	PAPER, CREPED, CRINKLED, EMBOSSED OR PERFORATED, IN ROLLS OR
64172	OTHER PAPER AND PAPERBOARD, COATED, IMPREGNATED OR COVERED WI
64173	PAPER AND PAPERBOARD, TARRED, BITUMINIZED OR ASPHALTED, IN RO
64176	OTHER KRAFT PAPER AND PAPERBOARD, COATED ON ONE OR BOTH SIDES
64177	OTHER PAPER AND PAPERBOARD COATED ON ONE OR BOTH SIDES WITH K
64179	OTHER PAPER, PAPERBOARD, CELLULOSE WADDING AND WEBS OF CELLUL
64192	OTHER COMPOSITE PAPER AND PAPERBOARD (MADE BY STICKING FLAT L
64193	FILTER BLOCKS, SLABS AND PLATES, OF PAPER PULP PAPER PULP
64194	WALLPAPER AND SIMILAR WALL COVERINGS; WINDOW TRANSPARENCIES O
64211	CARTONS, BOXES AND CASES, OF CORRUGATED PAPER OR PAPERBOARD P
64212	FOLDING CARTONS, BOXES AND CASES, OF NON-CORRUGATED PAPER OR
64214	OTHER SACKS AND BAGS (INCLUDING CONES)
64215	OTHER PACKING CONTAINERS (INCLUDING RECORD SLEEVES) RECORD SL
64216	BOX FILES, LETTER TRAYS, STORAGE BOXES AND SIMILAR ARTICLES,
64221	ENVELOPES
64222	LETTER CARDS, PLAIN POSTCARDS AND CORRESPONDENCE CARDS CORRES
64223	BOXES, POUCHES, WALLETS AND WRITING COMPENDIUMS, OF PAPER OR
64231	REGISTERS, ACCOUNT BOOKS, NOTEBOOKS, ORDER BOOKS, RECEIPT BOO
64232	EXERCISE-BOOKS
64233	BINDERS, FOLDERS AND FILE COVERS
64234	MANIFOLD BUSINESS FORMS AND INTERLEAVED CARBON SET CARBON SET
64235	ALBUMS FOR SAMPLES OR FOR COLLECTIONS
64239	BOOK COVERS; BLOTTING PADS AND OTHER ARTICLES OF STATIONERY,
64242	CARBON PAPER, SELF-COPY PAPER AND OTHER COPYING OR TRANSFER P
64243	TOILET PAPER, CUT TO SIZE, IN ROLLS OR SHEETS SHEETS
64244	GUMMED OR ADHESIVE PAPER, IN STRIPS OR ROLLS ROLLS
64245	FILTER PAPER AND PAPERBOARD, CUT TO SIZE OR SHAPE OR SHAPE
64248	PAPER AND PAPERBOARD, OF A KIND USED FOR WRITING, PRINTING OR
64291	BOBBINS, SPOOLS, CAPS AND SIMILAR SUPPORTS OF PAPER PULP, PAP
64292	CARDS, NOT PUNCHED, FOR PUNCHED CARD MACHINES, WHETHER OR NOT
64293	TRAYS, DISHES, PLATES, CUPS AND THE LIKE, OF PAPER OR PAPERBO
64294	HANDKERCHIEFS, CLEANSING TISSUES, TOWELS, SERVIETTES, TABLECL
64295	SANITARY TOWELS AND TAMPOONS, NAPKINS (DIAPERS) AND NAPKIN LI
64299	OTHER ARTICLES OF PAPER PULP, PAPER, PAPERBOARD, CELLULOSE WA
65122	COTTON SEWING THREAD, PUT UP FOR RETAIL SALE SALE
65132	OTHER COTTON YARN, PUT UP FOR RETAIL SALE SALE
65141	SEWING THREAD OF SYNTHETIC FILAMENTS, WHETHER OR NOT PUT UP F
65161	YARN OF SYNTHETIC FILAMENTS (OTHER THAN SEWING THREAD), PUT U
65162	HIGH TENACITY YARN (OTHER THAN SEWING THREAD), OF NYLON, OTHE
65171	YARN (OTHER THAN SEWING THREAD) OF ARTIFICIAL FILAMENTS, PUT
65185	YARN (OTHER THAN SEWING THREAD), OF ARTIFICIAL STAPLE FIBERS,
65192	SILK YARN (OTHER THAN YARN SPUN FROM SILK WASTE) NOT PUT UP F
65197	YARN OF JUTE OR OF OTHER TEXTILE BAST FIBERS OF GROUP 264 FIB
65199	YARN OF OTHER VEGETABLE TEXTILE FIBERS; PAPER YARN PAPER YARN
65211	COTTON GAUZE (OTHER THAN NARROW FABRICS OF GROUP 656) OF GROU
65213	OTHER TERRY TOWELLING AND SIMILAR WOVEN TERRY FABRICS, OF COT
65214	PILE FABRICS, WOVEN, OF COTTON (OTHER THAN TERRY TOWELLING OR
65215	OTHER PILE FABRICS AND CHENILLE FABRICS, WOVEN, OF COTTON (OT
65351	WOVEN FABRICS OBTAINED FROM HIGH TENACITY YARN OF VISCOSE RAY
65359	FABRICS, WOVEN, OF ARTIFICIAL FILAMENT YARN, N.E.S. YARN, N.E
65393	OTHER PILE FABRICS AND CHENILLE FABRICS, WOVEN, OF MAN-MADE F
65411	FABRICS, WOVEN, OF NOIL SILK
65419	OTHER WOVEN SILK FABRICS

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
65450	FABRICS, WOVEN, OF JUTE OR OF OTHER TEXTILE BAST FIBERS OF GR
65460	FABRICS, WOVEN, OF GLASS FIBER (INCLUDING NARROW FABRICS) (IN
65491	FABRICS, WOVEN, OF METAL THREAD OR OF METALLIZED YARN OF ITEM
65492	FABRICS, WOVEN, OF COARSE ANIMAL HAIR OR OF HORSEHAIR OF HORS
65493	FABRICS, WOVEN, OF VEGETABLE TEXTILE FIBERS, N.E.S.; WOVEN FA
65494	GAUZE (OTHER THAN NARROW FABRICS) OF TEXTILE MATERIALS (OTHER
65495	PILE AND CHENILLE FABRICS, WOVEN, N.E.S., OF TEXTILE MATERIAL
65519	OTHER PILE FABRICS, KNITTED OR CROCHETED
65529	KNITTED OR CROCHETED FABRICS, NOT IMPREGNATED, COATED, COVERE
65613	OTHER NARROW WOVEN FABRICS
65614	FABRICS CONSISTING OF WARP WITHOUT WEFT ASSEMBLED BY MEANS OF
65629	OTHER LABELS, BADGES AND SIMILAR ARTICLES OF TEXTILE MATERIAL
65632	BRAIDS IN THE PIECE; ORNAMENTAL TRIMMINGS IN THE PIECE, WITHO
65641	TULLES AND OTHER NET FABRICS (NOT INCLUDING WOVEN, KNITTED OR
65642	LACE, IN THE PIECE, IN STRIPS OR IN MOTIFS, MECHANICALLY MADE
65643	LACE, IN THE PIECE, IN STRIPS OR IN MOTIFS, HAND-MADE MOTIFS,
65659	OTHER EMBROIDERY, IN THE PIECE, IN STRIPS OR IN MOTIFS STRIPS
65712	OTHER FELT, NOT IMPREGNATED, COATED, COVERED OR LAMINATED COV
65719	FELT, IMPREGNATED, COATED, COVERED OR LAMINATED, N.E.S. LAMIN
65720	NONWOVENS, WHETHER OR NOT IMPREGNATED, COATED, COVERED OR LAM
65731	TEXTILE FABRICS COATED WITH GUM OR AMYLACEOUS SUBSTANCES, OF
65732	TEXTILE FABRICS, IMPREGNATED, COATED, COVERED OR LAMINATED WI
65733	RUBBERIZED TEXTILE FABRICS, OTHER THAN THOSE OF ITEM 657.93 T
65734	TEXTILE FABRICS OTHERWISE IMPREGNATED, COATED OR COVERED; PAI
65740	QUILTED TEXTILE PRODUCTS IN THE PIECE COMPOSED OF ONE OR MORE
65751	TWINE, CORDAGE, ROPE AND CABLES, WHETHER OR NOT PLATED OR BR
65752	KNOTTED NETTING OF TWINE, CORDAGE OR ROPE; MADE-UP FISHING NE
65759	ARTICLES OF YARN, STRIP OR THE LIKE OF ITEM 651.77 OR 651.88,
65761	HAT-FORMS, HAT BODIES AND HOODS OF FELT, NEITHER BLOCKED TO S
65771	WADDING OF TEXTILE MATERIALS AND ARTICLES THEREOF; TEXTILE F
65773	TEXTILE PRODUCTS AND ARTICLES, FOR TECHNICAL USES TECHNICAL U
65781	RUBBER THREAD AND CORD, TEXTILE COVERED
65789	OTHER TEXTILE YARN, AND STRIP AND THE LIKE OF ITEM 651.77 OR
65791	TEXTILE HOSEPIPING AND SIMILAR TEXTILE TUBING, WITH OR WITHOU
65792	TRANSMISSION OR CONVEYOR BELTS OR BELTING, OF TEXTILE MATERIA
65793	TIRE CORD FABRIC OF HIGH TENACITY YARN OF NYLON OR OTHER POLY
65819	SACKS AND BAGS, OF OTHER TEXTILE MATERIALS, OF A KIND USED FO
65821	TARPAULINS, AWNINGS AND SUNBLINDS
65822	TENTS
65824	PNEUMATIC MATTRESSES
65829	CAMPING GOODS, N.E.S.
65832	BLANKETS (OTHER THAN ELECTRIC) AND TRAVELING RUGS, OF COTTON
65839	BLANKETS (OTHER THAN ELECTRIC) AND TRAVELING RUGS, OF OTHER
65841	BED LINEN, KNITTED OR CROCHETED
65842	BED LINEN, NOT KNITTED NOR CROCHETED, OF COTTON COTTON
65843	BED LINEN, NOT KNITTED NOR CROCHETED, OF OTHER TEXTILE MATERIALS
65844	TABLE LINEN, KNITTED OR CROCHETED
65845	TABLE LINEN, NOT KNITTED NOR CROCHETED, OF COTTON OF COTTON
65846	TABLE LINEN, NOT KNITTED NOR CROCHETED, OF OTHER TEXTILE MATERIAL
65847	TOILET AND KITCHEN LINEN, OF COTTON
65848	TOILET AND KITCHEN LINEN, OF OTHER FIBERS FIBERS
65851	CURTAINS (INCLUDING DRAPES) AND INTERIOR BLINDS, OF TEXTILE MATERIAL
65852	BEDSPREADS
65859	FURNISHING ARTICLES, N.E.S.
65892	FLOOR-CLOTHS, DISH-CLOTHS, DUSTERS AND SIMILAR CLEANING CLOTH
65893	LIFE-JACKETS AND LIFE-BELTS AND OTHER MADE UP ARTICLES, INCLU
65899	SETS CONSISTING OF WOVEN FABRIC AND YARN, WITH OR WITHOUT ACC
65912	LINOLEUM, WHETHER OR NOT CUT TO SHAPE; FLOOR COVERINGS CONSIS
65921	CARPETS AND OTHER TEXTILE FLOOR COVERINGS, KNOTTED, WHETHER O
65929	CARPETS AND OTHER TEXTILE FLOOR COVERINGS, KNOTTED, WHETHER O
65951	CARPETS AND OTHER TEXTILE FLOOR COVERINGS, WOVEN, N.E.S., WHE
65952	CARPETS AND OTHER TEXTILE FLOOR COVERINGS, WOVEN, N.E.S., WHE
65959	CARPETS AND OTHER TEXTILE FLOOR COVERINGS, WOVEN, N.E.S., WHE
65969	OTHER CARPETS AND OTHER TEXTILE FLOOR COVERINGS, WHETHER OR N
66111	QUICKLIME
66112	SLAKED LIME
66113	HYDRAULIC LIME

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
66121	CEMENT CLINKERS
66122	PORTLAND CEMENT
66123	ALUMINOUS CEMENT ('CIMENT FONDU')
66129	OTHER HYDRAULIC CEMENTS
66132	SLATE, WORKED, AND ARTICLES OF SLATE OR OF AGGLOMERATED SLATE
66134	MARBLE, TRAVERTINE AND ALABASTER AND ARTICLES THEREOF, SIMPLY
66135	MONUMENTAL OR BUILDING STONE (EXCEPT SLATE) AND ARTICLES THEREOF
66139	OTHER MONUMENTAL OR BUILDING STONE (EXCEPT SLATE) AND ARTICLES THEREOF
66181	ARTICLES OF ASPHALT OR OF SIMILAR MATERIAL (E.G., PETROLEUM BITUMENS)
66183	ARTICLES OF ASBESTOS-CEMENT, OF CELLULOSE FIBER-CEMENT OR THE LIKE
66231	BRICKS, BLOCKS, TILES AND OTHER CERAMIC GOODS, OF SILICEOUS F
66232	REFRACTORY BRICKS, BLOCKS, TILES AND SIMILAR REFRACTORY CERAMIC
66233	REFRACTORY CEMENTS, MORTARS, CONCRETES AND SIMILAR COMPOSITIONS
66241	CERAMIC BUILDING BRICKS, FLOORING BLOCKS, SUPPORT OR FILLING TILES
66242	ROOFING TILES, CHIMNEY POTS, COWLS, CHIMNEY LINERS, ARCHITECTURAL
66243	CERAMIC PIPES, CONDUITS, GUTTERING AND PIPE FITTINGS PIPE FITTINGS
66244	UNGLAZED CERAMIC FLAGS AND PAVING, HEARTH OR WALL TILES; UNGLAZED
66245	GLAZED CERAMIC FLAGS AND PAVING, HEARTH OR WALL TILES; GLAZED
66312	OTHER MILLSTONES, GRINDSTONES, GRINDING WHEELS AND THE LIKE WITH
66313	HAND SHARPENING OR POLISHING STONES
66321	NATURAL OR ARTIFICIAL ABRASIVE POWDER OR GRAIN, ON A BASE OF
66322	NATURAL OR ARTIFICIAL ABRASIVE POWDER OR GRAIN, ON A BASE OF
66329	NATURAL OR ARTIFICIAL ABRASIVE POWDER OR GRAIN, ON A BASE OF
66332	BUILDING BLOCKS AND BRICKS, TILES, FLAGSTONES AND SIMILAR ARTICLES
66334	OTHER ARTICLES OF CEMENT, OF CONCRETE OR OF ARTIFICIAL STONE, OF
66335	MICA, WORKED, AND ARTICLES OF MICA (INCLUDING AGGLOMERATED OR
66339	ARTICLES OF STONE OR OTHER MINERAL SUBSTANCES, N.E.S. SUBSTANCES
66351	SLAG WOOL, ROCK WOOL AND SIMILAR MINERAL WOOLS (INCLUDING INSULATING
66370	REFRACTORY CERAMIC GOODS (E.G., RETORTS, CRUCIBLES, MUFFLES, FURNACES)
66381	FABRICATED ASBESTOS FIBERS; MIXTURES WITH A BASIS OF ASBESTOS
66382	FRICITION MATERIAL AND ARTICLES THEREOF (E.G., SHEETS, ROLLS, MATS)
66391	LABORATORY, CHEMICAL OR INDUSTRIAL CERAMIC WARES, NON-REFRACTORY
66399	CERAMIC ARTICLES, N.E.S.
66411	GLASS IN THE MASS; CULLET AND OTHER WASTE AND SCRAP, OF GLASS
66412	GLASS IN BALLS (OTHER THAN MICROSPHERES OF ITEM 665.93), RODS
66431	DRAWN GLASS AND BLOWN GLASS, IN SHEETS COLORED THROUGHOUT THE
66439	OTHER DRAWN GLASS AND BLOWN GLASS, IN SHEETS SHEETS
66441	FLOAT GLASS AND SURFACE GROUND OR POLISHED GLASS, NON-WIRED,
66442	FLOAT GLASS AND SURFACE GROUND OR POLISHED GLASS, WIRED, IN SHEETS
66453	CAST GLASS AND ROLLED GLASS, IN PROFILES, WHETHER OR NOT HAVING
66471	TOUGHENED (TEMPERED) SAFETY GLASS
66472	LAMINATED SAFETY GLASS
66481	REAR-VIEW MIRRORS FOR VEHICLES
66489	OTHER GLASS MIRRORS, WHETHER OR NOT FRAMED
66491	GLASS OF SUBGROUPS 664.3, 664.4 OR 664.5, BENT, EDGE-WORKED,
66492	MULTIPLE-WALLED INSULATING UNITS OF GLASS
66493	GLASS ENVELOPES (INCLUDING BULBS AND TUBES), OPEN, AND GLASS
66495	GLASS FIBERS (INCLUDING GLASS WOOL) AND ARTICLES THEREOF, N.E.S.
66496	PAVING BLOCKS, SLABS, BRICKS, SQUARES, TILES AND OTHER ARTICLES
66511	CARBOYS, BOTTLES, FLASKS, JARS, POTS, VIALS AND OTHER CONTAINERS
66521	GLASSWARE OF GLASS-CERAMICS
66522	DRINKING GLASSES OTHER THAN OF GLASS-CERAMICS
66523	GLASSWARE OF A KIND USED FOR TABLE (OTHER THAN DRINKING GLASS)
66529	OTHER GLASSWARE
66591	LABORATORY, HYGIENIC OR PHARMACEUTICAL GLASSWARE, WHETHER OR NOT
66592	GLASS AMPOULES
66593	GLASS BEADS, IMITATION PEARLS, IMITATION PRECIOUS OR SEMI-PRECIOUS
66594	GLASS CUBES AND OTHER GLASS SMALLWARES, WHETHER OR NOT ON A BASIS
66599	OTHER ARTICLES OF GLASS
66611	TABLEWARE AND KITCHENWARE OF PORCELAIN OR CHINA
66612	OTHER HOUSEHOLD OR TOILET ARTICLES, OF PORCELAIN OR CHINA
66613	CERAMIC TABLEWARE, KITCHENWARE AND OTHER HOUSEHOLD ARTICLES AND
66621	STATUETTES AND OTHER ORNAMENTAL CERAMIC ARTICLES, OF PORCELAIN
66629	STATUETTES AND OTHER ORNAMENTAL CERAMIC ARTICLES, OTHER THAN
67131	GRANULES OF PIG IRON, SPIEGELEISEN, IRON OR STEEL
67149	OTHER FERRO-MANGANESE
67151	FERRO-SILICON

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
67152	FERRO-SILICO-MANGANESE
67153	FERRO-CHROMIUM
67154	FERRO-SILICO-CHROMIUM
67159	FERRO-ALLOYS, N.E.S.
67245	OTHER PRIMARY FORMS OF IRON (OTHER THAN IRON OF ITEM 671.33)
67247	INGOTS AND OTHER PRIMARY FORMS, OF STAINLESS STEEL
67249	INGOTS AND OTHER PRIMARY FORMS, OF OTHER ALLOY STEEL
67269	SEMI-FINISHED PRODUCTS OF IRON OR NON-ALLOY STEEL CONTAINING
67282	SEMI-FINISHED PRODUCTS OF OTHER ALLOY STEEL
67321	FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, NOT CLAD, PL
67324	OTHER FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, NOT CL
67331	FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, NOT CLAD, PL
67351	FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, NOT CLAD, PL
67413	FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, OTHERWISE PL
67444	OTHER FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, CLAD,
67451	FLAT-ROLLED PRODUCTS OF IRON OR NON-ALLOY STEEL, PLATED OR CO
67511	FLAT-ROLLED PRODUCTS OF SILICON-ELECTRICAL STEEL
67532	FLAT-ROLLED PRODUCTS OF STAINLESS STEEL, NOT FURTHER WORKED T
67541	FLAT-ROLLED PRODUCTS OF OTHER ALLOY STEEL, NOT FURTHER WORKED
67556	FLAT-ROLLED PRODUCTS OF STAINLESS STEEL, NOT FURTHER WORKED T
67571	FLAT ROLLED PRODUCTS OF STAINLESS STEEL, N.E.S.
67573	FLAT-ROLLED PRODUCTS OF OTHER ALLOY STEEL, N.E.S.
67612	BARS AND RODS, HOT-ROLLED, IN IRREGULARLY WOUND COILS, OF FRE
67613	OTHER BARS AND RODS, HOT-ROLLED, IN IRREGULARLY WOUND COILS,
67615	BARS AND RODS, HOT-ROLLED, IN IRREGULARLY WOUND COILS, OF STA
67617	BARS AND RODS, HOT-ROLLED, IN IRREGULARLY WOUND COILS, OF HIG
67619	BARS AND RODS, HOT-ROLLED, IN IRREGULARLY WOUND COILS, OF OTH
67621	BARS AND RODS (OTHER THAN THOSE OF SUBGROUP 676.1), OF IRON O
67622	BARS AND RODS (OTHER THAN THOSE OF SUBGROUP 676.1), OF FREE-CU
67625	BARS AND RODS (OTHER THAN THOSE OF SUBGROUP 676.1), OF STAINL
67629	BARS AND RODS (OTHER THAN THOSE OF SUBGROUP 676.1), OF OTHER
67634	BARS AND RODS (OTHER THAN THOSE OF SUBGROUP 676.1), OF STAINL
67639	BARS AND RODS (OTHER THAN THOSE OF SUBGROUP 676.1), OF OTHER
67647	BARS AND RODS OF ALLOY STEEL, N.E.S.
67687	ANGLES, SHAPES AND SECTIONS, OF STAINLESS STEEL
67688	ANGLES, SHAPES AND SECTIONS, OF OTHER ALLOY STEEL
67701	RAILS (OTHER THAN CHECK-RAILS AND RACK RAILS) OF IRON OR STEE
67709	OTHER RAILWAY AND TRAMWAY TRACK CONSTRUCTION MATERIAL OF IRON
67821	WIRE OF STAINLESS STEEL
67829	WIRE OF OTHER ALLOY STEEL
67911	TUBES, PIPES AND HOLLOW PROFILES, SEAMLESS, OF CAST IRON
67912	LINE PIPE OF A KIND USED FOR OIL OR GAS PIPELINES, SEAMLESS,
67913	CASING, TUBING AND DRILL PIPE, SEAMLESS, OF A KIND USED IN TH
67915	OTHER TUBES, PIPES AND HOLLOW PROFILES, SEAMLESS, OF CIRCULAR
67917	OTHER SEAMLESS TUBES, PIPES AND HOLLOW PROFILES, OF IRON OR S
67943	OTHER TUBES, PIPES AND HOLLOW PROFILES, WELDED, OF CIRCULAR C
67944	OTHER TUBES, PIPES AND HOLLOW PROFILES, WELDED, OF NON-CIRCUL
67949	OTHER TUBES, PIPES AND HOLLOW PROFILES (E.G., OPEN SEAM OR WE
67951	TUBE OR PIPE FITTINGS OF NON-MALLEABLE CAST IRON
67952	TUBE OR PIPE FITTINGS OF OTHER CAST IRON
67953	FLANGES, OF STAINLESS STEEL
67954	THREADED ELBOWS, BENDS AND SLEEVES, OF STAINLESS STEEL
67955	BUTT WELDING FITTINGS, OF STAINLESS STEEL
67956	OTHER TUBE OR PIPE FITTINGS, OF STAINLESS STEEL
67959	TUBE AND PIPE FITTINGS, OF IRON OR STEEL, N.E.S.
68113	SILVER (INCLUDING SILVER PLATED WITH GOLD OR PLATINUM), UNWRO
68124	OTHER METALS OF THE PLATINUM GROUP AND ALLOYS THEREOF, UNWROU
68125	PLATINUM AND OTHER METALS OF THE PLATINUM GROUP AND ALLOYS TH
68211	UNREFINED COPPER (INCLUDING BLISTER COPPER BUT EXCLUDING CEME
68212	REFINED COPPER, UNWROUGHT
68214	COPPER ALLOYS (OTHER THAN MASTER ALLOYS), UNWROUGHT
68231	BARS, RODS AND PROFILES, OF REFINED COPPER
68232	BARS, RODS AND PROFILES, OF COPPER ALLOYS
68241	WIRE, OF REFINED COPPER
68242	WIRE, OF COPPER ALLOYS
68251	PLATES, SHEETS AND STRIP, OF REFINED COPPER, OF A THICKNESS E
68252	PLATES, SHEETS AND STRIP, OF COPPER ALLOYS, OF A THICKNESS EX

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
68262	COPPER POWDERS AND FLAKES
68271	COPPER TUBES AND PIPES
68272	COPPER TUBE OR PIPE FITTINGS (E.G., COUPLINGS, ELBOWS, SLEEVE
68312	NICKEL ALLOYS, UNWROUGHT
68321	NICKEL BARS, RODS, PROFILES AND WIRE
68323	NICKEL POWDERS AND FLAKES
68324	NICKEL PLATES, SHEETS, STRIP AND FOIL
68411	ALUMINUM, UNWROUGHT, NOT ALLOYED
68412	ALUMINUM ALLOYS, UNWROUGHT
68421	ALUMINUM BARS, RODS AND PROFILES
68422	ALUMINUM WIRE
68423	ALUMINUM PLATES, SHEETS AND STRIP, OF A THICKNESS EXCEEDING 0
68424	ALUMINUM FOIL (WHETHER OR NOT PRINTED OR BACKED WITH PAPER, P
68425	ALUMINUM POWDERS AND FLAKES
68426	ALUMINUM TUBES AND PIPES
68427	ALUMINUM TUBE OR PIPE FITTINGS (E.G., COUPLINGS, ELBOWS, SLEE
68511	UNREFINED LEAD AND LEAD ALLOYS, UNWROUGHT
68512	REFINED LEAD, UNWROUGHT
68521	LEAD BARS, RODS, PROFILES AND WIRE
68522	LEAD PLATES, SHEETS, STRIP AND FOIL; LEAD POWDERS AND FLAKES
68524	LEAD TUBES, PIPES AND TUBE OR PIPE FITTINGS (E.G., COUPLINGS,
68611	ZINC, NOT ALLOYED, UNWROUGHT
68612	ZINC ALLOYS, UNWROUGHT
68631	ZINC BARS, RODS, PROFILES AND WIRE
68632	ZINC PLATES, SHEETS, STRIP AND FOIL
68633	ZINC DUST (BLUE POWDER), POWDERS AND FLAKES
68634	ZINC TUBES, PIPES AND TUBE OR PIPE FITTINGS (E.G., COUPLINGS,
68712	TIN ALLOYS, UNWROUGHT
68721	TIN BARS, RODS, PROFILES AND WIRE
68722	TIN PLATES, SHEETS AND STRIP
68724	TIN TUBES, PIPES AND TUBE OR PIPE FITTINGS (E.G., COUPLINGS,
68914	MAGNESIUM WASTE AND SCRAP
68995	CHROMIUM AND ARTICLES THEREOF (INCLUDING WASTE AND SCRAP)
69111	BRIDGES AND BRIDGE-SECTIONS, OF IRON AND STEEL
69112	TOWERS AND LATTICE MASTS, OF IRON AND STEEL
69113	DOORS, WINDOWS AND THEIR FRAMES AND THRESHOLDS FOR DOORS, OF
69114	PROPS AND SIMILAR EQUIPMENT FOR SCAFFOLDING, SHUTTERING OR PI
69119	OTHER STRUCTURES (EXCLUDING PREFABRICATED BUILDINGS OF GROUP
69121	DOORS, WINDOWS AND THEIR FRAMES AND THRESHOLDS FOR DOORS, OF
69129	ALUMINUM STRUCTURES AND PARTS OF STRUCTURES, N.E.S.; ALUMINUM
69211	RESERVOIRS, TANKS, VATS AND SIMILAR CONTAINERS, FOR ANY MATER
69212	RESERVOIRS, TANKS, VATS AND SIMILAR CONTAINERS, FOR ANY MATER
69241	TANKS, CASKS, DRUMS, CANS, BOXES AND SIMILAR CONTAINERS, FOR
69242	ALUMINUM CASKS, DRUMS, CANS, BOXES AND SIMILAR CONTAINERS (IN
69243	CONTAINERS, OF IRON OR STEEL, FOR COMPRESSED OR LIQUEFIED GAS
69244	CONTAINERS, OF ALUMINUM, FOR COMPRESSED OR LIQUEFIED GAS
69311	STRANDED WIRE, ROPES, CABLES, PLAITED BANDS, SLINGS AND THE L
69312	STRANDED WIRE, ROPES, CABLES, PLAITED BANDS, SLINGS AND THE L
69313	STRANDED WIRE, ROPES, CABLES, PLAITED BANDS, SLINGS AND THE L
74920	GASKETS AND SIMILAR JOINTS OF METAL SHEETING COMBINED WITH OT
74991	SHIP'S PROPELLERS AND BLADES THEREFOR
74999	OTHER MACHINERY PARTS, NOT CONTAINING ELECTRICAL CONNECTORS,
75113	AUTOMATIC TYPEWRITERS; WORD-PROCESSING MACHINES
75116	OTHER ELECTRIC TYPEWRITERS
75119	OTHER NON-ELECTRIC TYPEWRITERS
75121	ELECTRONIC CALCULATORS CAPABLE OF OPERATION WITHOUT AN EXTERN
75122	OTHER CALCULATING MACHINES
75123	ACCOUNTING MACHINES (INCLUDING BOOKKEEPING MACHINES)
75124	CASH REGISTERS INCORPORATING A CALCULATING DEVICE
75128	POSTAGE-FRANKING, TICKET-ISSUING AND SIMILAR MACHINES, INCORP
75131	ELECTROSTATIC PHOTO-COPYING APPARATUS OPERATING BY REPRODUCIN
75135	THERMO-COPYING APPARATUS
75191	DUPLICATING MACHINES
75193	MACHINES FOR SORTING OR FOLDING MAIL OR-
75199	OFFICE MACHINES, N.E.S.
75220	DIGITAL AUTOMATIC DATA PROCESSING MACHINES CONTAINING IN THE
75290	DATA PROCESSING EQUIPMENT, N.E.S.

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
75910	PARTS AND ACCESSORIES OF THE PHOTO-COPYING AND THERMO-COPYING
75991	PARTS AND ACCESSORIES OF THE MACHINES OF SUBGROUP 751.1
75993	PARTS AND ACCESSORIES OF THE MACHINES OF SUBGROUP 751.9
75995	PARTS AND ACCESSORIES OF THE ELECTRONIC CALCULATING MACHINES
75997	PARTS AND ACCESSORIES OF THE MACHINES OF GROUP 752
76110	TELEVISION RECEIVERS, COLOR (INCLUDING VIDEO MONITORS AND VID
76220	TELEVISION RECEIVERS, BLACK AND WHITE OR OTHER MONOCHROME (IN
76211	RADIOBROADCAST RECEIVERS NOT CAPABLE OF OPERATING WITHOUT AN
76221	RADIOBROADCAST RECEIVERS CAPABLE OF OPERATING WITHOUT AN EXTE
76281	OTHER RADIOBROADCAST RECEIVERS (INCLUDING APPARATUS CAPABLE O
76331	RECORD-PLAYERS, COIN- OR DISC-OPERATED, NOT INCORPORATING A S
76333	OTHER RECORD PLAYERS, NOT INCORPORATING A SOUND RECORDING DEV
76381	VIDEO RECORDING OR REPRODUCING APPARATUS
76384	SOUND RECORDING APPARATUS, WHETHER OR NOT INCORPORATING A SOU
76411	TELEPHONE SETS
76413	TELEPRINTERS
76415	TELEPHONIC OR TELEGRAPHIC SWITCHING APPARATUS
76421	MICROPHONES AND STANDS THEREFOR
76422	LOUDSPEAKERS, MOUNTED IN THEIR ENCLOSURES
76423	LOUDSPEAKERS, NOT MOUNTED IN THEIR ENCLOSURES
76424	HEADPHONES, EARPHONES AND COMBINED MICROPHONE/SPEAKER SETS
76425	AUDIO-FREQUENCY ELECTRIC AMPLIFIERS
76426	ELECTRIC SOUND AMPLIFIER SETS
76431	TRANSMISSION APPARATUS
76432	TRANSMISSION APPARATUS INCORPORATING RECEPTION APPARATUS
76481	RECEPTION APPARATUS FOR RADIOTELEPHONY OR RADIOTELEGRAPHY, N
76482	TELEVISION CAMERAS
76483	RADAR APPARATUS, RADIO NAVIGATIONAL AID APPARATUS AND RADIO R
76491	PARTS AND ACCESSORIES OF THE APPARATUS OF SUBGROUP 764.1
76492	PARTS AND ACCESSORIES OF THE APPARATUS AND EQUIPMENT OF SUBGR
76493	PARTS AND ACCESSORIES OF THE APPARATUS AND EQUIPMENT OF GROUP
76499	PARTS AND ACCESSORIES OF THE APPARATUS FALLING WITHIN GROUP 7
77111	LIQUID DIELECTRIC TRANSFORMERS
77119	OTHER ELECTRIC TRANSFORMERS
77121	STATIC CONVERTERS (E.G., RECTIFIERS)
77123	BALLASTS FOR DISCHARGE LAMPS OR TUBES
77125	OTHER INDUCTORS
77129	PARTS OF THE ELECTRIC POWER MACHINERY OF GROUP 771
77220	PRINTED CIRCUITS
77235	OTHER VARIABLE RESISTORS (INCLUDING RHEOSTATS AND POTENTIOMET
77238	PARTS FOR THE ELECTRICAL RESISTORS OF SUBGROUP 772.3
77245	LIGHTNING ARRESTERS, VOLTAGE LIMITERS AND SURGE SUPPRESSORS
77254	RELAYS
77255	OTHER SWITCHES
77257	LAMP HOLDERS
77258	PLUGS AND SOCKETS
77259	OTHER ELECTRICAL APPARATUS FOR SWITCHING OR PROTECTING ELECTR
77281	BOARDS, PANELS, CONSOLES, DESKS, CABINETS AND OTHER BASES FOR
77282	OTHER PARTS SUITABLE FOR USE SOLELY OR PRINCIPALLY WITH THE A
77311	WINDING WIRE
77312	CO-AXIAL CABLE AND OTHER CO-AXIAL CONDUCTORS
77313	IGNITION WIRING SETS AND OTHER WIRING SETS OF A KIND USED IN
77315	OTHER ELECTRIC CONDUCTORS, FOR A VOLTAGE EXCEEDING 80V BUT NO
77318	OPTICAL FIBER CABLES MADE UP OF INDIVIDUALLY SHEATHED FIBERS,
77322	ELECTRICAL INSULATORS OF GLASS
77323	ELECTRICAL INSULATORS OF CERAMICS
77324	ELECTRICAL INSULATORS OF MATERIALS OTHER THAN GLASS OR CERAMI
77329	INSULATING FITTINGS FOR ELECTRICAL MACHINES, APPLIANCES OR EQ
77412	OTHER ELECTRO-DIAGNOSTIC APPARATUS (INCLUDING APPARATUS FOR F
77421	APPARATUS BASED ON THE USE OF X-RAYS, WHETHER OR NOT FOR MEDI
77429	OTHER X-RAY GENERATORS; HIGH TENSION GENERATORS, CONTROL PANE
77511	HOUSEHOLD OR LAUNDRY-TYPE WASHING MACHINES (INCLUDING MACHINE
77512	CLOTHES DRYING MACHINES, EACH OF A DRY LINEN CAPACITY NOT EXC
77521	REFRIGERATORS, HOUSEHOLD TYPE (ELECTRIC OR OTHER), WHETHER OR
77522	DEEP-FREEZERS, HOUSEHOLD TYPE (ELECTRIC OR OTHER)
77530	DISH WASHING MACHINES OF THE HOUSEHOLD TYPE
77541	SHAVERS, WITH SELF-CONTAINED ELECTRIC MOTOR

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
77549	PARTS OF SHAVERS AND HAIR CLIPPERS WITH SELF-CONTAINED ELECTR
77571	VACUUM CLEANERS AND FLOOR POLISHERS, ELECTRO-MECHANICAL, DOME
77572	FOOD GRINDERS AND MIXERS; FRUIT OR VEGETABLE JUICE EXTRACTORS
77573	OTHER ELECTRO-MECHANICAL, DOMESTIC APPLIANCES WITH SELF-CONTA
77579	PARTS OF THE ELECTRO-MECHANICAL DOMESTIC APPLIANCES FALLING W
77581	ELECTRIC INSTANTANEOUS OR STORAGE WATER HEATERS AND IMMERSION
77582	ELECTRIC SPACE HEATING APPARATUS AND ELECTRIC SOIL HEATING AP
77583	ELECTRO-THERMIC HAIR-DRESSING OR HAND-DRYING APPARATUS
77584	ELECTRIC SMOOTHING IRONS
77586	OVENS AND COOKERS, COOKING PLATES, BOILING RINGS, GRILLERS AN
77587	ELECTRO-THERMIC DOMESTIC APPLIANCES, N.E.S.
77589	PARTS OF THE ELECTRO-THERMIC APPLIANCES OF SUBGROUP 775.8
77611	COLOR TELEVISION PICTURE TUBES, CATHODE-RAY (INCLUDING VIDEO
77612	BLACK AND WHITE OR OTHER MONOCHROME TELEVISION PICTURE TUBES,
77621	TELEVISION CAMERA TUBES; IMAGE CONVERTERS AND INTENSIFIERS; O
77627	OTHER VALVES AND TUBES
77629	PARTS OF THE TUBES AND VALVES OF SUBGROUPS 776.1 AND 776.2
77632	TRANSISTORS (EXCLUDING PHOTSENSITIVE TRANSISTORS) WITH A DIS
77639	OTHER SEMI-CONDUCTOR DEVICES
77649	OTHER ELECTRONIC INTEGRATED CIRCUITS AND MICROASSEMBLIES
77688	PARTS OF THE DEVICES OF SUBGROUPS 776.3 AND OF THE MOUNTED PI
77689	PARTS OF THE ARTICLES OF SUBGROUP 776.4
77811	PRIMARY CELLS AND PRIMARY BATTERIES
77812	ELECTRIC ACCUMULATORS (STORAGE BATTERIES)
77817	PARTS OF PRIMARY CELLS AND PRIMARY BATTERIES
77819	PARTS OF ELECTRIC ACCUMULATORS
77821	FILAMENT LAMPS (OTHER THAN FLASH BULBS, INFRA-RED AND ULTRA-V
77822	DISCHARGE LAMPS (OTHER THAN ULTRA-VIOLET LAMPS)
77823	SEALED BEAM LAMP UNITS
77824	ULTRA-VIOLET OR INFRA-RED LAMPS; ARC-LAMPS
77829	PARTS OF THE LAMPS OF SUBGROUP 778.2
77831	ELECTRICAL IGNITION OR STARTING EQUIPMENT OF A KIND USED FOR
77833	PARTS OF THE EQUIPMENT OF ITEM 778.31
77834	ELECTRICAL LIGHTING OR SIGNALLING EQUIPMENT (EXCLUDING ARTICL
77835	PARTS OF THE EQUIPMENT OF ITEM 778.34
77841	DRILLS OF ALL KINDS
77843	SAWS FOR WORKING IN THE HAND, WITH SELF-CONTAINED ELECTRIC MO
77845	OTHER ELECTRO-MECHANICAL TOOLS FOR WORKING IN THE HAND, WITH
77848	PARTS OF THE ELECTRO-MECHANICAL HAND TOOLS OF SUBGROUP 778.4
77861	FIXED CAPACITORS DESIGNED FOR USE IN 50/60 HZ CIRCUITS AND HA
77867	OTHER FIXED CAPACITORS
77869	PARTS OF ELECTRICAL CAPACITORS
77878	OTHER ELECTRICAL MACHINES AND APPARATUS, HAVING INDIVIDUAL FU
77879	PARTS OF THE ELECTRICAL MACHINES AND APPARATUS OF SUBGROUP 77
77881	ELECTRO-MAGNETS; PERMANENT MAGNETS AND ARTICLES INTENDED TO B
77882	ELECTRICAL SIGNALLING, SAFETY OR TRAFFIC CONTROL EQUIPMENT FO
77884	ELECTRIC SOUND OR VISUAL SIGNALLING APPARATUS (E.G., BELLS, S
77889	ELECTRICAL PARTS OF MACHINERY OR APPARATUS, N.E.S.
78120	MOTOR VEHICLES FOR THE TRANSPORT OF PERSONS
78211	DUMPERS DESIGNED FOR OFF-HIGHWAY USE
78219	MOTOR VEHICLES FOR THE TRANSPORT OF GOODS, N.E.S.
78221	CRANE LORRIES
78223	MOBILE DRILLING DERRICKS
78225	FIRE FIGHTING VEHICLES
78227	CONCRETE-MIXER LORRIES
78229	OTHER SPECIAL PURPOSE VEHICLES
78311	PUBLIC-TRANSPORT TYPE PASSENGER MOTOR VEHICLES WITH COMPRESSI
78319	PUBLIC-TRANSPORT TYPE PASSENGER MOTOR VEHICLES OTHER THAN WIT
78320	ROAD TRACTORS FOR SEMI-TRAILERS
78410	CHASSIS FITTED WITH ENGINES, FOR THE MOTOR VEHICLES OF GROUPS
78421	BODIES (INCLUDING CABS), FOR THE MOTOR VEHICLES OF GROUP 781
78425	BODIES (INCLUDING CABS), FOR THE MOTOR VEHICLES OF GROUPS 722
78432	OTHER PARTS AND ACCESSORIES OF BODIES (INCLUDING CABS) OF THE
78439	OTHER PARTS AND ACCESSORIES OF THE MOTOR VEHICLES OF GROUPS 7
78513	MOTORCYCLES WITH RECIPROCATING INTERNAL COMBUSTION PISTON ENG
78520	BICYCLES AND OTHER CYCLES (INCLUDING DELIVERY TRICYCLES), NOT
78531	INVALID CARRIAGES, WHETHER OR NOT MOTORIZED) OR OTHERWISE MECH

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
78535	PARTS AND ACCESSORIES OF MOTORCYCLES (INCLUDING MOPEDS), CYCL
78536	PARTS AND ACCESSORIES OF INVALID CARRIAGES
78537	PARTS AND ACCESSORIES OF OTHER VEHICLES OF GROUP 785
78611	TRAILERS AND SEMI-TRAILERS OF THE CARAVAN TYPE, FOR HOUSING O
78621	SELF-LOADING OR SELF-UNLOADING TRAILERS AND SEMI-TRAILERS FOR
78622	TANKER TRAILERS AND TANKER SEMI-TRAILERS
78629	OTHER TRAILERS AND SEMI-TRAILERS FOR THE TRANSPORT OF GOODS
78630	CONTAINERS (INCLUDING CONTAINERS FOR THE TRANSPORT OF FLUIDS)
78683	TRAILERS AND SEMI-TRAILERS, N.E.S.
78685	VEHICLES, NOT MECHANICALLY PROPELLED, N.E.S.
78689	PARTS OF THE TRAILERS AND SEMI-TRAILERS OF SUB-GROUPS 786.1,
79129	RAIL LOCOMOTIVES, N.E.S., LOCOMOTIVE TENDERS
79181	RAILWAY OR TRAMWAY MAINTENANCE OR SERVICE VEHICLES, WHETHER O
79182	RAILWAY OR TRAMWAY GOODS VANS AND WAGONS (FREIGHT CARS), NOT
79211	HELICOPTERS OF AN UNLADEN WEIGHT NOT EXCEEDING 2,000 KG
79220	AIRPLANES AND OTHER AIRCRAFT, MECHANICALLY PROPELLED (OTHER T
79297	OTHER PARTS OF THE GOODS OF GROUP 792
79311	INFLATABLE VESSELS (INCLUDING ROWING BOATS AND CANOES)
79312	SAILBOATS, NOT INFLATABLE, WITH OR WITHOUT AUXILIARY MOTOR
79322	TANKERS OF ALL KINDS
79329	OTHER VESSELS (INCLUDING WARSHIPS AND LIFEBOATS OTHER THAN RO
79391	INFLATABLE RAFTS
79399	FLOATING STRUCTURES, N.E.S.
81100	PREFABRICATED BUILDINGS
81211	RADIATORS FOR CENTRAL HEATING, NOT ELECTRICALLY HEATED, AND P
81215	AIR HEATERS AND HOT AIR DISTRIBUTORS, AND PARTS THEREOF
81217	CENTRAL HEATING BOILERS (OTHER THAN THOSE OF GROUP 711)
81219	PARTS FOR THE BOILERS OF ITEM 812.17
81221	CERAMIC SINKS, WASH BASINS, WASH BASIN PEDESTALS, BATHS, BIDE
81229	CERAMIC SINKS, WASH BASINS, WASH BASIN PEDESTALS, BATHS, BIDE
81311	CHANDELIERS AND OTHER ELECTRIC CEILING AND WALL LIGHTING FITT
81312	PORTABLE ELECTRIC LAMPS DESIGNED TO FUNCTION BY THEIR OWN SOU
81313	ELECTRIC TABLE, DESK, BEDSIDE OR FLOOR-STANDING LAMPS
81315	ELECTRIC LAMPS AND LIGHTING FITTINGS, NES
81317	NON-ELECTRICAL LAMPS AND LIGHTING FITTINGS
81320	ILLUMINATED SIGNS, ILLUMINATED NAME-PLATES AND THE LIKE
81380	PARTS OF THE PORTABLE ELECTRIC LAMPS OF ITEM 813.12
81391	PARTS, N.E.S., OF THE GOODS OF SUBGROUPS 813.1 AND 813.2, OF
81399	PARTS, N.E.S., OF THE GOODS OF SUBGROUPS 813.1 AND 813.2, OF
82111	SEATS OF A KIND USED FOR AIRCRAFT
82112	SEATS OF A KIND USED FOR MOTOR VEHICLES
82113	SEATS OF CANE, OSIER, BAMBOO OR SIMILAR MATERIALS
82114	SWIVEL SEATS WITH VARIABLE HEIGHT ADJUSTMENT
82115	SEATS, OTHER THAN GARDEN SEATS OR CAMPING EQUIPMENT, CONVERTI
82116	SEATS, N.E.S., WITH WOODEN FRAMES
82117	SEATS, N.E.S., WITH METAL FRAMES
82118	OTHER SEATS
82119	PARTS OF THE SEATS OF SUBGROUP 821.1
82121	MATTRESS SUPPORTS
82123	MATTRESSES OF CELLULAR RUBBER OR PLASTICS
82125	MATTRESSES OF OTHER MATERIALS
82127	SLEEPING BAGS
82129	OTHER ARTICLES OF BEDDING
82131	FURNITURE, N.E.S., OF METAL, OF A KIND USED IN OFFICES
82139	OTHER METAL FURNITURE
82151	FURNITURE, N.E.S., OF WOOD, OF A KIND USED IN OFFICES
82153	FURNITURE, N.E.S., OF WOOD, OF A KIND USED IN THE KITCHEN
82155	FURNITURE, N.E.S., OF WOOD, OF A KIND USED IN THE BEDROOM
82159	OTHER WOODEN FURNITURE
82171	FURNITURE OF PLASTICS
82179	FURNITURE OF OTHER MATERIALS (INCLUDING BAMBOO)
82180	PARTS OF THE FURNITURE OF SUBGROUPS 821.3, 821.5 AND 821.7
83111	HANDBAGS, WHETHER OR NOT WITH SHOULDER STRAP (INCLUDING THOSE
83112	HANDBAGS, WHETHER OR NOT WITH SHOULDER STRAP (INCLUDING THOSE
83119	OTHER HANDBAGS, WHETHER OR NOT WITH SHOULDER STRAP (INCLUDING
83121	TRUNKS, SUITCASES, VANITY CASES, EXECUTIVE CASES, BRIEF CASES
83122	TRUNKS, SUITCASES, VANITY CASES, EXECUTIVE CASES, BRIEF CASES

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
83129	TRUNKS, SUITCASES, VANITY CASES, EXECUTIVE CASES, BRIEF CASES
83130	TRAVEL SETS FOR PERSONAL TOILET, SEWING OR SHOE OR CLOTHES CL
83191	ARTICLES OF A KIND NORMALLY CARRIED IN THE POCKET OR HANDBAG
83199	OTHER ARTICLES OF SUBGROUP 831.9, N.E.S.
84111	MEN'S OR BOYS' OVERCOATS, RAINCOATS, CAR-COATS, CAPES, CLOAKS
84112	MEN'S OR BOYS' OVERCOATS, RAINCOATS, CAR-COATS, CAPES, CLOAKS
84123	MEN'S OR BOYS' ENSEMBLES, OF TEXTILE FABRICS, NOT KNITTED OR
84130	MEN'S OR BOYS' JACKETS AND BLAZERS, OF TEXTILE FABRICS, NOT K
84140	MEN'S OR BOYS' TROUSERS, BIB AND BRACE OVERALLS, BREECHES AND
84151	MEN'S OR BOYS' SHIRTS OF COTTON, NOT KNITTED OR CROCHETED
84159	MEN'S OR BOYS' SHIRTS OF TEXTILE MATERIALS OTHER THAN COTTON,
84161	MEN'S OR BOYS' UNDERPANTS AND BRIEFS, OF TEXTILE FABRICS, NOT
84162	MEN'S OR BOYS' NIGHTSHIRTS AND PAJAMAS, OF TEXTILE FABRICS, N
84169	MEN'S OR BOYS' SINGLET AND OTHER VESTS, BATHROBES, DRESSING
84211	WOMEN'S OR GIRLS' OVERCOATS, RAINCOATS, CAR-COATS, CAPES, CLOA
84219	WOMEN'S OR GIRLS' ANORAKS (INCLUDING SKI-JACKETS), WIND-CHEAT
84221	WOMEN'S OR GIRLS' SUITS, OF TEXTILE FABRICS, NOT KNITTED OR C
84222	WOMEN'S OR GIRLS' ENSEMBLES, OF TEXTILE FABRICS, NOT KNITTED
84230	WOMEN'S OR GIRLS' JACKETS, OF TEXTILE FABRICS, NOT KNITTED OR
84240	WOMEN'S OR GIRLS' DRESSES, OF TEXTILE FABRICS, NOT KNITTED OR
84250	WOMEN'S OR GIRLS' SKIRTS AND DIVIDED SKIRTS, NOT KNITTED OR C
84260	WOMEN'S OR GIRLS' TROUSERS, BIB AND BRACE OVERALLS, BREECHES
84270	WOMEN'S OR GIRLS' BLOUSES, SHIRTS AND SHIRT-BLOUSES, OF TEXTI
84282	WOMEN'S OR GIRLS' NIGHTDRESSES AND PAJAMAS, OF TEXTILE FABRIC
84289	WOMEN'S OR GIRLS' SINGLET AND OTHER VESTS, BRIEFS, PANTIES,
84310	MEN'S OR BOYS' OVERCOATS, CAR-COATS, CAPES, CLOAKS, ANORAKS (
84321	MEN'S OR BOYS' SUITS OF TEXTILE FABRICS, KNITTED OR CROCHETED
84323	MEN'S OR BOYS' JACKETS AND BLAZERS, OF TEXTILE FABRICS, KNIT
84324	MEN'S OR BOYS' TROUSERS, BIB AND BRACE OVERALLS, BREECHES AND
84371	MEN'S OR BOYS' SHIRTS OF COTTON, KNITTED OR CROCHETED
84379	MEN'S OR BOYS' SHIRTS OF OTHER TEXTILE MATERIALS, KNITTED OR
84381	MEN'S OR BOYS' UNDERPANTS AND BRIEFS, OF TEXTILE FABRICS, KNI
84382	MEN'S OR BOYS' NIGHTSHIRTS AND PAJAMAS, OF TEXTILE FABRICS, K
84389	MEN'S OR BOYS' BATHROBES, DRESSING GOWNS AND SIMILAR ARTICLES
84410	WOMEN'S OR GIRLS' OVERCOATS, CAR-COATS, CAPES, CLOAKS, ANORAK
84421	WOMEN'S OR GIRLS' SUITS OF TEXTILE FABRICS, KNITTED OR CROCHE
84423	WOMEN'S OR GIRLS' JACKETS OF TEXTILE FABRICS, KNITTED OR CROC
84424	WOMEN'S OR GIRLS' DRESSES OF TEXTILE FABRICS, KNITTED OR CROC
84425	WOMEN'S OR GIRLS' SKIRTS AND DIVIDED SKIRTS, OF TEXTILE FABRI
84426	WOMEN'S OR GIRLS' TROUSERS, BIB AND BRACE OVERALLS, BREECHES
84470	WOMEN'S OR GIRLS' BLOUSES, SHIRTS AND SHIRT-BLOUSES, OF TEXTI
84482	WOMEN'S OR GIRLS' BRIEFS AND PANTIES, OF TEXTILE FABRICS, KNI
84489	WOMEN'S OR GIRLS' NEGLIGEEES, BATHROBES, DRESSING GOWNS AND SI
84511	BABIES' GARMENTS AND CLOTHING ACCESSORIES, OF TEXTILE FABRICS
84512	BABIES' GARMENTS AND CLOTHING ACCESSORIES, OF TEXTILE FABRICS
84521	GARMENTS MADE-UP OF FABRICS OF SUBGROUP 657.1 OR 657.2, OTHER
84530	JERSEYS, PULLOVERS, CARDIGANS, WAISTCOATS AND SIMILAR ARTICLE
84540	T-SHIRTS, SINGLET AND OTHER VESTS, OF TEXTILE FABRICS, KNIT
84551	BRASSIERES OF TEXTILE FABRICS, WHETHER OR NOT KNITTED OR CROC
84552	GIRDLES, CORSETS, BRACES, SUSPENDERS, GARTERS AND SIMILAR ART
84561	SWIMWEAR, MEN'S AND BOYS', OF TEXTILE FABRICS, NOT KNITTED OR
84562	SWIMWEAR, MEN'S AND BOYS', OF TEXTILE FABRICS, KNITTED OR CRO
84563	SWIMWEAR, WOMEN'S AND GIRLS', OF TEXTILE FABRICS, NOT KNITTED
84587	ARTICLES OF APPAREL, MEN'S OR BOYS', N.E.S., OF TEXTILE FABRI
84589	ARTICLES OF APPAREL, WOMEN'S OR GIRLS', N.E.S., OF TEXTILE FA
84599	GARMENTS, KNITTED OR CROCHETED, N.E.S., OF TEXTILE FABRICS
84611	HANDKERCHIEFS, OF TEXTILE FABRICS, NOT KNITTED OR CROCHETED
84612	SHAWLS, SCARVES, MUFFLERS, MANILLAS, VEILS AND THE LIKE, OF
84613	TIES, BOW TIES AND CRAVATS, OF TEXTILE FABRICS, NOT KNITTED O
84614	GLOVES, MITTENS AND MITTS, OF TEXTILE FABRICS, NOT KNITTED O
84619	OTHER MADE-UP CLOTHING ACCESSORIES, PARTS OF GARMENTS OR OF C
84621	PANTY HOSE AND TIGHTS, KNITTED OR CROCHETED
84629	OTHER HOSIERY, KNITTED OR CROCHETED (OTHER THAN THOSE FOR BAB
84691	GLOVES, KNITTED OR CROCHETED, IMPREGNATED, COATED OR COVERED
84692	OTHER GLOVES, MITTENS AND MITTS, KNITTED OR CROCHETED (OTHER
84694	TIES, BOW TIES AND CRAVATS, KNITTED OR CROCHETED
84699	MADE-UP CLOTHING ACCESSORIES, N.E.S.: PARTS OF GARMENTS OR OF

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
84811	ARTICLES OF APPAREL OF LEATHER OR COMPOSITION LEATHER
84812	GLOVES, MITTENS AND MITTS, NOT DESIGNED FOR USE IN SPORTS, OF
84813	BELTS AND BANDOLIERS OF LEATHER OR COMPOSITION LEATHER
84819	OTHER CLOTHING ACCESSORIES OF LEATHER OR COMPOSITION LEATHER
84821	ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, OF PLASTICS
84822	RUBBER GLOVES (OTHER THAN HARD RUBBER)
84829	OTHER ARTICLES OF APPAREL AND CLOTHING ACCESSORIES, FOR ALL P
84842	HATS AND OTHER HEADGEAR, PLATTED OR MADE BY ASSEMBLING STRIPS
84843	HATS AND OTHER HEADGEAR, KNITTED OR CROCHETED, OR MADE UP FRO
84845	HEADGEAR, N.E.S., OF RUBBER OR PLASTICS, WHETHER OR NOT LINED
84848	HEAD-BANDS, LININGS, COVERS, HAT FOUNDATIONS, HAT FRAMES, PEA
84849	HEADGEAR, N.E.S., OF MATERIALS OTHER THAN RUBBER OR PLASTICS
85115	FOOTWEAR WITH OUTER SOLES OF RUBBER, PLASTICS, LEATHER OR COM
85125	TENNIS SHOES, BASKETBALL SHOES, GYM SHOES, TRAINING SHOES AND
85132	OTHER FOOTWEAR WITH OUTER SOLES AND UPPERS OF RUBBER OR PLAST
85148	FOOTWEAR, N.E.S., WITH OUTER SOLES OF LEATHER AND UPPERS OF L
85159	FOOTWEAR WITH UPPER OF TEXTILE MATERIALS, N.E.S.
85170	FOOTWEAR, N.E.S.
85190	PARTS OF FOOTWEAR; REMOVABLE IN-SOLES, HEEL CUSHIONS AND SIMI
87115	OTHER OPTICAL INSTRUMENTS
87119	PARTS AND ACCESSORIES FOR ASTRONOMICAL INSTRUMENTS AND OPTICA
87139	PARTS AND ACCESSORIES OF MICROSCOPES (OTHER THAN OPTICAL MICR
87145	MICROSCOPES, N.E.S.
87193	OTHER DEVICES, APPLIANCES AND INSTRUMENTS
87199	PARTS AND ACCESSORIES OF THE ARTICLES OF SUBGROUP 871.9
87211	DENTAL DRILL ENGINES, WHETHER OR NOT COMBINED ON A SINGLE BAS
87219	OTHER DENTAL INSTRUMENTS AND APPLIANCES
87221	SYRINGES, NEEDLES, CATHETERS, CANNULAE AND THE LIKE
87225	OPHTHALMIC INSTRUMENTS AND APPLIANCES, N.E.S.
87229	OTHER INSTRUMENTS AND APPLIANCES FOR MEDICAL, SURGICAL OR VET
87231	MECHANO-THERAPY APPLIANCES; MASSAGE APPARATUS; PSYCHOLOGICAL
87233	OZONE THERAPY, OXYGEN THERAPY, AEROSOL THERAPY, ARTIFICIAL RE
87240	MEDICAL, DENTAL, SURGICAL OR VETERINARY FURNITURE (E.G., OPER
87311	GAS METERS
87313	LIQUID METERS
87315	ELECTRICITY METERS
87319	PARTS AND ACCESSORIES OF GAS, LIQUID OR ELECTRICITY METERS
87321	REVOLUTION COUNTERS, PRODUCTION COUNTERS, TAXIMETERS, MILEOME
87325	SPEED INDICATORS AND TACHOMETERS; STROBOSCOPES
87329	PARTS AND ACCESSORIES OF THE ARTICLES OF SUBGROUP 873.2
87411	DIRECTION FINDING COMPASSES; OTHER NAVIGATIONAL INSTRUMENTS A
87412	PARTS AND ACCESSORIES OF NAVIGATIONAL INSTRUMENTS AND APPLIAN
87413	SURVEYING (INCLUDING PHOTOGRAMMETRICAL SURVEYING), HYDROGRAPH
87414	PARTS AND ACCESSORIES FOR THE INSTRUMENTS AND APPLIANCES OF I
87422	DRAFTING TABLES AND MACHINES, WHETHER OR NOT AUTOMATIC, AND O
87423	INSTRUMENTS FOR MEASURING LENGTH, FOR USE IN THE HAND (E.G.,
87425	MEASURING OR CHECKING INSTRUMENTS, APPLIANCES AND MACHINES, N
87431	INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING THE FLOW
87435	INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING PRESSURE
87437	OTHER INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING OTH
87439	PARTS AND ACCESSORIES FOR THE INSTRUMENTS AND APPARATUS OF SU
87446	INSTRUMENTS AND APPARATUS FOR PHYSICAL OR CHEMICAL ANALYSIS,
87452	INSTRUMENTS, APPARATUS OR MODELS, DESIGNED FOR DEMONSTRATIONA
87453	MACHINES AND APPLIANCES FOR TESTING THE HARDNESS, STRENGTH, C
87454	PARTS AND ACCESSORIES FOR THE MACHINES AND APPLIANCES OF ITEM
87455	HYDROMETERS AND SIMILAR FLOATING INSTRUMENTS, THERMOMETERS, P
87456	PARTS AND ACCESSORIES FOR THE INSTRUMENTS OF ITEM 874.55
87463	PRESSURE REGULATORS AND CONTROLLERS (MANOSTATS)
87465	OTHER REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS
87469	PARTS AND ACCESSORIES FOR AUTOMATIC REGULATING OR CONTROLLING
87475	OTHER INSTRUMENTS AND APPARATUS, FOR MEASURING OR CHECKING VO
87477	OTHER INSTRUMENTS AND APPARATUS, SPECIALLY DESIGNED FOR TELEC
87478	OTHER INSTRUMENTS AND APPARATUS FOR MEASURING OR CHECKING ELE
87479	PARTS AND ACCESSORIES FOR THE INSTRUMENTS AND APPARATUS OF SU
88111	PHOTOGRAPHIC (OTHER THAN CINEMATOGRAPHIC) CAMERAS
88112	FLASHBULBS, FLASHCUBES AND THE LIKE
88113	PHOTOGRAPHIC FLASHLIGHT APPARATUS (OTHER THAN DISCHARGE LAMPS

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**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
88114	PARTS AND ACCESSORIES FOR THE PHOTOGRAPHIC CAMERAS OF ITEM 88
88121	CINEMATOGRAPHIC CAMERAS, WHETHER OR NOT INCORPORATING SOUND R
88122	CINEMATOGRAPHIC PROJECTORS, WHETHER OR NOT INCORPORATING SOUN
88123	PARTS AND ACCESSORIES FOR THE CINEMATOGRAPHIC CAMERAS OF ITEM
88124	PARTS AND ACCESSORIES FOR CINEMATOGRAPHIC PROJECTORS
88132	IMAGE PROJECTORS, N.E.S.
88133	PHOTOGRAPHIC (OTHER THAN CINEMATOGRAPHIC) ENLARGERS AND REDUC
88134	PARTS AND ACCESSORIES FOR THE EQUIPMENT OF ITEMS 881.31 THROU
88135	APPARATUS AND EQUIPMENT FOR PHOTOGRAPHIC (INCLUDING CINEMATOG
88136	PARTS AND ACCESSORIES FOR THE APPARATUS AND EQUIPMENT OF ITEM
88210	CHEMICAL PREPARATIONS FOR PHOTOGRAPHIC USES (OTHER THAN VARNI
88220	PHOTOGRAPHIC PLATES AND FILM IN THE FLAT, SENSITIZED, UNEXPOS
88230	PHOTOGRAPHIC FILM IN ROLLS, SENSITIZED, UNEXPOSED, OF ANY MAT
88240	PHOTOGRAPHIC PAPER, PAPERBOARD AND TEXTILES, SENSITIZED, UNEX
88250	PHOTOGRAPHIC PLATES, FILM, PAPER, PAPERBOARD AND TEXTILES, EX
88260	PHOTOGRAPHIC PLATES AND FILM, EXPOSED AND DEVELOPED, OTHER TH
88310	CINEMATOGRAPH FILM, EXPOSED AND DEVELOPED, WHETHER OR NOT INC
88390	OTHER CINEMATOGRAPH FILM, EXPOSED AND DEVELOPED, WHETHER OR N
88417	SPECTACLE LENSES OF OTHER MATERIALS
88421	FRAMES AND MOUNTINGS FOR SPECTACLES, GOGGLES OR THE LIKE
88423	SPECTACLES, GOGGLES AND THE LIKE, CORRECTIVE, PROTECTIVE OR O
88431	OBJECTIVE LENSES FOR CAMERAS, PROJECTORS OR PHOTOGRAPHIC ENLA
88432	OTHER OBJECTIVE LENSES, MOUNTED
88433	FILTERS, MOUNTED
88439	MOUNTED OPTICAL ELEMENTS, N.E.S.
88531	WRIST WATCHES, BATTERY OR ACCUMULATOR POWERED, WHETHER OR NOT
88541	WRIST WATCHES, BATTERY OR ACCUMULATOR POWERED, WHETHER OR NOT
88542	OTHER WRIST WATCHES, WHETHER OR NOT INCORPORATING A STOP WATC
88549	POCKET WATCHES AND OTHER WATCHES (NOT WRIST WATCHES), OTHER T
88574	ALARM CLOCKS, BATTERY, ACCUMULATOR OR MAINS POWERED
88576	WALL CLOCKS, BATTERY, ACCUMULATOR OR MAINS POWERED
88577	OTHER WALL CLOCKS
88579	CLOCKS, N.E.S.
88593	WATCH STRAPS, WATCH BANDS AND WATCH BRACELETS AND PARTS THERE
88594	TIME OF DAY RECORDING APPARATUS AND APPARATUS FOR MEASURING,
88599	CLOCK OR WATCH PARTS, N.E.S.
89111	TANKS AND OTHER ARMORED FIGHTING VEHICLES, MOTORIZED, WHETHER
89112	MILITARY WEAPONS (OTHER THAN REVOLVERS AND PISTOLS AND SIDEAR
89113	SIDE-ARMS (E.G., SWORDS, CUTLASSES AND BAYONETS) AND PARTS TH
89131	FIREARMS, N.E.S. AND SIMILAR DEVICES WHICH OPERATE BY THE FIR
89193	SHOTGUN BARRELS OF SHOTGUNS OF ITEM 891.31
89199	PARTS AND ACCESSORIES, N.E.S., OF THE ARTICLES OF ITEMS 891.1
89213	MAPS AND CHARTS IN BOOK FORM
89214	MAPS AND HYDROGRAPHIC OR SIMILAR CHARTS OF ALL KINDS (INCLUDI
89215	PRINTED BOOKS, BROCHURES, LEAFLETS AND SIMILAR PRINTED MATTER
89216	DICTIONARIES AND ENCYCLOPAEDIAS, AND SERIAL INSTALMENTS THERE
89219	OTHER BOOKS, BROCHURES AND SIMILAR PRINTED MATTER, NOT IN SIN
89221	NEWSPAPERS, JOURNALS AND PERIODICALS, WHETHER OR NOT ILLUSTR
89229	NEWSPAPERS, JOURNALS AND PERIODICALS OTHER THAN THOSE APPEAR
89241	TRANSFERS (DECALCOMANIAS)
89242	PRINTED OR ILLUSTRATED POSTCARDS; PRINTED CARDS BEARING PERSO
89281	PAPER AND PAPERBOARD LABELS OF ALL KINDS, WHETHER OR NOT PRIN
89282	PLANS AND DRAWINGS FOR ARCHITECTURAL, ENGINEERING, INDUSTRIAL
89283	UNUSED POSTAGE, REVENUE OR SIMILAR STAMPS OF CURRENT OR NEW I
89284	CALENDARS OF ANY KIND, PRINTED (INCLUDING CALENDAR BLOCKS)
89285	MUSIC, PRINTED OR IN MANUSCRIPT, WHETHER OR NOT BOUND OR ILLU
89286	TRADE ADVERTISING MATERIAL, COMMERCIAL CATALOGUES AND THE LIKE
89287	PICTURES, DESIGNS AND PHOTOGRAPHS
89289	PRINTED MATTER, N.E.S.
89311	SACKS AND BAGS (INCLUDING CONES), OF PLASTICS
89319	ARTICLES FOR THE CONVEYANCE OR PACKING OF GOODS, N.E.S., OF P
89321	BATHS, SHOWER-BATHS, WASH-BASINS, BIDETS, LAVATORY PANS, SEAT
89329	OTHER BUILDERS' WARE, OF PLASTICS
89331	FLOOR COVERINGS OF PLASTICS, WHETHER OR NOT SELF-ADHESIVE, IN
89332	TABLEWARE, KITCHENWARE, OTHER HOUSEHOLD ARTICLES AND TOILET A
89394	OFFICE OR SCHOOL SUPPLIES, OF PLASTICS
89395	FITTINGS FOR FURNITURE, COACHWORK OR THE LIKE, OF PLASTICS

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
89399	OTHER ARTICLES OF PLASTICS
89410	BABY CARRIAGES, AND PARTS THEREOF, N.E.S.
89421	WHEELED TOYS DESIGNED TO BE RIDDEN BY CHILDREN (E.G., TRICYCL
89422	DOLLS REPRESENTING ONLY HUMAN BEINGS, WHETHER OR NOT DRESSED
89423	PARTS AND ACCESSORIES OF DOLLS REPRESENTING ONLY HUMAN BEINGS
89424	CONSTRUCTION SETS AND CONSTRUCTIONAL TOYS
89425	TOYS REPRESENTING ANIMALS OR NON-HUMAN CREATURES
89427	PUZZLES
89429	TOYS, N.E.S.
89431	VIDEO GAMES OF A KIND USED WITH A TELEVISION RECEIVER
89433	ARTICLES AND ACCESSORIES FOR BILLIARDS
89435	OTHER GAMES, COIN- OR DISC-OPERATED (NOT BOWLING ALLEY EQUIPM
89437	PLAYING CARDS
89439	ARTICLES FOR FUNFAIR, TABLE AND PARLOR GAMES, N.E.S.
89441	LIGHTING SETS OF A KIND USED FOR CHRISTMAS TREES
89445	OTHER ARTICLES FOR CHRISTMAS FESTIVITIES
89449	OTHER ENTERTAINMENT ARTICLES
89460	ROUNDBOUTS, SWINGS, SHOOTING GALLERIES AND OTHER FAIRGROUND
89471	FISHING RODS, FISH-HOOKS AND OTHER LINE TACKLE; FISH LANDING
89472	ICE SKATES AND ROLLER SKATES (INCLUDING SKATING BOOTS WITH SK
89474	WATER-SKIS, SURF-BOARDS, SAILBOARDS AND OTHER WATER SPORT EQU
89475	GOLF EQUIPMENT
89476	TENNIS, BADMINTON OR SIMILAR RACKETS, WHETHER OR NOT*STRUNG
89477	GLOVES, MITTENS AND MITTS, ESPECIALLY DESIGNED FOR USE IN SPO
89478	GYMNASIUM OR ATHLETICS ARTICLES AND EQUIPMENT
89479	SPORTS GOODS, N.E.S.
89511	FILING CABINETS, CARD-INDEX CABINETS, PAPER TRAYS, PAPER REST
89512	FITTINGS FOR LOOSE-LEAF BINDERS OR FILES, LETTER CLIPS, LETTE
89521	BALL POINT PENS; FELT-TIPPED OR OTHER POROUS-TIPPED PENS AND
89522	PEN NIBS AND NIB POINTS
89523	PENCILS (OTHER THAN PENCILS OF ITEM 895.21), CRAYONS, PENCIL
89591	WRITING OR DRAWING INK AND OTHER INKS (EXCEPT PRINTING INK),
89592	SLATES AND BOARDS, WITH WRITING OR DRAWING SURFACES, WHETHER
89593	DATE, SEALING OR NUMBERING STAMPS, AND THE LIKE (INCLUDING DE
89594	TYPEWRITER OR SIMILAR RIBBONS, INKED OR OTHERWISE PREPARED FO
89611	PAINTINGS, DRAWINGS AND PASTELS, EXECUTED ENTIRELY BY HAND, O
89612	COLLAGES AND SIMILAR DECORATIVE PLAQUES
89620	ORIGINAL ENGRAVINGS, PRINTS AND LITHOGRAPHS
89630	ORIGINAL SCULPTURES AND STATUARY, IN ANY MATERIAL
89640	POSTAGE OR REVENUE STAMPS, STAMP-POSTMARKS, FIRST-DAY COVERS,
89650	COLLECTIONS AND COLLECTORS' PIECES OF ZOOLOGICAL, BOTANICAL,
89660	ANTIQUES OF AN AGE EXCEEDING 100 YEARS
89721	IMITATION JEWELLERY, OF BASE METAL, WHETHER OR NOT PLATED WIT
89729	IMITATION JEWELLERY, OF OTHER NON-PRECIOUS MATERIALS
89731	ARTICLES OF JEWELLERY AND PARTS THEREOF, OF PRECIOUS METALS O
89732	ARTICLES OF GOLDSMITHS' OR SILVERSMITHS' WARES AND PARTS THER
89733	ARTICLES OF NATURAL OR CULTURED PEARLS, PRECIOUS OR SEMI-PREC
89749	ARTICLES OF PRECIOUS METAL OR OF METAL CLAD WITH PRECIOUS MET
89813	PIANOS (INCLUDING AUTOMATIC PIANOS); HARPSICORDS AND OTHER K
89815	OTHER STRING MUSICAL INSTRUMENTS (E.G., GUITARS, VIOLINS, HAR
89821	KEYBOARD PIPE ORGANS; HARMONIUMS AND SIMILAR KEYBOARD INSTRUM
89822	ACCORDIONS AND SIMILAR INSTRUMENTS; MOUTH ORGANS
89823	OTHER WIND MUSICAL INSTRUMENTS (E.G., CLARINETS, TRUMPETS, BA
89824	PERCUSSION MUSICAL INSTRUMENTS (E.G., DRUMS, XYLOPHONES, CYMB
89825	KEYBOARD INSTRUMENTS (OTHER THAN ACCORDIONS), THE SOUND OF WH
89826	MUSICAL INSTRUMENTS, N.E.S., THE SOUND OF WHICH IS PRODUCED O
89829	MUSICAL BOXES, FAIRGROUND ORGANS, MECHANICAL STREET ORGANS, M
89851	MAGNETIC DISCS
89859	PREPARED UNRECORDED MEDIA, N.E.S.
89871	GRAMOPHONE RECORDS
89879	RECORDED MEDIA, N.E.S.
89890	PARTS AND ACCESSORIES OF MUSICAL INSTRUMENT (E.G., MECHANISMS
89911	WORKED IVORY, BONE, TORTOISE-SHELL, HORN, CORAL, MOTHER-OF-
89919	WORKED VEGETABLE OR MINERAL CARVING MATERIAL AND ARTICLES OF
89921	ARTIFICIAL FLOWERS, FOLIAGE OR FRUIT AND PARTS THEREOF; ARTIC
89929	ARTIFICIAL FLOWERS, FOLIAGE OR FRUIT AND PARTS THEREOF; ARTIC
89931	CANDLES, TAPERS AND THE LIKE

**TABLE A.1**  
(Continued)  
**NSO COMMODITY CLASSIFICATION**

NSO NUMBERS	COMMODITY
89932	MATCHES, OTHER THAN PYROTECHNICAL ARTICLES OF SUBGROUP 593.3
89933	CIGARETTE LIGHTERS AND OTHER LIGHTERS, WHETHER OR NOT MECHANICAL
89934	LIQUID OR LIQUEFIED-GAS FUELS IN CONTAINERS OF A KIND USED FOR LIGHTERS
89935	PARTS AND ACCESSORIES OF LIGHTERS, N.E.S., OTHER THAN FLINTS
89936	ROUGHLY SHAPED BLOCKS OF WOOD OR ROOT, FOR THE MANUFACTURE OF SMOKING PIPES
89937	SMOKING PIPES (INCLUDING PIPE BOWLS) AND CIGAR OR CIGARETTE HOLDERS
89941	UMBRELLAS AND SUN UMBRELLAS (INCLUDING WALKING-STICK UMBRELLAS)
89942	WALKING STICKS, SEAT STICKS, WHIPS, RIDING-CROPS AND THE LIKE
89949	PARTS, TRIMMINGS AND ACCESSORIES OF ARTICLES FALLING WITHIN GROUP 899
89961	HEARING AIDS (EXCLUDING PARTS AND ACCESSORIES)
89965	ARTIFICIAL TEETH AND DENTAL FITTINGS
89969	APPLIANCES, N.E.S., WHICH ARE WORN OR CARRIED, OR IMPLANTED IN THE BODY
89971	BASKETWARE, WICKERWORK AND OTHER ARTICLES MADE DIRECTLY OF WOOD, BASKETRY
89972	BROOMS, BRUSHES (INCLUDING BRUSHES CONSTITUTING PARTS OF MACHINERY)
89973	PLAITS AND SIMILAR PRODUCTS OF PLAITING MATERIALS, WHETHER OR NOT FINISHED
89974	MATS, MATTING AND SCREENS OF VEGETABLE MATERIALS
89979	PLAITING MATERIALS, PLAITS AND SIMILAR PRODUCTS OF PLAITING MATERIALS
89981	HAND SIEVES AND HAND RIDDLES
89982	POWDER PUFFS AND PADS FOR THE APPLICATION OF COSMETICS OR TOILET PREPARATIONS
89983	PRESS-FASTENERS, SNAP FASTENERS AND PRESS-STUDS AND PARTS THEREOF
89984	BUTTON MOLDS AND OTHER PARTS OF BUTTONS; BUTTON BLANKS
89985	SLIDE FASTENERS
89986	PARTS OF SLIDE FASTENERS
89987	SCENT SPRAYS AND SIMILAR TOILET SPRAYS, AND MOUNTS AND HEADS OF TOILET BRUSHES
89988	TAILORS' DUMMIES AND OTHER LAY FIGURES; AUTOMATA AND OTHER AMUSEMENT
89989	COMBS, HAIR-SLIDES AND THE LIKE; HAIRPINS, CURLING PINS, CURLERS
89995	WIGS, FALSE BEARDS, EYEBROWS AND EYELASHES, SWITCHES AND THE LIKE
89996	PARACHUTES (INCLUDING DIRIGIBLE PARACHUTES AND ROTACHUTES); PARACHUTE
89997	VACUUM FLASKS AND OTHER VACUUM VESSELS, COMPLETE WITH CASES; VACUUM
91100	POSTAL PACKAGES NOT CLASSIFIED ACCORDING TO KIND
93106	PERSONAL AND HOUSEHOLD EFFECTS OF TRAVELERS AND IMMIGRANTS
93107	GIFTS, DONATIONS AND ARTICLES FOR RELIEF, EDUCATIONAL, SCIENTIFIC OR
93109	OTHER SPECIAL TRANSACTIONS AND COMMODITIES NOT CLASSIFIED ACCORDING TO KIND
96100	COIN (OTHER THAN GOLD COIN), NOT BEING LEGAL TENDER
97103	WASTE AND SCRAP, OF GOLD (INCLUDING METALS CLAD WITH GOLD BUT NOT BEING GOLD)
99900	VARIOUS COMMODITIES, N.E.S.

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Table A.2

MARINA Commodity Classification  
for Identification of Applicable Cargo Rates

The following regulations, and no other, shall govern the classification of commodities or property transported between coastwise ports of the Philippine Islands.

Commodities not enumerated in the classification shall be carried and charged for as Class A freight.

When not otherwise specified, the rates given on shipments in boxes apply to shipments in barrels or kegs, and vice-versa. The terms "boxed", "in boxes", and "in barrels", used in this classification are intended to mean completely inclosed and will apply only to such packages made of wood; and the terms "crated" or "in crates" to mean enclosed on all sides by wood framework or slats. All detachable parts of machine, boilers, and similar articles, liable to breakage or loss from handling in transit, must be detached and boxed.

Abbreviations

P.P.	-----	Prepaid
S.U.	-----	Set Up
K.D.	-----	Knockdown
O.R.	-----	Owner risk
N.O.S.	-----	Not otherwise specified

CLASSIFICATION OF COMMODITIES  
ARTICLE

	CLASS
A	
Acharas -----	A
Acids:	
In carboys, not accepted for transportation	
unless carboys are packed with non-combustible	
dunnage -----	2 A
Advertising paraphernalia -----	A
Aerated water -----	C
Aeroplanes and parts thereof -----	A
Agricultural implements -----	C
Albums, photograph -----	A
Alcohol:	
Ethylene or rectified -----	A
Industrial -----	B
Denatured -----	C

Ale -----	A
Almonds -----	A
Almaciga (by weight only) -----	A
Alpargatas -----	C
Amacanes -----	C
Ammonia -----	A
Anchors -----	C
Anisado:	
In demijohns -----	A
In cans -----	C
Anvils -----	C
Apples -----	B
Arms and ammunition, in cases or boxes, N.O.S. -----	A
Army equipment and supplies:	
Dummy Cartridges -----	C
Waste Rugs -----	C
Target Paper -----	B
Dummy Hand Grenades -----	C
Canteen and Canteen covers -----	B
Cleaning Rods -----	B
Diler Thongs -----	B
Empty Cartridges -----	C
Target Paster -----	C
Target Cloth -----	C
Cups (aluminum) -----	B
Bayonets and Seabards -----	B
Belt Cartridge -----	B
Can Meat -----	B
Beds, Coats, and Cot Frames -----	C
Barracks Bags, empty -----	B
Belt, Waist -----	B
Asbestos and manufactures thereof -----	C
Asphaltum, in bags, boxes and barrels -----	C
Automobiles and trucks, boxed -----	C
Automobiles and Trucks, unboxed -----	B
Awnings -----	C
Axles -----	B

B

Rabbit metal, in boxes -----	B
Baby carriages -----	C
Bacon, in packages -----	A
Bagoong -----	I 1/2 A
Bags or bagging: (1)	
In bales or bundles, or rolls, new (by weight only) -----	B
In bales returned empty, (see Carriers, empty, returned and sacks)	

(1) Fiji cloth or jute used for bags or bagging (by weight only) ----- Class B ----- as per letter dated November 4, 1940 of the Philippine Shipowners' Association.

Baking powder, in barrels or boxes -----	A
Balatan -----	A
Ballot-boxes -----	C
Balls -----	A
Bananas -----	C
Bangas (by weight only) -----	3 C
Barber chairs -----	B
Barley -----	B
Bangus seeds or other fish seeds -----	C
Sarrometers, boxed -----	A
Barrels and Keys:	
Empty, new -----	C
Returned empty, (see Carriers, empty, returned) -----	
Basins and bathtubs -----	B
Baskets:	
Empty, new (by weight only) -----	C
Desk -----	B
Empty, returned (see Carriers, empty, returned) -----	
Bastas -----	C
Batteries and parts thereof -----	B
Bayones, (by weight only) -----	2 C
Beds or cots, camp, folding and parts thereof -----	C
Beef -----	A
Beer -----	A
Bejuco:	
Willow, rattan or palabasan -----	1/2 C
Split, (by weight only) (1) -----	2 C
Bellows, crated -----	B
Bells, hangers and clappers detached, boxed -----	B
Belting -----	A
Belts -----	B
Benzine, commercial -----	A
Bicycles, including motor and other attachments, boxed or crated -----	B
Bijon -----	A
Billiard Tables -----	A
Blackboard -----	B
Blacking :	
Shoe, in barrels or boxes -----	B
Stove, in boxes -----	B
Blankets, in bales or cases -----	A
Blasting caps, (see Dynamite) -----	.
Blands and porch shades, in boxes -----	C
(1) A bundle of 500 split bejuocos for baling abaca or tobacco weights approximately 30 kilograms, and for sugar 13 kilograms.	
Blowers, blacksmith, crated -----	B
Board, card, crated, or boxed -----	B
Boat rigging, including wire rope and attachments -----	B
Boat and launches -----	C
Boilers and parts thereof -----	C

Bonote and coconut coir fibre -----	1/2	C
Books -----		A
Boots and shoes, boxed -----		A
Bottles:		
Empty, returned, (see Carriers, empty, returned)		
Glass, empty, in boxes or barrels, new -----		B
Bowling alleys, in crates or boxes -----		B
Bows, ox -----		R
Boxes (see Cases)		
Bran. or screenings -----		C
Brass goods -----		B
Bricks -----		C
Brooms and broom brushes, in bundles, crates, or boxes -----		C
Brushes -----		C
Buckets -----		B
Buckles, clothing or suspender -----		B
Bulbs, electric -----		A
Bullion (see Valuable Cargo)		
Bouys, iron, N.O.S. -----		C
Butter -----		A
Buttons, boxed -----		A

C

Cabbage, fresh -----		C
Cable (hemp, rope, telephone or telegraph wire) -----		B
Cacao -----		A
Cages, bird -----		B
Cake, copra -----		B
Calcium carbide (see also Acid: accepted only in watertight packages) -----	2	A
Calendars -----		A
Calesas -----		C
Calcimine -----		C
Calves, (see Livestock)		
Cameras, boxed -----		A
Camote, (by weight only) -----	1 1/2	C
Camphor, in packages -----		A
Candles, in boxes -----		B
Candy -----		A
Cane, sugar, (see Sugar cane)		
Canes, in packages -----		A
Canned goods or preserves, imported -----		A
Canned goods, or preserves, native -----		B
Cans:		
Empty, new, crated or boxes -----		C
Returned, (see Carriers, empty, returned)		
Canvas -----		B
Caps, headwear -----		A
Capstand -----		C
Carabaos (see Livestock)		
Carajays (by weight only) -----	1 1/2	B

Standard weights:			
No. 1	-----	3 kls. each	
No. 2	-----	2 3/4 kls. each	
No. 3	-----	2 kls. each	
No. 4	-----	1 3/4 kls. each	
No. 5	-----	1 1/8 kls. each	
Caramelo	-----		A
Carbolineum	-----		B
Carbon points and brushes for electric lights, boxed	----		A
Carboys, empty, new	-----		C
Empty, returned, (see Carriers, empty, returned)			
Cardboard, crated or boxed	-----		B
Cards, photographic	-----		A
Cargo of value (see Sec. 28)			
Carpets, and carpeting, in rolls	-----		A
Carriers, empty, returned, (by weight only):			
Bags or sacks	-----		C
Barrels	-----	3	C
Baskets (loose)	-----	5	C
Baskets (in bundles, nested)	-----	3	C
Beer Kegs	-----		C
Bottles, in sacks or bags	-----	1 1/2	C
Bottles, in cases	-----		C
Boxes, K.D.	-----		C
Cans (loose or in boxes)	-----	3	C
Cases or crates, S.U.	-----	3	C
Demijohns (1)	-----	5	C
Drums (2)	-----	3	C
Ollas	-----	4	C
Tinajas	-----	2	C
Carromatas, carts and carretelas	-----		C
Cascalote (by weight only)	-----		C
Cases, empty, new	-----		C
Empty, returned (see Carriers, empty returned)			
Cash registers, crated	-----		A
<p>(1) The average weight of an empty demijohn is 4 kilos  (2) Provided, however, that heavy containers such as Ammonia, Acetylene, Oxygen and other drums or bottles whose weights are nearly same at measurement, should be charged as Class B.</p>			
Cattle, (see Livestock)			
Cans (by weight only)	-----		2 B
Standard weights:			
No. 1	-----	48 kilos each	
No. 2	-----	28 kilos each	
No. 3	-----	23 kilos each	
No. 4	-----	19 kilos each	
No. 5	-----	11 kilos each	
No. 6	-----	8 kilos each	
No. 7	-----	3 kilos each	
Caviar	-----		A
Celluloid goods, N. O. S. in packages	-----		A

Cement -----	B
Cereals and cereal products, N.O.S. -----	A
Chain, in barrels or boxes -----	C
Chalk, in boxes -----	B
Charcoal (by weight only) -----	2 C
Cheese, in cases, boxes, drums, or tubes -----	A
Chewing gum -----	A
Chickens -----	C
Chinelas, cases -----	A
Chips, poker -----	A
Chocolate, in boxes -----	A
Chow chow -----	A
Cromos boxed -----	A
Chronometers -----	A
Chucherias -----	A
Cider -----	A
Cinnamon bark -----	C
Cigar boxes:	
Empty, S.U. -----	C
Material, K.D. -----	B
Cigar and cigarettes -----	A
Cinnamon, ground -----	A
Cinematographs -----	A
Clocks, boxed or in cases -----	A
Closet, water -----	B
Coal oil or kerosene, in tanks, barrels, or tin cans, boxed, N.O.S. (1) -----	A
Coconuts:	
Ground -----	A
Oil -----	B
Coconuts, loose -----	C
Coca-cola syrup -----	A
(1) 10 1/2 cases of two 5 gallon cans each, equal to 1 ton	
Codfish in bundles or boxes -----	A
Coffee (by weight only) -----	A
Coffins -----	C
Coke (by weight only) -----	C
Coloring and coloring strap -----	A
Combs -----	A
Compass, boxed -----	A
Concentrates -----	C
Conchas for windows, in sacks or baskets -----	C
Confectionery -----	A
Cooking chemicals -----	B
Coolers, water -----	B
Copper goods -----	B
Copra, sacked or loose (by weight only) -----	2 C
Copra cake -----	B
Copra meal -----	C
Copra peeling -----	C
Cordage, in bales and bags, N.O.S. -----	B
Corks, raw and corks -----	C

Articles of -----	B.
Corn -----	C
Corrugated cartons and corrugated shipping boxes (K.D.) (by weight only) -----	B
Corsets -----	B
Cotton, spool, in boxes -----	A
Cotton, raw or waste, compressed in bales (by weight only). Provided that each 1,000 kilos should occupy a space of not more than 4 cubic meters, and provided further that any excess thereof shall be subject to an additional pro-rata charges based on the basic rate herein authorized) -----	2 C
Crabs, native -----	C
Crates, returned (see Carriers, empty, returned)	
Crockery and earthenware (see Earthenware)	
Crutches, in crates or boxes -----	B
Curious, boxed -----	A
Curlers, hair, in cases -----	B
Curry powder -----	A
Curtains -----	A
Cushions -----	B
Cuspidors (in boxes or barrels) -----	B
Cutlery -----	A

D  
-----

Dates, in boxes -----	A
Demijohns, empty, new -----	C
Demijohns, empty, returned, (by weight only) (see Carriers, empty, returned)	
Copra Paring and Sweepings -----	C
Derricks, K.D. -----	C
Derris roots, (by weight only) -----	C
Disinfectants -----	B
Dogs (see Livestock)	
Doors -----	B
Drills hand or powder -----	B
Drugs, medicines -----	A
Drums, empty, new -----	C
Drums, empty, returned (see Carriers, empty, returned)	
Dry goods in bales or cases -----	A
Dusters, feathers -----	B
Dyestuffs -----	B
Dynamite, and blasting caps, (flat rate, any port, per cuse of not more than 1 cu. ft.) -----	P 5.00
Dynamos -----	B

E  
-----

Earthenware:	
Native -----	C
Glazed -----	A

Earth, for building, loam, etc. -----	C
Eggs and carriers -----	C
Electrical appliances, machinery and supplies -----	B
Emery and emery wheels, boxed -----	B
Empty packages returned (see Carriers, empty, returned) -----	B
Enamelware -----	B
Engines -----	A
Engraving boxed -----	A
Envelopes, in cases -----	A
Explosives, high -----	2 A
Extracts -----	A

F  
---

Fans -----	A
Fans, electric -----	B
Fertilizers, N.O.S. in bags or barrels (by weight only) --	C
Films, cinematograph (see Sec. 28) -----	A
Firecrackers, in boxes -----	B
Fire extinguishers -----	C
Firewood or cord -----	A
Fireworks, in boxes -----	A
Fish -----	
Fish, canned (see Canned goods) -----	C
Fish, dried (native, other than bagoong) -----	C
Fishing apparatus, N.O.S. -----	B
Flags, in boxes, bundles or crates -----	A
Floor wax -----	
Flour, wheat, rye, rice, buckwheat, etc. (by weight only) -----	B
Flower pots with plants -----	C
Frames, pictures -----	A
Freezers, ice cream -----	B
Fruits: -----	
Fresh, native, in crates or boxes -----	C
Fresh, imported -----	B
Preserved (see Preserves) -----	
Furniture, new: -----	
Bamboo, bejuco, mimbre, wicker -----	C
Of other materials -----	B
Furniture, household not new: -----	
Bamboo, bejuco, mimbre, wicker -----	1/2 B
Of other materials -----	
Fuse blasting, (flat rate to any port, per case of not more than 1 cu. ft.) -----	P 3.00

G  
---

Gaogao (by weight only) -----	A
Game -----	A
Garlic -----	C
Gasoline, accepted in jackets, cans glass or other -----	

66

secure packages only (1) -----	1 1/2 A
Gin -----	A
Ginger -----	C
Glass and glassware -----	A
Gloves -----	A
Glucose, in barrels -----	A
Glue -----	B
Glycerin -----	A
Goats (see Livestock)	
Gogo -----	A
Gold, gold dust, jewelers sweeping and tailing, (silver foil or leaf, bullion, specie precious stone), and valuable documents and cargo (see Sec. 28, p.7)	
Graphite, boxed -----	B
Grass, boxed -----	B
Grass, green, forage -----	C
Gravel -----	C
Grease, axle, in packages -----	B
Grindstones -----	C
Groceries -----	A
Gun cotton, gun powder, (flat rate to any port, per case of not more than 1 cu. ft.) -----	R 4.00

H

Hair, in bales or sacks -----	C
Hamakan, building mats -----	C
Hammocks, in boxes -----	B
Hams, in bags, barrels or cases -----	A
Handles, for tools, in crates or cases -----	C
Hardware -----	B
Harness and saddlery, N.O.S. -----	A
Hats and Caps, in racks or crates -----	A
Heads and horns mounted -----	B
Hemp:	
Cable, rope -----	B
Cloth, (not sinamay) -----	B
Compressed or baled (by weight only) -----	2 C
Loose (by weight only) -----	3 C
Slippers (by weight only) -----	A
Stalks -----	C
Sinogot or sinagac (by weight only) -----	3 A
Waste (by weight only) -----	C
Hides:	
Raw -----	C
Tanned, dry -----	B
Manufactured, articles of -----	A
Hops, pigs, etc. (see Livestock)	
Honey -----	A
Horns, in bulk -----	C
Horses, mules, etc. (see Livestock)	
Hose, leather, canvas or rubber, in crates, boxes	

67

or bales -----	B
Hosiery, in cases -----	A
Household goods, including the following: Sewing machines, pianos, cabinets, organs, boxed and personal effects, not new -----	1/2 B
Houses, portable, completely K.D. and tied in bundles ---	B

I  
---

Ice, properly packed for shipment -----	C
Incense -----	A
Incubators and brooders, boxed or crated -----	B
Ink, printing or writing, in boxes, on barrels -----	B
Instruments, dental, surgical and scientific, musical, telegraph or telephone -----	A
Iron and steel, articles of, viz: Angles, channels, beams, columns, girders, braces, rods, els, tees, plates, and joist hangers, used in construction of buildings, etc. -----	C
Anvils -----	C
Axles, carriages and wagon -----	B
Band, or strap, shipping -----	C
Bar, rod or hoop -----	C
Boilers and parts -----	C
Bolts and nuts -----	C
Chain -----	C
Corrugated iron or steel -----	C
Hydrants -----	C
Pig iron and scrap -----	C
Pipe and pipe fittings -----	H
Railings -----	C
Rivets -----	H
Sheets and plate, plain and galvanized -----	B
Shoes, horse or mule -----	C
Structural steel, or iron -----	B
Wheels M.O.B. -----	C
Iron and steel, articles of N.O.S. -----	F

J  
---

Japanned ware -----	B
Jars -----	C
Jewelry, including watches, (see Sec. 28, p 7) -----	
Juices, fruit -----	A
Junk, in secure packages -----	C
Jusi, cloth -----	2 B
Jute -----	B

K  
---

Kapok (by weight only) -----	1 1/2 A
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Kapok seeds (by weight only) -----	C
Keys and barrels, empty, returned, (see Carriers, empty, returned)	
Keys and barrels, empty, new -----	C
Kerosene, in tanks, barrels, or cans, boxed (1) -----	A
Kitchen utensils, N.O.S. -----	B
Knives and forks, N.O.S. (see also Cutlery) -----	A
Ladders, atep -----	B
Lampazos -----	B
Lamps and lamp fixtures -----	B
Lanterns -----	B
Lard:	
Animal -----	A
Vegetables, imported -----	A
Vegetables, native -----	B
Lasts, boot and shoe -----	B
Launches, (see boats)	
Lead, sheet or pig -----	C
Leather goods, manufactured, articles of, in boxes or barrels N.O.S. -----	A
Leather, N.O.S. in bundles, rolls or boxes -----	B
Lemons and limes -----	B
Life preserves, in packages or securely tied in bundles -	C
Line -----	C
Limestone (see stone)	
Linoleum, in crates or boxes -----	A
Liquors -----	A
Lithograph stones, boxed -----	B
Livestock (see Livestock, Sec. 20 p.6)	
Logs, timber and lumber:	
Logs, squared -----	D
Logs, round -----	D+20x
Sawn, the shortest dimension exceeding 6" -----	D
Sawn, the shortest dimension not exceeding 6" -----	D
Ties -----	C
Lumber (see Logs)	
Lye -----	B
Macaroni -----	A
Machinery, N.O.S. -----	B
Manuey: (by weight only)	
Fiber, baled -----	2 C
Fiber, loose -----	1 1/2 C
Leaves -----	C
Maize, sacked or loose -----	C
Mangoes, fruit in basket -----	C
Mani or peanuts, shelled -----	B

Mani or peanuts, in shells (by weight only) -----	3	C
Mantecoleta -----		A
Maps, boxed -----		A
Marble, granite, jasper, onyx, and slate blocks or slabs, including plumbers, marble and printers' imposing stone, N.O.S. -----		B
Masilla (putty) -----		C
Matches, safety, in paper or wooded boxes, packed in metallic cases -----		C
Mats:		
For baling -----		C
For household use -----		B
Mattresses -----		B
Meat -----		A
Medicines, N.O.S. -----		A
Melons (see Fruit)		
Merchandise:		
Shippers are requested to give full description of contents of packages. All articles described as "Merchandise" will be charged -----		A
Meters, gas, water, or electric -----		B
Milk -----		A
Millinery goods -----	2	A
Mimeographs, boxed -----		B
Mineral water -----		C
Miqui -----		A
Mocassins, Chinelas, or sandals, cased -----		A
Molasses -----		B
Mongos -----		C
Monuments, to tombstones, boxed or crated -----		A
Mouldings, picture, and frame, boxed, crated or bundled -----		B
Mouldings, building (charge as sawn lumber)		
Mucillage -----		B
Mules, (see Livestock)		
Music sheet, in bundles or boxes -----		A
Musical instruments, N.O.S. phonograph, gramophones, etc. -----		A
Mustard -----		A

N

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Nails -----		C
Naphtha, accepted in jacketed cans, glass or secure packages only -----	2	B
Napkins -----		A
Nests -----		A
Nets and netting, N.O.S., in bales or boxes -----		A
Netting wire, in packages -----		C
Newspaper, old (by weight only) -----		B
Nigue -----		A
Nipa -----	1/2	C
Nitroglycerin, NOT CARRIED		
Nutmegs -----		A

Nuts, edible, in sacks, boxes, or barrels -----	B
O	
Oakum, in bales -----	B
Oars -----	C
Oats -----	C
Ochre -----	B
Oil cakes -----	B
Oilcloth, in cases, crates, rolls or boxes -----	A
Oil: -----	
For cooking -----	A
Turpentine -----	A
Castor and medicinal -----	A
Coconut and vegetable -----	B
Lubricating -----	B
Mineral, of slow combustion -----	B
N.O.S. -----	A
Crude -----	B
Olives -----	A
Ollas, (see Earthenware) -----	
Onions -----	B
Opium, prepared or crude -----	2 A
Oranges: -----	
Imported -----	B
Native -----	C
Ore and concentrates -----	C
Organs -----	A
Ovens, bake -----	B
Oxbows, in bundles -----	B
Oyster -----	A
P	
Packing, rubber cloth -----	B
Pails -----	B
Painting, boxed -----	A
Paints and painting material -----	A
Palay -----	C
Panocha -----	C
Paper roll or bales of old newspaper, (by weight only) --	U
Paper, manufacture of: (pads, composition books, bags, etc. not including printed books) -----	C
Paper, N.O.S. -----	B
Paste -----	B
Pastecas, (nautical) -----	B
Potatoes, (see Mats) -----	
Photographic goods -----	A
Perfume, glass, boxed -----	2 A
Pianos, boxed, (unboxed not accepted) -----	A
Picks, iron -----	C
Pictures, boxed -----	A

Pigs (see Livestock)	
Pillars and small pillars, wood, cement or stone -----	C
Pillows, in bales or bundles -----	C
Pina Cloth -----	2 B
Pipe:	
Cement or concrete -----	C
Iron -----	B
Pipes, smoking -----	B
Planks, (see Lumber)	
Plants -----	C
Playing cards -----	2 A
Flows:	
Imported -----	C
Locally manufactured, (by weight only) -----	2 C
Plumbing supplies -----	B
Poles:	
Bamboo -----	C
Iron, up to 3 inches in diameter -----	C
Iron, more than 3 inches in diameter -----	B
Wooden -----	D
Potatoes -----	B
Poultry, live, in coops -----	C
Powder:	
Baking -----	A
Gun, or blasting, (flat rate to any port per case of not more than 1 cu. ft.) -----	P 4.00
Preserves, fruit, vegetables and jellies, including fruit butter, packed in boxes or barrels imported --	A
Preserves, fruit, vegetables, jellies, fish and other N.O.S. locally manufactured -----	B
Printed Matter -----	A
Propellers, ship's -----	C
Pulleys -----	B
Putty -----	C
Radio apparatus and radiolas -----	A
Rafts, life, metallic -----	C
Rags, (junk), in secure packages -----	C
Rails:	
Up to 18 ft. length -----	C
More than 18 ft. in length -----	A
Ramie fibre, (charge same rate as hemp, plus 25%)	
Ranges, cooking and heating, crated -----	B
Refrigerators -----	B
Resin, in barrels or sacks -----	C
Rice, in bags (1) -----	C
Rods, iron and steel -----	B
Rope -----	B
Rubber -----	C
Rubber, articles of -----	A
Sacks (see Bags)	
Safes -----	B
Sequanes -----	C
Sails, in bundles or bales -----	B
Salt:	

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Common, sacked -----	C
Table -----	A
Rock -----	B
Samong -----	B
Sand, sacked or loose -----	C
Sardines, canned -----	A
Sash, door and blinds, door and window frames, carpenter's moulding for door frames and for inside finishing, balusters and stairs rails, straight for mixed with lumber, laths or shingles --	
Sawale -----	B
Scales -----	B
Scrap Iron -----	C
Screws, iron or wood, in kegs or boxes -----	B
Seeds, boxed -----	C
Sewing machines -----	B
Sheep, (see Livestock) .	
Shellac, boxed -----	B
Shells, pearl, in baskets -----	B
Shells, window, in baskets -----	C
Shingles -----	C
Ship chandlery -----	C
Shirt (camisas) -----	A
Shoes -----	A
Shoes, materials for -----	B
Shovels and spades, in bundles -----	C
Sisal -----	B
Silks -----	B
Sinamay -----	B
Slippers or chinelas -----	A
Smokestacks, cast-iron, in pieces -----	C
Soap (by weight only) -----	C
Soda in packages -----	B
Softdrinks -----	C
Solarine -----	B
Solder, boxed -----	C
Sotangon -----	A
Spaghetti -----	D
Spices -----	A
Spools, in kegs -----	C
Sponges, in bales or boxes -----	B
Sporting goods -----	B
Starch (by weight only) -----	B
Stationery and school supplies, in cases N.O.S. -----	A
Steel, (see Iron and Steel)	
Stones	
Building -----	B
Lapidary -----	B
Precious (see Sec. p. 7)	
Stoves and ranges, gas, alcohol, electric, petroleum, fire wood, etc. -----	B
Straw -----	C
Sugars	
Cane -----	C

Raw -----	C
Centrifugal -----	B
Refined -----	A
Caramelo -----	A
Panocha -----	C
Sulphur, boxed -----	C
Sirups -----	A

T  
---

Tallow, in cans or barrels -----	B
Tan-bark, (by weight only) -----	C
Tanks, iron -----	C
Tapestry -----	2 A
Tar in barrels or in cans, boxed -----	C
Tarpaulins -----	B
Tea -----	A
Telephone and telegraph instruments -----	A
Telegraph and telegraph wire -----	B
Tents -----	B
Thermometers, boxed -----	A
Thread, in cases, cabinets, or boxed -----	A
Tiki-tiki (by weight only) -----	1/2 A
Tiles and tiling:	
Bricks or earthenware -----	C
Enamelled or encaustic in boxes -----	B
Timber (see Lumber)	
Tin, boxed -----	C
Tinajas:	
De 1. a 25 kilos or .104 m.c.) -----	
De 2. a 19 kilos or .133 m.c.) -----	
De 3. a 15 kilos or .104 m.c.) by weight only -----	3 C
De 4. a 10 kilos or .065 m.c.) -----	
Tinajas, empty, returned, (see Carriers, empty, returned)	
Tins, empty, (see Carriers, empty, returned)	
Tinware -----	B
Tires and tubes, for automobiles and trucks (by weight only) -----	4 A
Tires, old (by weight only) -----	A
Tobacco leaf -----	C-15x
Tobacco manufactured -----	A
Tools -----	B
Toothpicks in boxes -----	B
Towels -----	A
Toy -----	A
Toys, N.O.S., boxed -----	A
Trees, roots boxed and tops tied-up -----	C
Tripe, in barrels -----	B
Trocas -----	B
Trucks (see Automobiles)	
Trunks and suit cases -----	B

NOTES: Trunks and suit case filled with "merchandise" other than

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personal effects, securely crated will be subject to the rates applicable on the articles contained therein.

Tubas, in tubs or cans -----	C
Turkeys, alive in coops -----	C
Tusks and bones, wrapped, crated, or boxed -----	C
Turpentine -----	A
Twine, in bales or boxes, cases or packages -----	B
Type, in boxes, cases or packages -----	B
Typewriters, boxed -----	A

U

Umbrellas and parasols -----	A
Underwear -----	A
Urinals -----	B
Utensils, cooking -----	B

V

Valuable Cargo (see Sec. p.7)	
Valves, metal -----	B
Varnish, in barrels, kegs or cans -----	A
Vaseline -----	A
Vegetables:	
Dried, preserved, or canned -----	A
Fresh, N.O.S. -----	B
Vermicelli -----	A
Vinegar -----	B

W

Wagons, small wagons and materials and parts of -----	C
Wagon, funeral -----	A
Wallboard, paper, card, cement, etc. -----	B
Matches, (see Sec. 28, p. 7)	
Water closet and parts thereof -----	B
Wax, bees, or paraffin -----	B
Wheelbarrow, wood or iron -----	C
Whips -----	A
Whisky -----	A
White lead, (albayalde) -----	A
Windmills -----	B
Wines -----	A
Wire:	
Plain, galvanized -----	C
Barbed, in reels, boxed (by weight only) -----	B
N.O.S. -----	B
Wire rope cable -----	B
Wood, fire or cord -----	C
Wreaths -----	A

15

Y

Yeast -----

Yeso, lime -----

Z

Zinc, in sheets or rolls -----

Zuecos -----

TABLE A.3

COMMODITY SUMMARY CLASSIFICATION A

CLASS	NSC NUMBERS																			
A	01111	02212	03418	05422	07112	11245	51122	54113	55310	59864	62594	66139	66529	76423	87425	88114	88421	89427	89593	89879
	01121	02221	03529	05423	07113	11249	51132	54114	57551	59885	62991	66411	66591	76424	87431	88121	88423	89429	89594	89890
	01213	02222	03530	05645	07120	12110	51215	54115	57552	59889	62992	66412	66592	76425	87435	88122	88431	89431	89611	89941
	01221	02223	03631	05910	07131	12120	51216	54116	57553	59893	62999	66431	66593	76426	87437	88123	88432	89433	89612	89942
	01222	02224	03711	05830	07411	12130	51221	54117	57559	61210	63541	66439	66594	76431	87439	88124	88433	89435	89620	89984
	01291	02232	03712	05991	07413	12220	51461	54139	58219	61220	65122	66441	66599	76432	87448	88132	88439	89437	89630	89939
	01299	02233	03713	05992	07431	12231	51467	54151	58229	61290	65132	66442	75113	76481	87452	88133	89213	89439	89640	
	01611	02249	03714	05993	07432	12239	51617	54211	58281	62119	65781	66453	75116	76482	87455	88134	89214	89441	89813	
	01612	02300	03715	05994	07529	22350	51624	54212	58299	62121	65832	66471	75119	83130	87458	88135	89215	89460	89815	
	01619	02420	03716	05995	08111	22370	53222	54213	59211	62129	65839	66472	76110	84691	87463	88136	89216	89472	89821	
	01681	02491	04599	05996	08151	26310	53231	54219	59212	62510	65851	66481	76120	84692	87465	88210	89219	89474	89822	
	01689	02499	04722	06121	09101	26320	53232	54291	59213	62520	65912	66489	76211	84811	87469	88220	89234	89475	89823	
	01720	03411	04729	06129	09109	26340	53317	54292	59214	62541	65921	66491	76221	84812	87475	88230	89237	89476	89824	
	01730	03412	04811	06193	09842	29193	53341	54293	59215	62542	65929	66492	76281	84822	87477	88240	89239	89477	89825	
	01740	03413	04813	06194	09860	29196	53342	55131	59224	62551	65951	66493	76411	87411	87478	88250	89421	89478	89826	
	01750	03414	04814	06199	11241	29197	53343	55132	59226	62559	65952	66495	76413	87412	87479	88260	89422	89479	89829	
	01760	03415	04815	06221	11242	29199	53344	55135	59311	62591	65959	66521	76415	87413	88111	88310	89423	89522	89851	
	01790	03416	04830	06229	11243	42250	53355	55141	59312	62592	65969	66522	76421	87414	88112	88390	89424	89523	89859	
	02211	03417	05421	07111	11244	51111	54111	55149	59311	62593	66135	66523	76422	87423	88113	88417	89425	89592	89871	
	B	04120	05671	08142	51219	59149	64152	66245	67952	68631	77522	77639	77849	78320	82123	89242				
04592		05672	09844	52221	59227	64214	66334	67953	68632	77530	77649	77861	78513	82125	89281					
04610		05673	22211	52222	59229	64215	66511	67954	68634	77541	77688	77867	78520	82127	89282					
04620		05674	22212	52261	59895	64216	66611	67955	69311	77549	77689	77869	78611	82131	89283					
04849		05676	22320	52322	59897	64221	66612	67956	69312	77571	77811	77878	78621	82139	89285					
05410		05679	22390	52329	81141	65192	66613	67959	69313	77572	77812	77879	78622	82151	89286					
05440		05721	25113	53321	81142	65411	67245	68211	74999	77573	77817	77881	78629	82153	89311					
05451		05729	25119	53329	81183	65419	67247	68212	77257	77579	77819	77882	78630	82155	89319					
05454		05740	25141	55354	82132	65751	67249	68214	77312	77581	77821	77884	78683	82159	89332					
05455		05773	25142	55359	82133	65752	67269	68231	77313	77582	77822	77889	78685	82171	89395					
05458		05779	26410	55422	82141	65822	67282	68232	77322	77583	77823	78120	81311	82179	89591					
05457		05810	26490	55423	82145	65824	67911	68241	77323	77584	77824	78211	81312	82180	89931					
05458		05821	27311	56216	83532	65892	67912	68242	77324	77586	77829	78219	81313	84813	89937					
05459		05892	27312	57541	83542	66121	67913	68251	77329	77587	77831	78221	81315	87311	89974					
05489		05894	27313	58120	83591	66122	67915	68252	77412	77589	77833	78223	81317	87313	89987					
05642		05896	42231	58140	64110	66123	67917	68262	77421	77611	77834	78225	81320	87315	89988					
05648		08131	42239	58150	64124	66129	67943	68271	77429	77612	77835	78227	81380	89113						
05647		08137	42299	58160	64129	66134	67944	68272	77511	77621	77841	78229	81391	89221						
05648		08139	43110	58170	64141	66233	67949	68611	77512	77627	77843	78311	81399	89229						
05669		08141	51217	59141	64142	66244	67951	68612	77521	77632	77845	78319	82121	89241						
C	00141	05453	08152	24611	52238	63319	64212	65821	67131	67622	69114	75220	83129							
	00149	05488	21111	24615	52242	63491	64222	65841	67321	67625	69118	75290	83191							
	01231	05677	21112	24620	52344	63511	64223	65842	67324	67629	69121	76331	83199							

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(Continued)

## COMMODITY SUMMARY CLASSIFICATION A

CLASS	NSO NUMBERS																			
	01232	05711	21113	24730	52349	64153	64231	65843	67331	67634	69211	76333	89410							
	01234	05730	21120	24740	53354	64154	64232	65852	67351	67639	69212	76381	89471							
	01235	05751	21140	24752	55353	64155	64233	68111	67413	67647	69241	76384	89932							
	02510	05752	21199	26331	55411	64156	64234	68112	67444	67687	69242	77129	89938							
	03513	05771	22220	26339	55415	64161	64235	68119	67451	67688	69243	77311	89971							
	03619	05791	22250	26902	55419	64162	64239	68181	67511	67701	69244	79129	89972							
	03620	05795	22310	27210	55421	64164	64243	68183	67532	67709	74991	79181								
	03721	05797	23110	27419	56219	64169	64244	68231	67541	67821	75121	79182								
	04210	05798	23129	29229	56222	64172	64245	68232	67556	67829	75122	79391								
	04231	05799	23130	29253	56229	64173	64248	68241	67571	68511	75123	81217								
	04410	05893	23219	29254	56231	64176	64291	68242	67573	68512	75124	81219								
	04490	05897	23221	29259	56232	64177	64292	68243	67612	68521	75128	82129								
	04520	06111	23222	29269	56239	64179	64293	68312	67613	68522	75131	83111								
	04593	06112	24402	29272	56291	64192	64294	68318	67615	68524	75135	83112								
	04721	06151	24404	51549	56292	64183	64295	68332	67617	69111	75191	83119								
	04812	06159	24501	52226	56299	64194	64299	68381	67619	69112	75193	83121								
	05452	07527	24502	52232	63311	64211	65211	66496	67621	69113	75199	83122								
<b>Deregulated</b>	00111	00119	00122	00131	00139	00151	00190	08195	29192											
<b>Non-Liner</b>	27322	27824	27869	28210	28791	28929	66339													
<b>Cargo</b>	27323	27825	27891	28221	28799	32121	89934													
	27324	27827	27892	28229	28810	32122														
	27331	27829	27894	28231	28821	32221														
	27339	27830	27895	28239	28822	32222														
	27340	27840	27896	28310	28823	32500														
	27420	27851	27897	28510	28824	33300														
	27722	27853	27898	28750	28825	33411														
	27822	27861	27899	28760	28826	33421														
	27823	27862	28140	28770	28919	33430														
<b>Unassigned</b>	02231	07511	24819	27232	41113	51211	51451	51629	52253	52361	52495	56211	57439	59896	65185	65629	65792	68391	68422	
	02241	07512	25192	29115	41139	51212	51452	51631	52254	52362	52499	56213	57511	59899	65197	65632	65793	66399	68423	
	03611	07521	26130	29116	42119	51213	51453	51639	52255	52363	52515	56215	57513	62911	65199	65641	65819	66621	68424	
	03633	07528	26521	29221	42139	51214	51455	51699	52256	52364	52519	57111	57519	62919	65213	65642	65829	66629	68425	
	03635	08119	26529	29231	42149	51222	51462	52210	52257	52365	52595	57112	57529	62921	65214	65643	65844	67149	68426	
	03637	08124	26541	29232	42161	51229	51464	52223	52262	52371	53119	57190	57543	62929	65215	65659	65845	67151	68427	
	03639	08125	26549	29239	42169	51231	51465	52224	52263	52372	53221	57211	57544	63411	65351	65712	65846	67152	68633	
	03722	08199	26551	29261	42180	51241	51479	52225	52264	52373	54163	57219	57545	63412	65359	65719	65847	67153	68712	
	04530	09841	26559	29271	42221	51242	51482	52227	52265	52374	54191	57299	57591	63421	65393	65720	65848	67154	68721	
	04820	09849	26571	29292	42229	51243	51484	52228	52266	52375	54199	57311	57592	63439	65450	65731	65859	67159	68722	
	04841	09850	26579	29297	42241	51371	51489	52229	52268	52379	55320	57312	57595	63449	65460	65732	65893	68113	68724	
	04842	09892	26581	29299	42249	51373	51544	52231	52269	52381	55330	57313	57598	63531	65491	65733	65899	68124	68914	
	04850	09893	26589	33440	51112	51377	51569	52233	52321	52383	55340	57392	57990	63539	65492	65734	66132	68125	68935	
	05481	09894	26659	33450	51114	51379	51612	52234	52331	52384	55351	57399	59110	63549	65493	65740	66321	68312	69129	

TABLE A.3  
(Continued)  
COMMODITY SUMMARY CLASSIFICATION A

CLASS	NSO NUMBERS																			
05483	09899	26679	33512	51119	51389	51616	52235	52339	52389	55352	57411	59120	63599	65494	65759	66322	66321	74920		
07210	11101	26721	33521	51125	51391	51621	52236	52341	52432	55431	57419	59130	64242	65495	65761	66329	66323	75910		
07220	11102	26722	33525	51137	51392	51622	52237	52345	52491	55432	57420	59320	65141	65519	65771	66335	66324	75991		
07310	11220	26901	33541	51138	51393	51623	52239	52351	52492	55433	57432	59731	65161	65529	65773	66351	66411	75993		
07330	11230	27220	34420	51139	51394	51627	52251	52352	52493	55434	57433	59814	65162	65613	65789	66370	66412	75995		
07390	24811	27231	41111	51140	51396	51628	52252	52359	52494	55435	57434	59869	65171	65614	65791	66382	66421	75997		
76483	77315	79399	84151	84371	84552	84843	87225	88593	89721	89988										
76491	77318	81100	84159	84379	84561	84845	87229	88594	89729	89985										
76492	77629	81211	84161	84381	84562	84848	87231	88599	89731	89986										
76493	78410	81215	84162	84382	84563	84849	87233	89111	89732	89995										
76499	78421	81221	84169	84389	84587	85115	87240	89112	89733	89996										
77111	78425	81229	84211	84410	84589	85125	87319	89131	89749	89997										
77119	78432	82111	84219	84421	84589	85132	87321	89193	89911	91100										
77121	78439	82112	84221	84423	84611	85148	87325	89199	89919	93106										
77123	78531	82113	84222	84424	84612	85159	87329	89321	89921	93107										
77125	78535	82114	84230	84425	84613	85170	87422	89329	89929	93109										
77220	78536	82115	84240	84426	84614	85190	87453	89331	89933	96100										
77235	78537	82116	84250	84470	84619	87115	87454	89394	89935	97103										
77238	78689	82117	84260	84482	84621	87119	88531	89399	89949	99900										
77245	79211	82118	84270	84489	84629	87139	88541	89445	89961											
77254	79220	82119	84282	84511	84684	87145	88542	89449	89965											
77255	79297	84111	84289	84512	84689	87193	88549	89511	89969											
77258	79311	84112	84310	84521	84819	87199	88574	89512	89973											
77259	79312	84123	84321	84530	84821	87211	88576	89521	89979											
77281	79322	84130	84323	84540	84829	87219	88577	89650	89981											
77282	79329	84140	84324	84551	84842	87221	88579	89660	89982											

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TABLE A.4

**PROPORTION OF SEA TRANSPORT CARGO BY ROUTE  
AND MARINA COMMODITY CLASS, 1991-1992 \***

ORIGIN	DESTINATION	Percent of Total Cargo on Route			
		CLASS A	CLASS B	CLASS C	OTHER
ASAO GOV'T. PIER, LUMBOCAN, BUTUAN CITY					
	PORT OF BATANGAS STA. CLARA, BATANGAS			100%	
	CEBU CITY			100%	
ASIPIT GOV'T. (R.C.) WHARF, NASIPIT					
	CEBU CITY	1%	14%	59%	26%
	MANILA (FIRST DISTRICT) NORTH HARBOR		12%	46%	41%
NASIPIT LUMBER COMPANY NASIPIT, AGUSAN DEL NORTE					
	CEBU CITY	1%	16%	53%	29%
SAN MIGUEL CORPORATION BADING, BUTUAN CITY BADING, BUTUAN CITY					
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		100%		
DUMAGUIT CAUSEWAY/PIER NEW WASHINGTON, AKLAN					
	MANILA (FIRST DISTRICT) NORTH HARBOR	8%	30%	41%	22%
SAN MIGUEL CORPORATION NUMANCIA, AKLAN					
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		100%		
TABACO, ALBAY					
	VIRAC, CATANDUANES	9%	20%	50%	21%
LEGASPI OIL COMPANY ARIMBAY, LEGASPI CITY ARIMBAY, LEGASPI					
	PORT OF BATANGAS STA. CLARA, BATANGAS		80%		20%
	BAUAN PIER, BAUAN, BATANGAS		100%		
ISABELA WHARF, BASILAN CITY					
	ZAMBOANGA, ZAMBOANGA DEL SUR	4%	18%	76%	3%
PORT OF BATANGAS STA. CLARA, BATANGAS					
	SAN JOSE (CAMINAWIT), CAUSEWAY/PIER, MANGARIN, SAN JOSE	9%	62%	10%	34%
	OTHER MUNICIPAL PORTS ROMBLON	3%	41%	9%	47%
OTHER PRIVATE PORTS (BATANGAS)					
	CEBU CITY		48%	13%	39%
	MANILA (FIRST DISTRICT) NORTH HARBOR		25%	20%	56%
TAGBILARAN CITY					
	CEBU CITY	7%	13%	66%	13%
	CAGAYAN DE ORO	5%	15%	66%	14%
CULASI, ROXAS CITY, CAPIZ					
	MANILA (FIRST DISTRICT) NORTH HARBOR	17%	26%	42%	15%
CEBU CITY					
	BUTUAN GOV'T. (R.C.) WHARF, BUTUAN CITY	25%	17%	29%	29%
	TAGBILARAN CITY	17%	23%	20%	39%
	TALIBON CAUSEWAY	13%	24%	33%	30%
	TUBIGON CAUSEWAY/PIER, BOHOL	24%	18%	29%	29%
	SASA GOVERNMENT WHARF SASA, DAVAO CITY	17%	22%	23%	38%
	ILOILO, ILOILO CITY	19%	27%	21%	33%
	ILIGAN CITY	15%	13%	32%	40%
	TUBOD CAUSEWAY/PIER TUBOD, LANA O DEL NORTE TUBOD		98%		1%
	TACLOBAN, LEYTE DEL NORTE	7%	41%	16%	36%
	HILONGOS CAUSEWAY/PIER, LEYTE	5%	18%	29%	48%
	ORMOC, ORMOC CITY CAUSEWAY/PIER LEYTE DEL NORTE	6%	29%	25%	40%
	MANILA (FIRST DISTRICT) NORTH HARBOR	20%	27%	27%	26%
	OZAMIS, OZAMIS CITY	17%	21%	27%	35%
	CAGAYAN DE ORO	19%	20%	23%	39%
	PULUPANDAN, NEGROS OCCIDENTAL	15%	32%	24%	30%
	DAAN BANWA, BACOLOD CITY	12%	43%	19%	26%
	DUMAGUETE CITY	9%	43%	18%	30%
	MAASIN, SOUTHERN LEYTE	11%	51%	19%	19%
	SURIGAO CITY, SURIGAO DEL NORTE	24%	24%	30%	22%
	ZAMBOANGA, ZAMBOANGA DEL SUR	9%	50%	13%	29%
ATLAS CONSOLIDATED MINING AND DEVELOPMENT CORP. (A C M D C)					
	SASA GOVERNMENT WHARF SASA, DAVAO CITY			97%	3%
	AG & P. PORO, SAN FERNANDO, LA UNION			100%	
	MANILA (FIRST DISTRICT) NORTH HARBOR			92%	8%
	AROROY CAUSEWAY/PIER, AROROY, MASBATE	1%	2%	57%	39%
	CAGAYAN DE ORO		0%	99%	1%
SASA GOVERNMENT WHARF SASA, DAVAO CITY					
	CEBU CITY	5%	17%	59%	18%
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		99%		1%
	MANILA (FIRST DISTRICT) NORTH HARBOR	10%	16%	59%	15%
	ZAMBOANGA, ZAMBOANGA DEL SUR	37%	20%	23%	20%
OTHER PRIVATE PORTS (DAVAO SUR)					

**TABLE A.4**  
(Continued)  
**PROPORTION OF SEA TRANSPORT CARGO BY ROUTE**  
**AND MARINA COMMODITY CLASS, 1991-1992 \***

ORIGIN	DESTINATION	Percent of Total Cargo on Route			
		CLASS A	CLASS B	CLASS C	OTHER
	LEGASPI, LEGAZPI CITY		100%		
	TABAGO, ALBAY		100%		
	PASACAO, CAMARINES SUR		100%		
	CEBU CITY		99%		1%
	ILOILO, ILOILO CITY		100%		
	TACLOBAN, LEYTE DEL NORTE		100%		
	DUMAGUETE CITY		100%		
	ZAMBOANGA, ZAMBOANGA DEL SUR		89%	1%	10%
TEFASCO, ILANG TIBUNGKO, DAVAO CITY		2%	10%	52%	36%
	MANILA (FIRST DISTRICT) NORTH HARBOR				
ILOILO, ILOILO CITY					
	TAGBILARAN CITY		22%	31%	46%
	CEBU CITY	6%	7%	70%	17%
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		98%		2%
	TACLOBAN, LEYTE DEL NORTE	12%	4%	74%	10%
	COTABATO, COTABATO CITY, MAGUINDANAO	13%	44%	42%	1%
	MANILA (FIRST DISTRICT) NORTH HARBOR	17%	58%	18%	7%
	CAGAYAN DE ORO	12%	12%	65%	11%
	PULUPANDAN, NEGROS OCCIDENTAL	6%	37%	49%	8%
	DAAN BANWA, BACOLOD CITY	1%	26%	57%	16%
	BREDCO, RECLAMATION AREA, BACOLOD CITY, NEGROS OCCIDENTAL		32%	50%	14%
	NEGROS SAV. INCORPORATED BO. BANAGO, BACOLOD CITY	8%	22%	53%	16%
	WEST VISAYAN SHIPPING (WVSC) BACOLOD CITY	2%	5%	81%	12%
	ZAMBOANGA, ZAMBOANGA DEL SUR	13%	19%	59%	9%
PORT COMPLEX BRGY. LOBAC, ILOILO CITY					
	MANILA (FIRST DISTRICT) NORTH HARBOR	27%	33%	20%	20%
	DAAN BANWA, BACOLOD CITY	14%	19%	32%	35%
ILIGAN CITY					
	CEBU CITY	1%	21%	51%	27%
	MANILA (FIRST DISTRICT) NORTH HARBOR	1%	11%	44%	44%
ILIGAN CEMENT CORPORATION, KIWALAN, ILIGAN CITY					
	TAGBILARAN CITY		100%		
	CEBU CITY		100%		
	ILOILO, ILOILO CITY		97%		3%
	MANILA (FIRST DISTRICT) NORTH HARBOR		95%		4%
	FLORO CEMENT CORPORATION LUGAIT, MISAMIS ORIENTAL		94%		6%
	DAAN BANWA, BACOLOD CITY		99%		1%
	DUMAGUETE CITY		100%		
	ZAMBOANGA, ZAMBOANGA DEL SUR		99%		1%
MINDANAO PORTLAND CEMENT CORPORATION, KIWALAN, ILIGAN CITY					
	ILOILO, ILOILO CITY		100%		
NATIONAL STEEL CORPORATION SUAREZ, ILIGAN CITY					
	TAGBILARAN CITY		0%	100%	
	CEBU CITY		3%	91%	6%
	MANILA (FIRST DISTRICT) NORTH HARBOR		7%	79%	14%
TACLOBAN, LEYTE DEL NORTE					
	GRANEX EXPORT INCORPORATED, KIWALAN (GRANEX PORT), ILIGAN		0%	100%	
	MANILA (FIRST DISTRICT) NORTH HARBOR	7%	29%	17%	46%
ORMOC, ORMOC CITY CAUSEWAY/PIER LEYTE DEL NORTE					
	CEBU CITY	3%	15%	39%	42%
PASAR, ISABEL, LEYTE					
	MANILA (FIRST DISTRICT) NORTH HARBOR		34%	62%	4%
PHILPHOS, ISABEL, LEYTE					
	ILOILO, ILOILO CITY			98%	2%
	MANILA (FIRST DISTRICT) NORTH HARBOR			73%	27%
	PULUPANDAN, NEGROS OCCIDENTAL			100%	
POLLOC, COTABATO					
	MANILA (FIRST DISTRICT) NORTH HARBOR		3%	58%	11%
MANILA (FIRST DISTRICT) NORTH HARBOR					
	BUTUAN GOVT. (R.C.) WHARF, BUTUAN CITY	32%	12%	14%	42%
	TAGBILARAN CITY	27%	9%	14%	50%
	CEBU CITY	13%	18%	35%	34%
	SASA GOVERNMENT WHARF SASA, DAVAO CITY	19%	16%	25%	40%
	ILOILO, ILOILO CITY	34%	11%	17%	39%
	ILIGAN CITY	13%	15%	24%	46%
	TACLOBAN, LEYTE DEL NORTE	29%	13%	14%	44%

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**TABLE A.4**  
(Continued)  
**PROPORTION OF SEA TRANSPORT CARGO BY ROUTE**  
**AND MARINA COMMODITY CLASS, 1991-1992 \***

ORIGIN	DESTINATION	Percent of Total Cargo on Route			
		CLASS A	CLASS B	CLASS C	OTHER
	COTABATO, COTABATO CITY, MAGUINDANAO	35%	11%	10%	44%
	MASBATE, MASBATE	18%	10%	28%	45%
	CAGAYAN DE ORO	26%	17%	22%	36%
	PULUPANDAN, NEGROS OCCIDENTAL	83%	3%	6%	9%
	DAAN BANWA, BACOLOD CITY	33%	10%	32%	25%
	BFEDCO, RECLAMATION AREA, BACOLOD CITY, NEGROS OCCIDENTAL		13%	43%	25%
	NEGROS NAV. INCORPORATED BO. BANAGO, BACOLOD CITY	14%	19%	14%	54%
	DUMAGUETE CITY	23%	13%	23%	41%
	SAN JOSE (CAMINAWT), CAUSEWAY/PIER, MANGARIN, SAN JOSE	23%	15%	26%	36%
	PUERTO PRINCESA CITY, PALAWAN	36%	15%	12%	37%
	MAKAR WHARF, GEN. SANTOS CITY SOUTH COTABATO	25%	16%	1%	46%
	ZAMBOANGA, ZAMBOANGA DEL SUP	21%	17%	16%	46%
<b>BALANACAN, MARINDUQUE</b>					
	OTHER MUNICIPAL PORTS QUEZON		91%	8%	
<b>MASBATE, MASBATE</b>					
	GRANEX EXPORT INCORPORATED, KWALAN (GRANEX PORT), ILAGAN			100%	
<b>OZAMIS, OZAMIS CITY</b>					
	CEBU CITY	1%	15%	60%	23%
	MANILA (FIRST DISTRICT) NORTH HARBOR	1%	54%	27%	17%
<b>CAGAYAN DE ORO</b>					
	PORT OF BATANGAS STA. CLARA, BATANGAS			99%	1%
	TAGBILARAN CITY	14%	6%	44%	36%
	CEBU CITY	5%	9%	68%	19%
	MANILA (FIRST DISTRICT) NORTH HARBOR	18%	9%	54%	24%
	DUMAGUETE CITY	7%	17%	48%	28%
<b>FLORO CEMENT CORPORATION LUGAIT, MISAMIS ORIENTAL</b>					
	LEGASPI, LEGAZPI CITY		99%		1%
	TAGBILARAN CITY		97%		3%
	PASACAO, CAMARINES SUR		99%		1%
	CEBU CITY		96%	1%	3%
	ILOILO, ILOILO CITY		100%	0%	
	MANILA (FIRST DISTRICT) NORTH HARBOR		96%	4%	
	DAAN BANWA, BACOLOD CITY		99%		1%
	SORSOGON CAUSEWAY/LANDING SORSOGON, SORSOGON		99%		1%
<b>SAN MIGUEL CORPORATION OPOL, MISAMIS ORIENTAL OPJL, MISAMIS</b>					
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		92%	6%	2%
<b>PULUPANDAN, NEGROS OCCIDENTAL</b>					
	ILOILO, ILOILO CITY	10%	1%	87%	2%
	MANILA (FIRST DISTRICT) NORTH HARBOR	53%	8%	33%	6%
<b>OTHER PRIVATE PORTS (NEGROS OCC)</b>					
	ILOILO, ILOILO CITY	24%	35%	22%	19%
<b>BREDCO, RECLAMATION AREA, BACOLOD CITY, NEGROS OCCIDENTAL</b>					
	LEGASPI, LEGAZPI CITY	44%		56%	
	BAUAN PIER, BAUAN, BATANGAS			100%	
	CEBU CITY	57%	2%	37%	4%
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		89%		8%
	ILOILO, ILOILO CITY	7%	15%	32%	46%
	MANILA (FIRST DISTRICT) NORTH HARBOR	51%	2%	46%	
<b>NEGROS NAV. INCORPORATED BO. BANAGO, BACOLOD CITY</b>					
	ILOILO, ILOILO CITY	19%	31%	22%	28%
	MANILA (FIRST DISTRICT) NORTH HARBOR	43%	20%	24%	14%
<b>TOTAL BULK CORPORATION (TBC) PULUPANDAN, NEGROS OCCIDENTAL</b>					
	MANILA (FIRST DISTRICT) NORTH HARBOR	91%		9%	
<b>VICTORIAS MILL. CORPORATION INC. DAAN BANUA, VICTORIAS, NEG</b>					
	BAUAN PIER, BAUAN, BATANGAS			100%	
	MANILA (FIRST DISTRICT) NORTH HARBOR	88%		11%	1%
<b>DUMAGUETE CITY</b>					
	CEBU CITY	1%	2%	91%	7%
	MANILA (FIRST DISTRICT) NORTH HARBOR	8%	23%	39%	31%
<b>OTHER MUNICIPAL PORTS NEGROS ORR.</b>					
	OTHER MUNICIPAL PORTS (LEYTE)	25%	59%	12%	4%
<b>DANAO ESCALANTE PUBLIC WHARF, NEGROS ORIENTAL</b>					
	TUBURAN CAUSEWAY/PIER, TUBURAN, CEBU		100%		
	MANILA (FIRST DISTRICT) NORTH HARBOR	14%	0%	86%	
<b>TAMPI, SAN JOSE, NEGROS ORIENTAL</b>					
	SAMBOAN (SAN SEBASTIAN) CAUSEWAY WHARF		99%		1%

**TABLE A.4**  
(Continued)  
**PROPORTION OF SEA TRANSPORT CARGO BY ROUTE**  
**AND MARINA COMMODITY CLASS, 1991-1992 \***

ORIGIN	DESTINATION	Percent of Total Cargo on Route			
		CLASS A	CLASS B	CLASS C	OTHER
OTHER MUNICIPAL PORTS NORTHERN SAMAR					
	MATNOG CAUSEWAY, MATNOG, SORSOGON		100%		
OTHER PRIVATE PORTS NORTHERN SAMAR					
	MATNOG CAUSEWAY, MATNOG, SORSOGON		100%		
SAN JOSE (CAMINAWIT), CAUSEWAY/PIER, MANGARIN, SAN JOSE					
	PORT OF BATANGAS STA. CLARA, BATANGAS	1%	50%	37%	12%
	TACLOBAN, LEYTE DEL NORTE			55%	45%
	MANILA (FIRST DISTRICT) NORTH HARBOR	11%	6%	65%	19%
CALAPAN, ORIENTAL MINDORO					
	PORT OF BATANGAS STA. CLARA, BATANGAS	1%	47%	30%	22%
PUERTO PRINCESA CITY, PALAWAN					
	MANILA (FIRST DISTRICT) NORTH HARBOR	5%	25%	57%	13%
BROOKE'S PT. CAUSEWAY, PALAWAN					
	MANILA (FIRST DISTRICT) NORTH HARBOR		1%	98%	1%
ROMBLON, ROMBLON					
	MANILA (FIRST DISTRICT) NORTH HARBOR	1%	76%	6%	17%
BULAN (SUBPORT) SORSOGON					
	ILIGAN CITY		4%	93%	3%
MATNOG CAUSEWAY, MATNOG, SORSOGON					
	OTHER MUNICIPAL PORTS NORTHERN SAMAR		100%		
	OTHER MUNICIPAL PORTS SOUTHERN LEYTE		100%		
MAKAR WHARF, GEN. SANTOS CITY SOUTH COTABATO					
	CEBU CITY	5%	2%	86%	8%
	SAN MIGUEL RECLAMATION QUANO RECLAMATION		100%		
	MANILA (FIRST DISTRICT) NORTH HARBOR	20%	5%	57%	18%
	DUMAGUETE CITY			89%	11%
	ZAMBOANGA, ZAMBOANGA DEL SUR	2%	2%	91%	4%
OTHER PRIVATE PORTS SOUTHERN LEYTE					
	OTHER MUNICIPAL PORTS SURIGAO DEL NORTE		100%		
JOLO, SULU					
	ZAMBOANGA, ZAMBOANGA DEL SUR	2%	8%	63%	27%
SURIGAO CITY, SURIGAO DEL NORTE					
	CEBU CITY	1%	23%	71%	5%
	ILIGAN CITY		0%	97%	3%
OTHER MUNICIPAL PORTS SURIGAO DEL NORTE					
	OTHER MUNICIPAL PORTS SOUTHERN LEYTE		98%	1%	1%
PACIFIC CEMENT CORPORATION BARANGAY QUEZON, SURIGAO CITY					
	CEBU CITY		100%		
BISLIG (MANGAGOY), SURIGAO DEL SUR					
	CEBU CITY		4%	71%	25%
	MANILA (FIRST DISTRICT) NORTH HARBOR		43%	28%	27%
LIANGA CAUSEWAY (PUGAD)					
	FERROCHROME, PHIVEDEC AREA TAGOLOAN, MISAMIS ORIENTAL			100%	
PAPER INDUSTRIES CORP. OF THE PHIL. (PICOP), MANGAGOY, BISL					
	CEBU CITY		8%	67%	25%
	MANILA (FIRST DISTRICT) NORTH HARBOR		59%	25%	15%
ZAMBOANGA, ZAMBOANGA DEL SUR					
	ISABELA WHARF, BASILAN CITY	7%	21%	29%	43%
	SASA GOVERNMENT WHARF SASA, DAVAO CITY	15%	8%	55%	22%
	MANILA (FIRST DISTRICT) NORTH HARBOR	20%	9%	40%	31%
	JOLO, SULU	7%	18%	38%	37%
MALANGAS, ZAMBOANGA DEL SUR					
	ZAMBOANGA, ZAMBOANGA DEL SUR	1%	4%	65%	30%
PAGADIAN CITY, ZAMBOANGA DEL SUR					
	ZAMBOANGA, ZAMBOANGA DEL SUR		3%	96%	1%

\* Routes included in the table are those with an average of 10,000 tons of cargo per direction per year, during 1991-1992, and with a minimum of 50% of cargo being Class A, B and C cargo. The "other" category contains cargoes that are not accommodated by liner vessel, such as sand, gravel, coal, metal ores, and clay, and commodities which the LSRS was unable to assign to a MARINA commodity classification, i.e. Table A.1 commodities that could not be identified in Table A.2.

Table A.5

**DERIVATION OF RLF & TIF VALUES FOR TEN PRINCIPAL  
LINER SHIPPING ROUTES, 1991-1992**

ROUTE DIRECTION & YEAR	Cargo Tonnages					% of Subtotal			
	A	B	C	Subtotal	Other	Total	A	B	C
<b>Manila-Tagbilaran</b>									
Southward									
1991	11,479	3,874	3,669	19,022	21,342	40,364	60%	20%	19%
1992	10,568	3,547	8,176	22,291	20,417	42,708	47%	16%	37%
Total	22,047	7,421	11,845	41,313	41,759	83,072			
Northward									
1991	1,438	1,300	532	3,270	336	3,606	44%	40%	16%
1992	5,857	1,689	529	8,075	1,142	9,217	73%	21%	7%
Total	7,295	2,989	1,061	11,346	1,478	12,824			
Two-direction Total	29,342	10,410	12,907	52,658	43,237	95,896	56%	20%	25%
<b>Manila-Cebu</b>									
Southward									
1991	81,738	123,739	325,877	531,148	197,482	728,629	15%	23%	61%
1992	84,795	108,842	132,327	325,964	252,961	578,925	26%	33%	41%
Total	166,531	232,575	458,004	857,110	450,445	1,307,554			
Northward									
1991	86,008	117,168	106,410	309,586	99,070	408,656	28%	38%	34%
1992	45,765	55,712	69,641	171,118	72,486	243,604	27%	33%	41%
Total	131,774	172,880	176,051	480,705	171,556	652,260			
Two-direction Total	298,305	405,455	634,055	1,337,814	622,000	1,959,815	22%	30%	47%
<b>Manila-Davao (Sasa Wharf)</b>									
Southward									
1991	36,813	28,029	42,451	107,293	59,063	166,355	34%	26%	40%
1992	47,277	40,766	63,757	151,800	114,273	266,072	31%	27%	42%
Total	84,090	68,795	106,208	259,093	173,335	432,428			
Northward									
1991	56,948	73,891	249,679	380,518	76,688	457,206	15%	19%	66%
1992	40,058	82,107	306,923	429,087	60,885	489,972	9%	19%	72%
Total	97,006	155,997	556,602	809,605	137,573	947,178			
Two-direction Total	181,096	224,792	662,810	1,068,698	310,908	1,379,606	17%	21%	62%
<b>Manila-Tacloban</b>									
Southward									
1991	25,427	13,870	9,956	49,253	33,869	83,122	52%	28%	20%
1992	38,779	13,822	19,745	70,346	60,183	130,529	52%	20%	28%
Total	62,208	27,692	29,701	119,599	94,052	213,651			
Northward									
1991	1,339	3,692	3,816	8,846	9,369	18,215	15%	42%	43%
1992	895	6,513	1,626	8,034	5,191	13,225	11%	68%	20%
Total	2,234	9,205	5,442	16,880	14,560	31,441			
Two-direction Total	64,439	36,897	35,143	136,479	108,612	245,091	47%	27%	26%
<b>Manila-Cagayan de Oro</b>									
Southward									
1991	31,715	21,100	26,599	79,414	43,740	123,153	40%	27%	33%
1992	38,271	24,229	31,995	94,494	54,476	148,970	41%	26%	34%
Total	69,985	45,329	58,594	173,908	98,216	272,124			
Northward									
1991	13,179	13,064	69,340	95,583	28,934	124,517	14%	14%	73%
1992	17,557	9,108	62,347	89,012	30,626	119,637	20%	10%	70%
Total	30,736	22,172	131,687	184,595	59,560	244,154			
Two-direction Total	100,721	67,500	190,281	358,502	157,776	516,278	28%	19%	53%
<b>Manila-Puerto Princesa</b>									
Southward									
1991	14,287	8,742	9,985	33,014	20,168	53,182	43%	26%	30%
1992	14,265	11,719	6,858	32,842	30,445	63,286	43%	36%	21%
Total	28,552	20,461	16,843	65,855	50,613	116,468			
Northward									
1991	1,789	10,628	21,174	33,589	4,890	38,479	5%	32%	63%
1992	2,497	9,608	23,996	36,101	5,188	41,288	7%	27%	66%
Total	4,286	20,234	45,170	69,689	10,078	79,767			
Two-direction Total	32,838	40,695	62,012	135,545	60,691	196,235	24%	30%	46%

Table A.5

(Continued)

**DERIVATION OF RLF & TIF VALUES FOR TEN PRINCIPAL  
LINER SHIPPING ROUTES, 1991-1992**

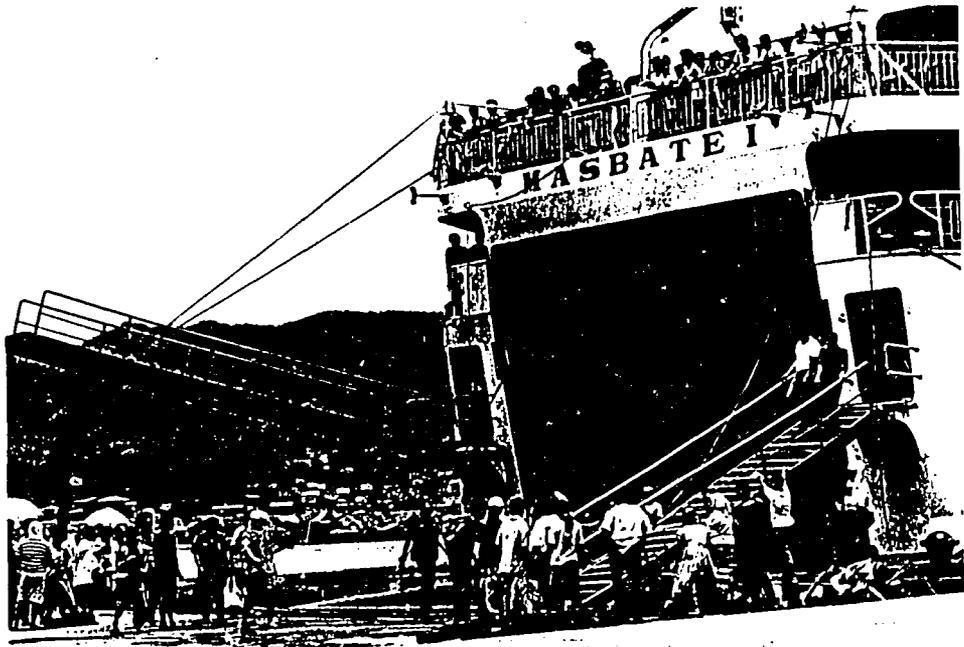
ROUTE, DIRECTION & YEAR	Cargo Tonnages						% of Subtotal		
	A	B	C	Subtotal	Other	Total	A	B	C
<b>Manila-Iloilo</b>									
Southward									
1991	35,752	10,429	16,063	62,244	40,050	102,294	57%	17%	26%
1992	38,155	13,744	20,591	72,490	44,919	117,409	53%	19%	28%
Total	73,907	24,172	36,654	134,734	84,969	219,703			
Northward									
1991	28,241	17,298	39,341	84,880	14,414	99,293	33%	20%	46%
1992	52,517	266,976	50,477	369,969	17,264	387,233	14%	72%	14%
Total	80,757	284,273	89,818	454,849	31,677	486,526			
Two-direction Total	164,664	308,446	126,472	589,582	116,646	706,228	26%	52%	21%
<b>Manila-Gen. Santos (Makar Wharf)</b>									
Southward									
1991	13,917	8,390	5,959	28,266	23,923	52,189	49%	30%	21%
1992	16,767	11,261	9,780	37,808	33,382	71,191	44%	30%	26%
Total	30,684	19,651	15,739	66,069	57,305	123,374			
Northward									
1991	119,969	40,651	440,275	600,895	126,472	727,367	20%	7%	73%
1992	182,045	32,991	408,219	623,249	141,097	764,346	28%	5%	65%
Total	302,014	73,641	848,499	1,224,144	267,570	1,491,713			
Two-direction Total	332,698	93,293	864,222	1,290,212	324,875	1,615,087	26%	7%	67%
<b>Manila-Zamboanga</b>									
Southward									
1991	15,732	13,857	13,344	42,933	33,825	76,759	37%	32%	31%
1992	14,964	10,637	9,943	35,544	33,472	69,016	42%	30%	28%
Total	30,696	24,494	23,287	78,477	67,296	145,773			
Northward									
1991	14,337	6,093	24,033	44,463	20,107	64,570	32%	14%	54%
1992	12,134	5,225	27,145	44,505	20,219	64,723	27%	12%	61%
Total	26,471	11,318	51,178	88,968	40,325	129,293			
Two-direction Total	57,168	35,812	74,465	167,445	107,621	275,066	34%	21%	44%
<b>Cebu-Cagayan de Oro</b>									
Southward									
1991	11,762	9,965	14,679	36,406	23,398	59,804	32%	27%	40%
1992	14,819	16,878	18,188	47,885	29,377	77,262	31%	35%	34%
Total	26,581	26,843	30,867	84,291	52,774	137,065			
Northward									
1991	8,214	21,818	135,524	155,556	26,846	182,402	5%	13%	82%
1992	10,763	13,103	140,811	164,676	49,954	214,631	7%	8%	86%
Total	18,977	34,922	276,334	330,232	76,801	407,033			
Two-direction Total	45,557	61,764	307,201	414,523	129,575	544,098	11%	15%	74%
<b>Cebu-Iloilo</b>									
Southward									
1991	6,812	5,498	8,268	20,578	13,653	34,231	33%	27%	40%
1992	9,708	17,738	9,392	36,839	14,927	51,765	26%	48%	25%
Total	16,520	23,237	17,660	57,416	28,579	85,996			
Northward									
1991	2,218	5,970	48,198	56,386	13,515	69,901	4%	11%	85%
1992	8,224	5,835	72,548	86,607	15,540	102,147	9%	7%	94%
Total	10,442	11,805	120,746	142,993	29,055	172,048			
Two-direction Total	26,962	35,042	138,406	200,409	57,635	258,044	13%	17%	69%
<b>Cebu-Davao (Sasa wharf)</b>									
Southward									
1991	4,070	6,441	4,824	15,336	9,979	25,315	27%	42%	31%
1992	1,676	904	2,999	5,579	2,653	8,232	30%	16%	54%
Total	5,746	7,346	7,823	20,915	12,632	33,547			
Northward									
1991	5,579	8,720	84,248	98,547	19,048	117,595	7%	11%	82%
1992	4,830	24,860	50,319	80,009	16,178	96,186	6%	31%	63%
Total	10,409	33,580	134,567	178,556	35,226	213,782			
Two-direction Total	16,155	40,926	122,388	179,468	47,858	227,326	8%	23%	69%

Table A.5  
(Continued)  
DERIVATION OF RLF & TIF VALUES FOR TEN PRINCIPAL  
LINER SHIPPING ROUTES, 1991-1992

RLF & TIF COMPUTATION

<b>Manila-Tagbilaran</b>			
	RLF = (	$1.00 \times 0.56$	)+( $0.95 \times 0.20$ )+( $0.65 \times 0.25$ ) = 0.71
	TIF = (	$1.00 + 0.15$	)/ 2.00 = 0.58
<b>Manila-Cebu</b>			
	RLF = (	$1.00 \times 0.22$	)+( $0.85 \times 0.30$ )+( $0.65 \times 0.47$ ) = 0.79
	TIF = (	$1.00 + 0.60$	)/ 2.00 = 0.75
<b>Manila-Davao (Sasa)</b>			
	RLF = (	$1.00 \times 0.17$	)+( $0.85 \times 0.21$ )+( $0.65 \times 0.62$ ) = 0.75
	TIF = (	$1.00 + 0.46$	)/ 2.00 = 0.73
<b>Manila-Tacloban</b>			
	RLF = (	$1.00 \times 0.47$	)+( $0.85 \times 0.27$ )+( $0.65 \times 0.28$ ) = 0.87
	TIF = (	$1.00 + 0.15$	)/ 2.00 = 0.57
<b>Manila-Cagayan de Oro</b>			
	RLF = (	$1.00 \times 0.28$	)+( $0.85 \times 0.19$ )+( $0.65 \times 0.53$ ) = 0.79
	TIF = (	$1.00 + 0.90$	)/ 2.00 = 0.95
<b>Manila-Puerto Princesa</b>			
	RLF = (	$1.00 \times 0.24$	)+( $0.85 \times 0.30$ )+( $0.65 \times 0.46$ ) = 0.79
	TIF = (	$1.00 + 0.68$	)/ 2.00 = 0.84
<b>Manila-Iloilo</b>			
	RLF = (	$1.00 \times 0.26$	)+( $0.85 \times 0.52$ )+( $0.65 \times 0.21$ ) = 0.85
	TIF = (	$1.00 + 0.45$	)/ 2.00 = 0.73
<b>Manila-Gen. Santos (Makar Wharf)</b>			
	RLF = (	$1.00 \times 0.26$	)+( $0.85 \times 0.07$ )+( $0.65 \times 0.67$ ) = 0.76
	TIF = (	$1.00 + 0.63$	)/ 2.00 = 0.64
<b>Manila-Zamboanga</b>			
	RLF = (	$1.00 \times 0.34$	)+( $0.85 \times 0.21$ )+( $0.65 \times 0.44$ ) = 0.81
	TIF = (	$1.00 + 0.89$	)/ 2.00 = 0.94
<b>Cebu-Cagayan de Oro</b>			
	RLF = (	$1.00 \times 0.11$	)+( $0.85 \times 0.15$ )+( $0.65 \times 0.74$ ) = 0.72
	TIF = (	$1.00 + 0.34$	)/ 2.00 = 0.67
<b>Cebu-Iloilo</b>			
	RLF = (	$1.00 \times 0.13$	)+( $0.85 \times 0.17$ )+( $0.65 \times 0.69$ ) = 0.73
	TIF = (	$1.00 + 0.50$	)/ 2.00 = 0.75
<b>Cebu-Sasa Wharf, Davao</b>			
	RLF = (	$1.00 \times 0.09$	)+( $0.85 \times 0.23$ )+( $0.65 \times 0.68$ ) = 0.73
	TIF = (	$1.00 + 0.17$	)/ 2.00 = 0.59

TACLOBAN PORT



## ANNEX B

### COMPUTATION OF AVERAGE COSTS OF CONTAINER ACCOMMODATION ON FOUR PRINCIPAL LINER SHIPPING ROUTES

This annex uses both the actual cost model and the theoretical cost model of DOSOCOMO to estimate the costs of the accommodation of twenty-foot equivalent units (TEUs) of containers on four routes out of Manila, viz., the 392-n.m. route to Cebu, the 340-n.m. route to Iloilo, the 504-n.m. route to Cagayan de Oro, and the 842-n.m. route to Davao (along the west coast of Mindanao).

The annex presents a series of 11 tables:

- Table B.1 presents the available information in the MARINA database on the accommodation of containers by containership on each of four routes in 1992. The results shown appear to be mostly realistic, but there are a few very high and very low values which suggest that there are errors in the data. The very high values are those of containerships of William Lines. The TEU capacities of these vessels appear to be understated by 20 percent. Only one vessel has unrealistically low cost estimates, and that is the Concarrier X of Aboitiz Shipping.
- Table B.2 presents similar information to that presented in Table B.1, except that only passenger/cargo vessels are included in the table. Several TEU capacities appear to be understated, since load factors of over 200 and 300 percent are simply not possible.
- Table B.3 derives an average TEU cost value for container accommodation by containerships between Manila and Cagayan de Oro. The average is derived on the basis of the prevailing cost figures of Table B.1 and the proportions of individual containership traffic accommodation on the route in 1992, as reported to MARINA. Because the Wilcon VIII accommodated more than one-half of the traffic on the route, the vessel heavily influences the computed average.
- Table B.4 presents a derivation of the average cost of accommodating a TEU by passenger/cargo vessels on the Manila-Cagayan de Oro route. The derived average of ₱4,333 is not much more than one-half of the level that was derived for containerships in Table B.3
- Table B.5 presents a derivation of the average cost of accommodating a TEU by containerships on the Manila-Cebu

route, and a cost of just under ₱10,000 is obtained. As in the case of the Manila-Cagayan de Oro route, a single vessel of William Lines heavily influences the computation by virtue of having accommodated more than one-half of all reported traffic (containers accommodated by containerships) on the route. Even though the Manila-Cebu route is about 20 percent shorter than the Manila-Cagayan de Oro route (392 n.m., compared with 504 n.m.), the average cost estimate is 25 percent higher (₱10,000, compared with ₱8,000).

- Table B.6 estimates the average cost of accommodation of a TEU by passenger/cargo vessels on the Manila-Cebu route. The derived average is 40 percent below the Table B.5 estimate for accommodation of a TEU by containerships on the route, and is about 38 percent above the Table B.4 estimate for passenger/cargo vessel TEU accommodation between Manila and Cagayan de Oro.
- Table B.7 derives an average cost of ₱8,880 for the accommodation of a TEU between Manila and Iloilo.
- Table B.8 provides a very low average cost figure of under ₱2,000 per TEU for container accommodation between Manila and Iloilo by passenger/cargo vessels. The low estimate derives mainly from Sulpicio's Cotabato Princess, which accommodated nearly three-quarters of all reported containers on the route which were carried aboard this type of vessel.
- Table B.9 derives an estimate of ₱11,600 as the approximate cost of TEU accommodation aboard containership between Manila and Davao. Vessels of William Lines account for 72 percent of reported 1992 traffic, accordingly heavily influencing the computation.
- Table B.10 derives an estimate of ₱9,500 as the approximate cost of passenger/cargo vessel accommodation of a TEU between Manila and Davao.
- Table B.11 presents cost estimates derived using the DOSOCOMO theoretical model. These show the costs at a load factor of 60 percent of accommodation of containers aboard containerships on three routes, employing three sizes of vessel, with three service frequencies. These estimates are significantly lower than the average cost values derived in Tables B.3, B.7 and B.9, for the same three routes. Whereas operator reports produce an average cost for TEU accommodation on the Manila-Cagayan de Oro route of ₱8,000, the maximum shown in Table B.11 for vessels of comparable size is ₱5,500 (4000 DWT vessel, with 17 round-trip voyages per year).

**COST OF CONTAINER (TEU) ACCOMODATION ABOARD CONTAINERSHIPS PLYING ROUTES BETWEEN MANILA AND PORTS OF CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992**

Operator Vessel	Year Built	TEU	GRT	DWT	ROUTE	TEU-Mths	Orig	Dest	Dist	Load Factor (%)	Cost per TEU (Peso)	
											At 100% I.F	Prevailing
<b>ABOITIZ SHIPPING CORP.</b>												
A. CONCARRIER - 6	1970	224	3,275.05	5,071.24	MNLA-CEBU-MNLA	304,976	MNLA	CDOR	504	43.42	6,364	14,658
A. SUPERCONCARRIER - II	1970	279	2,999.68	5,852.60	MNLA-CDOR-MNLA-BCLD	90,048	MNLA	CDOR	504	24.01	2,390	9,954
					MNLA-CDOR-MNLA-CEBU-MNLA-BCLD-ILOI-MNLA	563,192	MNLA	CDOR	504	81.00	2,390	2,951
A. SUPERCONCARRIER - I	1970	330	4,733.33	7,218.30	MNLA-CDOR	76,104	MNLA	CDOR	504	45.76	3,691	8,066
A. SUPERCONCARRIER - 3	1976	264	3,792.71	6,208.60	MNLA-CDOR	1,849,680	MNLA	CDOR	504	106.99	2,682	2,507
					MNLA-CDOR-CEBU-MNLA-DVAO	167,400	MNLA	CDOR	504	34.11	2,682	7,864
					MNLA-CDOR-BCLD-DVAO-ILOI-MNLA-ILOI-ROAS	174,680	MNLA	CDOR	504	33.35	2,682	8,043
					MNLA-DVAO	79,584	MNLA	CDOR	504	36.38	2,682	7,373
					MNLA-CDOR-MNLA-DGAS-MNLA-DVAO	738,675	MNLA	CDOR	504	85.27	2,682	3,146
<b>SULPICIO LINES, INC.</b>												
SULPICIO CONTAINER - XV		208	2,933.44	4,903.00	MNLA-CDOR-OZMS-MNLA	154,468	MNLA	CDOR	504	70.07	3,678	5,249
					MNLA-CDOR-ILOI	875,662	MNLA	CDOR	504	143.13	3,678	2,569
					MNLA-CDOR	109,368	MNLA	CDOR	504	104.14	3,678	3,531
					MNLA-CDOR-ILIG	440,115	MNLA	CDOR	504	126.85	3,678	2,899
					MNLA-CDOR-ILIG-ILOI	200,605	MNLA	CDOR	504	127.17	3,678	2,892
					MNLA-ILOI-CDOR	79,230	MNLA	CDOR	504	66.71	3,678	5,513
<b>WILLIAM LINES, INC.</b>												
WILCON - VIII	1975	152	3,638.18	4,643.00	MNLA-DGTE-CDOR-MNLA	6,977,970	MNLA	CDOR	504	158.41	18,213	11,497
<b>ABOITIZ SHIPPING CORP.</b>												
A. CONCARRIER - 6	1970	224	3,275.05	5,071.24	MNLA-CEBU-MNLA	304,976	MNLA	CEBU	392	43.42	5,910	13,613
					MNLA-CEBU	962,752	MNLA	CEBU	392	99.68	5,910	5,929
					MNLA-CEBU-MNLA-ILOI	243,908	MNLA	CEBU	392	96.88	5,910	6,111
					MNLA-DGAS-MNLA	552,372	MNLA	CEBU	392	85.27	5,910	6,931
					MNLA-CEBU-DVAO-DGAS-CEBU	157,960	MNLA	CEBU	392	49.11	5,910	12,035
A. CONCARRIER - X	1970	194	2,918.38	4,382.56	MNLA-CEBU-MNLA-CTBT	1,606,704	MNLA	CEBU	392	96.39	447	460

TABLE B.1

(Continued)

**COST OF CONTAINER (TEU) ACCOMODATION ABOARD CONTAINERSHIPS PLYING ROUTES BETWEEN MANILA  
AND PORTS OF CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992**

Operator Vessel	Year Built	TEU	GRT	DWT	ROUTE	TEU-MT	Orig	Dest	Dist	Load Factor (%)	Cost per TEU (Peso)	
											At 100% LF	Prevailing
SULPICIO LINES, INC. SULCON - XI	1971	110	2637.74	3500.00	MNLA-CEBU	454,720	MNLA	CEBU	392	74.74	443	593
					MNLA-CEBU	32,928	MNLA	CEBU	392	76.36	6,528	8,549
					MNLA-DGAS-CEBU	503,516	MNLA	CEBU	392	191.36	6,528	3,412
SULPICIO CONTAINER - XV	208	2933.44	4903.00	MNLA-DGAS-CEBU-MNLA-ZBGA-ILOI-MNLA	525,868	MNLA	CEBU	392	94.06	3,167	3,367	
				WILLIAM LINES, INC. WILCON - II	1968	111	2249.49	3404.60	MNLA-BUTIN-TGBL-CEBU-ILOI-MNLA	7,355,304	MNLA	CEBU
MNLA-BUTIN-TGBL-CEBU-ILOI	404,379	MNLA	CEBU	392					137.84	20,550	14,909	
ABOITIZ SHIPPING CORP. A. CONCARRIER - 6	1970	224	3,275.05	5,071.24	MNLA-CEBU-MNLA-ILOI	243,908	MNLA	ILOI	340	96.88	5,699	5,883
A. CONCARRIER - XI					140	2135.57	3287.46	CEBU-MNLA-ILOI	193,248	MNLA	ILOI	340
A. SUPERCONCARRIER - II	1970	279	2999.68	5852.60	MNLA-BCLD	286,608	MNLA	ILOI	340	38.22	1,924	5,034
MNLA-CDOR-MNLA-BCLD					90,048	MNLA	ILOI	340	24.01	1,924	8,011	
MNLA-DGAS-MNLA-BCLD					365,310	MNLA	ILOI	340	36.74	1,924	5,235	
MNLA-BCLD-MNLA-DVAO					181,621	MNLA	ILOI	340	43.37	1,924	4,436	
CEBU-MNLA-BCLD-DVAO-ILOI-MNLA					984,520	MNLA	ILOI	340	54.12	1,924	3,554	
CEBU-MNLA-BCLD-ILOI-MNLA					741,468	MNLA	ILOI	340	60.84	1,924	3,162	
MNLA-BCLD-ILOI-MNLA					541,100	MNLA	ILOI	340	55.41	1,924	3,472	
MNLA-BCLD-CTBT-ILOI-MNLA					88,620	MNLA	ILOI	340	30.11	1,924	6,389	
MNLA-BCLD-DVAO-ILOI-MNLA					281,026	MNLA	ILOI	340	40.68	1,924	4,729	
CEBU-MNLA-BCLD-ILOI-MNLA					98,280	MNLA	ILOI	340	48.39	1,924	3,976	
MNLA-CDOR-MNLA-CEBU-MNLA-BCLD-ILOI-MNLA					563,192	MNLA	ILOI	340	81.00	1,924	2,375	
MNLA-CEBU					546,840	MNLA	ILOI	340	55.56	1,924	3,463	
A. SUPERCONCARRIER - 3					1976	264	3792.71	6208.60	MNLA-CDOR	1,849,680	MNLA	ILOI
MNLA-CDOR-BCLD-DVAO-ILOI-MNLA-ILOI-ROAS	174,680	MNLA	ILOI	340					33.35	2,225	6,673	
MNLA-ILOI	592,620	MNLA	ILOI	340					50.81	2,225	4,380	
MNLA-DVAO	79,584	MNLA	ILOI	340					36.38	2,225	6,117	

TABLE B.1

(Continued)

**COST OF CONTAINER (TEU) ACCOMODATION ABOARD CONTAINERSHIPS PLYING ROUTES BETWEEN MANILA  
AND PORTS OF CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992**

Operator	Vessel	Year Built	TEU	GRT	DWT	ROUTE	TEU-Mile	Orig	Dest	Dist	Load Factor (%)	Cost per TEU (Peso)	
												At 100% LF	Prevailing
						MNLA-CDOR-MNLA-DGAS-MNLA-DVAO	738,675	MNLA	ILOI	340	85.27	2,225	2,610
						DGAS-MNLA-DVAO	1,101,920	MNLA	ILOI	340	33.63	2,225	6,616
						MNLA-DVAO-DGAS-MNLA	225,435	MNLA	ILOI	340	50.40	2,225	4,415
<b>NEGROS NAV. CO., INC.</b>													
	CONNIE - II	1971	87	1428.05	2050.01	MNLA-BCLD-ILOI	3,877,560	MNLA	ILOI	340	148.95	5,208	3,497
	MOSES - VII		19	858.91	450.34	MNLA-BCLD-ILOI	212,760	MNLA	ILOI	340	205.86	15,104	7,337
	SAN SEBASTIAN	1970	200	2749.70	4431.70	MNLA-BCLD-ILOI	5,000,760	MNLA	ILOI	340	87.92	4,155	4,726
<b>SULPICIO LINES, INC.</b>													
	SULCON - II	1958	170	3505.56	4002.99	MNLA-DGAS-ZBGA-CTBT-ILO	160,500	MNLA	ILOI	340	88.24	6,204	7,144
						MNLA-CTBT-ZBGA-ILOI	354,315	MNLA	ILOI	340	101.47	6,204	6,212
	SULCON - XI	1971	110	2637.74	3500.00	MNLA-DGIE-OZMS-ILOI	77,916	MNLA	ILOI	340	137.27	6,008	4,377
	SULPICIO CONTAINER - XV		208	2933.44	4903.00	MNLA-CDOR-ILOI	875,662	MNLA	ILOI	340	143.13	2,930	2,047
						MNLA-CDOR-ILIG-ILOI	200,605	MNLA	ILOI	340	127.17	2,930	2,304
						MNLA-ILOI	112,880	MNLA	ILOI	340	79.66	2,930	3,678
						MNLA-DGAS-CEBU-MNLA-ZBGA-ILOI-MNLA	525,868	MNLA	ILOI	340	94.06	2,930	3,115
						MNLA-ILOI-CDOR	79,230	MNLA	ILOI	340	66.71	2,930	4,393
<b>WILLIAM LINES, INC.</b>													
	WILCON - II	1968	111	2249.49	3404.60	MNLA-BUTN-TGBL-CEBU-ILOI-MNLA	7,355,304	MNLA	ILOI	340	146.68	20,359	13,867
	WILCON - V	1973	132	1858.06	3738.00	MNLA-ILOI-BCLD-MNLA	5,960,500	MNLA	ILOI	340	189.73	17,788	9,375
	WILCON - X	1974	215	3742.12	6204.00	MNLA-ILOI-ZBGA-DVAO-MNLA	13,366,782	MNLA	ILOI	340	156.16	15,767	10,097
	WILCON - XI	1977	250	4566.00	7129.00	MNLA-ILOI-ZBGA-DVAO-DGAS-MNLA	10,745,904	MNLA	ILOI	340	127.96	17,134	13,390
<b>ABOITIZ SHIPPING CORP.</b>													
	A. CONCARRIER - 6	1970	224	3,275.05	5,071.24	MNLA-CEBU-MNLA	304,976	MNLA	DVAO	829	43.42	7,620	17,689

TABLE B.1

(Continued)

COST OF CONTAINER (TEU) ACCOMODATION ABOARD CONTAINERSHIPS PLYING ROUTES BETWEEN MANILA AND PORTS OF CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992

Operator	Vessel	Year Built	TEU	GRT	DWT	ROUTE	TEU-Mile	Orig	Dest	Dist	Load Factor (%)	Cost per TEU (Peso)	
												At 100% LF	Prevailing
						MNLA-CEBU	962,752	MNLA	DVAO	829	99.68	7,620	7,705
<b>A. SUPERCONCARRIER - II</b>													
		1970	279	2,999.68	5,852.60	MNLA-BCLD-MNLA-DVAO	181,621	MNLA	DVAO	829	43.37	3,315	7,644
						CEBU-MNLA-BCLD-DVAO-ILOI-MNLA	984,520	MNLA	DVAO	829	54.12	3,315	6,125
						MNLA-BCLD-DVAO-ILOI-MNLA	281,026	MNLA	DVAO	829	40.68	3,315	8,149
<b>A. SUPERCONCARRIER - I</b>													
		1970	330	4,733.33	7,218.30	CEBU-MNLA-DVAO	713,064	MNLA	DVAO	829	44.24	4,622	10,447
						MNLA-DVAO	1,790,640	MNLA	DVAO	829	54.55	4,622	8,474
						MNLA-DGAS-BCLD-DVAO-DGAS-MNLA	208,159	MNLA	DVAO	829	39.70	4,622	11,644
						CEBU-MNLA-DVAO-DGAS-MNLA	350,616	MNLA	DVAO	829	50.91	4,622	9,079
<b>A. SUPERCONCARRIER - 3</b>													
		1976	264	3,792.71	6,208.60	MNLA-CDOR-CEBU-MNLA-DVAO	167,400	MNLA	DVAO	829	34.11	3,588	10,519
						MNLA-CDOR-BCLD-DVAO-ILOI-MNLA-ILOI-ROAS	174,680	MNLA	DVAO	829	33.35	3,528	10,758
						MNLA-ILOI	592,620	MNLA	DVAO	829	50.81	3,588	7,061
						MNLA-DVAO	79,584	MNLA	DVAO	829	36.38	3,588	9,862
						MNLA-CDOR-MNLA-DGAS-MNLA-DVAO	738,675	MNLA	DVAO	829	85.27	3,588	4,208
						DGAS-MNLA-DVAO	1,101,920	MNLA	DVAO	829	33.63	3,588	10,667
						CEBU-MNLA-DGAS-MNLA-DVAO	400,050	MNLA	DVAO	829	56.85	3,528	6,311
						MNLA-DVAO-DGAS-MNLA	225,435	MNLA	DVAO	829	50.40	3,588	7,118
<b>WILLIAM LINES, INC.</b>													
<b>WILCON - X</b>													
		1974	215	3,742.12	6,204.00	MNLA-ILOI-ZBGA-DVAO-MNLA	13,366,782	MNLA	DVAO	829	156.16	17,238	11,039
<b>WILCON - XI</b>													
		1977	250	4,566.00	7,129.00	MNLA-ILOI-ZBGA-DVAO-DGAS-MNLA	10,745,904	MNLA	DVAO	829	127.96	19,102	14,929

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**COST OF CONTAINER (TEU) ACCOMODATION ABOARD PASSENGER/CARGO VESSELS PLYING ROUTES  
BETWEEN MANILA AND PORTS CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992**

Operator	Vessel	Type	Year built	TEU	GRT	DWT	ROUTE	TEU-Mile	Orig	Dest	Dist	Load Factor (%)	Cost per TEU (Peso)	
													At 100% I.F.	Prevailing
<b>ABOITIZ SHIPPING CORP.</b>														
ABOITIZ SUPERFERRY - I														
							MNLA-CDOR	958,608	MNLA	CDOR	504	61.56	3,784	6,147
							MNLA-ILOI-MNLA	2,031,160	MNLA	CDOR	504	63.60	3,784	5,950
							MNLA-ILOI-CDOR-ILOI-MNLA	140,220	MNLA	CDOR	504	99.52	3,784	3,802
							MNLA-CDOR-MNLA-CEBU-MNLA	179,200	MNLA	CDOR	504	80.91	3,784	4,677
							MNLA-ILOI-MNLA-CDOR-MNLA	315,656	MNLA	CDOR	504	75.65	3,784	5,002
							MNLA-CDOR-MNLA	1,176,336	MNLA	CDOR	504	67.45	3,784	5,611
							MNLA-CDOR-MNLA-BCLD	25,536	MNLA	CDOR	504	15.37	3,784	24,616
<b>SULPICIO LINES, INC.</b>														
DIPOLOG PRINCESS														
				76	3,786.81	1,797.76	MNLA-DGTE-DPLG-CDOR-OZMS	615,979	MNLA	CDOR	504	158.20	4,742	4,997
				76	3,786.81	1,797.76	MNLA-DGTE-DPLG-CDOR-DGTE	311,754	MNLA	CDOR	504	152.48	4,742	3,110
PALAWAN PRINCESS														
				85	1,497.27	2,000.00	MNLA-DGTE-DPLG-CDOR-OZMS	41,405	MNLA	CDOR	504	76.47	2,992	3,912
							MNLA-DGTE-DPLG-CDOR-OZMS-MNLA	3,304,125	MNLA	CDOR	504	119.15	2,992	2,511
<b>SULPICIO LINES, INC.</b>														
COTABATO PRINCESS														
			1970	120	7977.00	2494.60	MNLA-ILOI-CEBU-CTBT-ZBGA-ILOI-ESTC-MNLA	201,474	MNLA	CEBU	392	102.50	1,200	7,049
DAVAO PRINCESS														
			1973	74	3935.21	1741.14	MNLA-CEBU-DVAO	503,480	MNLA	CEBU	392	207.44	8,449	4,314
							MNLA-DVAO-CEBU	642,327	MNLA	CEBU	392	230.19	8,449	3,888
DIPOLOG PRINCESS														
				76	3786.81	1797.76	MNLA-CEBU-DVAO	871,660	MNLA	CEBU	392	154.59	7,793	2,454
							MNLA-ESTC-CEBU-ZBGA-CTBT-DVAO-ESTC-MNLA	105,060	MNLA	CEBU	392	111.25	3,793	3,410
FILIPINA PRINCESS														
				182	13705.23	4277.55	CEBU-MNLA	10,296,272	MNLA	CEBU	392	168.00	7,661	4,560
MANILA PRINCESS														
				70	4149.22	1658.14	MNLA-CEBU-DVAO	3,715,420	MNLA	CEBU	392	357.20	16,902	4,732
							MNLA-ESTC-CEBU-DVAO-CEBU-MNLA	683,520	MNLA	CEBU	392	315.73	16,902	5,353
<b>WILLIAM LINES, INC.</b>														
MISAMIS OCCIDENTAL														
			1970	72	1998.34	1453.00	MNLA-DPLG-ILIG-CEBU-ILIG-DPLG-MNLA	2,147,840	MNLA	CEBU	392	116.53	4,196	3,601
SUGBU														

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TABLE B.2

(Continued)

COST OF CONTAINER (TEU) ACCOMODATION ABOARD PASSENGER/CARGO VESSELS PLYING ROUTES BETWEEN MANILA AND PORTS OF CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992

Operator	Vessel	Type	Year Built	TEU	GRT	DWT	ROUTE	TEU-Mile	Orig	Des.	Dist	Load Factor (%)	Cost per TEU (Peso)	
													At 100% LF	Prevailing
	TACLOBAN CITY		1977	150	6524.55	3322.00	MNLA-CEBU-MNLA	13,444,032	MNLA	CEBU	392	156.60	11,952	7,632
							MNLA-CEBU	2,598,176	MNLA	CEBU	392	169.95	11,952	7,033
							MNLA-CEBU	2,598,176	MNLA	CEBU	392	169.95	11,952	7,033
			1963	45	2641.75	1164.00	MNLA-ILIG-CZMS-CEBU-ILIG-OZMS-MNLA	228,976	MNLA	CEBU	392	97.78	13,098	13,395
<b>ABOITIZ SHIPPING CORP.</b>														
	ABOITIZ SUPERFERRY - I			124	4511.48	2908.00	MNLA-CDOR	958,608	MNLA	ILOI	340	61.56	2,671	4,339
							MNLA-ILOI-MNLA	2,031,160	MNLA	ILOI	340	63.60	2,671	4,200
							MNLA-ILOI-CDOR-ILOI-MNLA	140,220	MNLA	ILOI	340	99.52	2,671	2,684
							MNLA-ILOI-MNLA-CDOR-MNLA	315,656	MNLA	ILOI	340	75.65	2,671	3,531
							MNLA-CDOR-MNLA	1,176,336	MNLA	ILOI	340	67.45	2,671	3,961
							MNLA-ILOI-MNLA-BCLD	187,960	MNLA	ILOI	340	49.90	2,671	5,354
							MNLA-ILOI-ROAS	21,760	MNLA	ILOI	340	51.78	2,671	5,159
<b>C.A. GOTHONG LINES, INC.</b>														
	OUR LADY OF GUADALUPE		1973	50	938.17	819.24	MNLA-ILOI	39,440	MNLA	ILOI	340	232.00	2,749	2,478
<b>SULPICIO LINES, INC.</b>														
	COTABATO PRINCESS		1970	120	7977.00	2494.60	MNLA-ESTC-ILOI-ZBGA-CTBT-MNLA	22,199,916	MNLA	ILOI	340	461.26	6,877	1,491
							MNLA-ILOI-CEBU-CTBT-ZBGA-ILOI-ESTC-MNLA	201,474	MNLA	ILOI	340	102.50	6,877	6,709
	DIPOLOG PRINCESS			76	3786.81	1797.76	MNLA-ILOI-ZBGA-DGAS	609,792	MNLA	ILOI	340	201.03	3,353	1,668
							MNLA-ESTC-ILOI-ZBGA-CTBT	1,303,155	MNLA	ILOI	340	232.05	3,353	1,445
							MNLA-ESTC-ILOI-ZBGA-DGAS-ZBGA-ILOI-MNLA	219,748	MNLA	ILOI	340	179.31	3,353	1,870
	PALAWAN PRINCESS			85	1497.27	2000.00	MNLA-PLMP-ILOI	118,680	MNLA	ILOI	340	81.18	2,155	2,654
							MNLA-ILOI-DGAS	65,736	MNLA	ILOI	340	97.65	2,155	2,206
							MNLA-ILOI-ZBGA-DGAS-MNLA	294,298	MNLA	ILOI	340	114.12	2,155	1,888
<b>ABOITIZ SHIPPING CORP.</b>														
	ABOITIZ SUPERFERRY - I			124	4,511.48	2,908.00	MNLA-CDOR-MNLA	1,176,336	MNLA	DAVAO	829	67.45	2,990	8,881
<b>SULPICIO LINES, INC.</b>														
	DAVAO PRINCESS													

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**TABLE B.2**

(Continued)

**COST OF CONTAINER (TEU) ACCOMODATION ABOARD PASSENGER/CARGO VESSELS PLYING ROUTES  
BETWEEN MANILA AND PORTS OF CAGAYAN DE ORO, CEBU, ILOILO & DAVAO, 1992**

Operator	Vessel	Type	Year Built	TEU	GRT	DWT	ROUTE	TEU-Mile	Orig	Dest	Dist	Load Factor (%)	Cost per TEU (Peso)	
													At 100% LF	Prevailing
WILLIAM LINES, INC. ZAMBOANGA			1973	74	3,935.21	1,741.14	MNLA-CEBU-DVAO	503,480	MNLA	DVAO	829	207.44	15,912	7,671
							MNLA-DVAO-CEBU	642,327	MNLA	DVAO	829	230.19	15,912	6,913
							MNLA-CEBU-DVAO	871,660	MNLA	DVAO	829	154.59	7,495	4,848
							MNLA-ESTC-CEBU-ZBGA-CTBT-DVAO-ESTC-MNLA	105,060	MNLA	DVAO	829	111.25	7,495	6,737
							MNLA-ZBGA-DVAO-DGAS-ZBGA-MNLA	1,544,270	MNLA	DVAO	829	205.68	21,729	10,564
							MNLA-ZBGA-DVAO-DGAS-MNLA	14,161,465	MNLA	DVAO	829	219.33	21,729	9,907
			1975	88	5,747.99	2,082.00	MNLA-ZBGA-DVAO-GAS-MNLA	351,513	MNLA	DVAO	829	239.02	21,729	9,091

**TABLE B.3**

**COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED  
ON CONTAINERSHIPS FOR MOVEMENT BETWEEN MANILA & CAGAYAN DE ORO, 1992**

Operator Vessel	ROUTE	TEU-Mile	Proportion of Total TEU-Mile	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>					
A. CONCARRIER - 6	MNLA-CEBU-MNLA	304,976	2%	14,657.60	347.02
A. SUPERCONCARRIER - II	MNLA-CDOR-MNLA-BCLD	90,048	1%	9,953.96	69.58
	MNLA-CDOR-MNLA-CEBU-MNLA-BCLD-ILOI-MNLA	563,192	4%	2,950.95	129.02
A. SUPERCONCARRIER - I	MNLA-CDOR	76,104	1%	8,065.94	47.65
A. SUPERCONCARRIER - 3	MNLA-CDOR	1,849,680	14%	2,507.10	359.99
	MNLA-CDOR-CEBU-MNLA-DVAO	167,400	1%	7,864.13	102.20
	MNLA-CDOR-BCLD-DVAO-ILOI-MNLA-ILOI-ROAS	174,680	1%	8,042.87	109.06
	MNLA-DVAO	79,584	1%	7,372.62	45.55
	MNLA-CDOR-MNLA-DGAS-MNLA-DVAO	738,675	6%	3,145.66	180.38
<b>SULPICIO LINES, INC.</b>					
SULPICIO CONTAINER - XV	MNLA-CDOR-OZMS-MNLA	154,468	1%	5,248.85	62.94
	MNLA-CDOR-ILOI	875,662	7%	2,569.43	174.66
	MNLA-CDOR	109,368	1%	3,531.48	29.98
	MNLA-CDOR-ILIG	440,115	3%	2,899.11	99.05
	MNLA-CDOR-ILIG-ILOI	200,605	2%	2,891.82	45.03
	MNLA-ILOI-CDOR	79,230	1%	5,513.18	33.91
<b>WILLIAM LINES, INC.</b>					
WILCON - VIII	MNLA-DGTE-CDOR-MNLA	6,977,970	54%	11,497.31	6,228.02
	<b>** TOTAL **</b>	12,881,757	100%		8,064.05

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**COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED ON  
PASSENGER/CARGO VESSELS FOR MOVEMENT BETWEEN MANILA & CAGAYAN DE ORO, 1992**

Operator Vessel	ROUTE	TEU-Mile	Proportion of Total TEU-Mile	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>					
<b>ABOITIZ SUPERFERRY - I</b>					
	MNLA-CDOR	958,608	11%	5,147.48	647.59
	MNLA-ILOI-MNLA	2,031,160	22%	5,949.99	1,328.07
	MNLA-ILOI-CDOR-ILOI-MNLA	140,220	2%	3,802.44	58.59
	MNLA-CDOR-MNLA-CEBU-MNLA	179,200	2%	4,677.00	92.10
	MNLA-ILOI-MNLA-CDOR-MNLA	315,656	3%	5,002.14	173.51
	MNLA-CDOR-MNLA	1,176,336	13%	5,610.80	725.30
	MNLA-CDOR-MNLA-BCLD	25,536	0%	24,615.81	69.08
<b>SULPICIO LINES, INC.</b>					
<b>DIPOLOG PRINCESS</b>					
	MNLA-DGTE-DPLG-CDOR-OZMS	615,979	7%	2,997.39	202.89
	MNLA-DGTE-DPLG-CDOR-DGTE	311,754	3%	3,109.95	106.54
<b>PALAWAN PRINCESS</b>					
	MNLA-DGTE-DPLG-CDOR-OZMS	41,405	0%	3,912.32	17.80
	MNLA-DGTE-DPLG-CDOR-OZMS-MNLA	3,304,125	36%	2,510.97	911.71
	<b>** TOTAL **</b>	<b>9,099,979</b>	<b>100%</b>		<b>4,333.18</b>

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TABLE B.5

COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED  
ON CONTAINERSHIPS FOR MOVEMENT BETWEEN MANILA & CEBU, 1992

Operator Vessel	ROUTE	TEU-Mile	Proportion of Total TEU-Mile	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>					
<b>A. CONCARRIER - 6</b>					
	MNLA-CEBU-MNLA	304,976	2%	13,512.79	316.78
	MNLA-CEBU	962,752	7%	5,929.27	435.58
	MNLA-CEBU-MNLA-ILOI	243,908	2%	6,100.67	113.54
	MNLA-DGAS-MNLA	552,372	4%	6,931.12	292.14
	MNLA-CEBU-DVAO-DGAS-CEBU	157,960	1%	12,034.96	145.06
<b>A. CONCARRIER - X</b>					
	MNLA-CEBU-MNLA-CTBT	1,606,704	12%	459.84	56.38
	MNLA-CEBU	454,720	3%	593.04	20.58
<b>SULPICIO LINES, INC.</b>					
<b>SULCON - XI</b>					
	MNLA-CEBU	32,928	0%	8,549.19	21.48
	MNLA-DGAS-CEBU	503,516	4%	3,411.55	131.07
<b>SULPICIO CONTAINER - XV</b>					
	MNLA-DGAS-CEBU-MNLA-ZBGA-ILOI-MNLA	525,868	4%	3,367.12	135.11
<b>WILLIAM LINES, INC.</b>					
<b>WILCON - II</b>					
	MNLA-BUTN-TGBL-CEBU-ILOI-MNLA	7,355,304	56%	14,010.63	7,863.36
	MNLA-BUTN-TGBL-CEBU-ILOI	404,379	3%	14,909.03	460.03
	<b>** TOTAL **</b>	<b>13,105,387</b>	<b>100%</b>		<b>9,991.11</b>

TABLE B.6

**COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED ON  
PASSENGER/CARGO VESSELS FOR MOVEMENT BETWEEN MANILA & CEBU. 1992**

Operator	Vessel	ROUTE	TEU-Mts	Proportion of Total TEU-Mts	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>SULPICIO LINES, INC.</b>						
	COTABATO PRINCESS					
		MNLA-ILOI-CEBU-CTBT-ZBGA-ILOI-ESTC-MNLA	201,474	1%	7,049.07	37.34
	DAVAO PRINCESS					
		MNLA-CEBU-DVAO	503,480	1%	4,314.11	57.11
		MNLA-DVAO-CEBU	642,327	2%	3,887.77	65.65
	DIPOLOG PRINCESS					
		MNLA-CEBU-DVAO	871,660	2%	2,453.90	56.23
		MNLA-ESTC-CEBU-ZBGA-CTBT-DVAO-ESTC-MNLA	105,060	0%	3,409.80	9.42
	FILIPINA PRINCESS					
		CEBU-MNLA	10,296,272	27%	4,560.08	1,234.39
	MANILA PRINCESS					
		MNLA-CEBU-DVAO	3,715,420	10%	4,731.76	462.20
		MNLA-ESTC-CEBU-DVAO-CEBU-MNLA	683,520	2%	5,353.21	96.20
<b>WILLIAM LINES, INC.</b>						
	MISAMIS OCCIDENTAL					
		MNLA-DPLG-ILIG-CEBU-ILIG-DPLG-MNLA	2,147,840	6%	3,600.72	203.33
	SUGBU					
		MNLA-CEBU-MNLA	13,444,032	35%	7,631.99	2,697.54
		MNLA-CEBU	2,598,176	7%	7,032.65	480.38
		MNLA-CEBU	2,598,176	7%	7,032.65	480.38
	TACLOBAN CITY					
		MNLA-ILIG-OZMS-CEBU-ILIG-OZMS-MNLA	228,976	1%	13,395.44	80.64
		<b>** TOTAL **</b>	<b>38,036,413</b>	<b>100%</b>		<b>5,960.81</b>

TABLE B.7

**COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED  
ON CONTAINERSHIPS FOR MOVEMENT BETWEEN MANILA & ILOILO, 1992**

Operator Vessel	ROUTE	TEU-Mths	Proportion of Total TEU-Mths	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>					
A. CONCARRIER - 6					
	MNLA-CEBU-MNLA-ILOI	243,908	0%	5,883.27	24.37
A. CONCARRIER - XI					
	CEBU-MNLA-ILOI	193,248	0%	5,587.70	18.34
A. SUPERCONCARRIER - II					
	MNLA-BCLD	286,608	0%	5,033.68	24.50
	MNLA-CDOR-MNLA-BCLD	90,048	0%	8,010.69	12.25
	MNLA-DGAS-MNLA-BCLD	365,310	1%	5,236.24	32.49
	MNLA-BCLD-MNLA-DVAO	181,621	0%	4,435.66	13.68
	CEBU-MNLA-BCLD-DVAO-ILOI-MNLA	984,520	2%	3,554.40	59.44
	CEBU-MNLA-BCLD-ILOI-MNLA	741,468	1%	3,161.80	39.82
	MNLA-BCLD-ILOI-MNLA	541,100	1%	3,471.64	31.91
	MNLA-BCLD-CTBT-ILOI-MNLA	88,620	0%	6,389.48	9.62
	MNLA-BCLD-DVAO-ILOI-MNLA	281,026	0%	4,728.77	22.57
	CEBU-MNLA-BCLD-ILOI-MNLA	98,280	0%	3,975.67	6.64
	MNLA-CDOR-MNLA-CEBU-MNLA-BCLD-ILOI-MNLA	563,192	1%	2,374.85	22.72
	MNLA-CEBU	546,840	1%	3,462.68	32.16
A. SUPERCONCARRIER - 3					
	MNLA-CDOR	1,849,680	3%	2,080.00	65.35
	MNLA-CDOR-BCLD-DVAO-ILOI-MNLA-ILOI-ROAS	174,680	0%	6,672.74	19.80
	MNLA-ILOI	592,620	1%	4,379.58	44.08
	MNLA-DVAO	79,584	0%	6,116.67	8.27
	MNLA-CDOR-MNLA-DGAS-MNLA-DVAO	738,675	1%	2,609.78	32.74
	DGAS-MNLA-DVAO	1,101,920	2%	6,616.34	123.83
	MNLA-DVAO-DGAS-MNLA	225,435	0%	4,415.04	16.91
<b>NEGROS NAV. CO., INC.</b>					
CONNIE - II					
	MNLA-BCLD-ILOI	3,877,560	7%	3,496.52	230.28
MOSES - VII					
	MNLA-BCLD-ILOI	212,760	0%	7,336.88	26.51
SAN SEBASTIAN					
	MNLA-BCLD-ILOI	5,000,760	8%	4,726.40	401.45

**TABLE B.7**  
(Continued)  
**COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED**  
**ON CONTAINERSHIPS FOR MOVEMENT BETWEEN MANILA & ILOILO, 1992**

Operator	Vessel	ROUTE	TEU-Mile	Proportion of Total TEU-Mile	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>SULPICIO LINES, INC.</b>						
	SULCON - II					
		MNLA-DGAS-ZBGA-CTBT-ILO	160,500	0%	7,144.02	19.48
		MNLA-CTBT-ZBGA-ILOI	354,315	1%	6,212.19	37.39
	SULCON - XI					
		MNLA-DGTE-OZMS-ILOI	77,916	0%	4,376.66	5.79
	SULPICIO CONTAINER - XV					
		MNLA-CDOR-ILOI	875,662	1%	2,047.17	30.45
		MNLA-CDOR-ILIG-ILOI	200,605	0%	2,304.03	7.85
		MNLA-ILOI	112,880	0%	3,678.12	7.05
		MNLA-DGAS-CEBU-MNLA-ZBGA-ILOI-MNLA	525,868	1%	3,115.14	27.82
		MNLA-ILOI-CDOR	79,230	0%	4,392.57	5.91
<b>WILLIAM LINES, INC.</b>						
	WILCON - II					
		MNLA-BUTN-TGBL-CEBU-ILOI-MNLA	7,355,304	12%	13,866.61	1,732.37
	WILCON - V					
		MNLA-ILOI-BCLD-MNLA	5,960,500	10%	9,375.44	949.17
	WILCON - X					
		MNLA-ILOI-ZBGA-DVAO-MNLA	13,366,782	23%	10,096.98	2,292.39
	WILCON - XI					
		MNLA-ILOI-ZBGA-DVAO-DGAS-MNLA	10,745,904	18%	13,390.27	2,444.00
		<b>** TOTAL **</b>	<b>58,874,929</b>	<b>100%</b>		<b>8,879.41</b>

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TABLE B.8

COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED ON PASSENGER/CARGO VESSELS FOR MOVEMENT BETWEEN MANILA & ILOILO, 1992

Operator Vessel	ROUTE	TEU-Mths	Proportion of Total TEU-Mths	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>					
ABOITIZ SUPERFERRY - I					
	MNLA-CDOR	958,608	3%	4,339.44	139.20
	MNLA-ILOI-MNLA	2,031,160	7%	4,200.03	285.47
	MNLA-ILOI-CDOR-ILOI-MNLA	140,220	0%	2,684.10	12.59
	MNLA-ILOI-MNLA-CDOR-MNLA	315,656	1%	3,530.95	37.30
	MNLA-CDOR-MNLA	1,176,336	4%	3,960.60	155.90
	MNLA-ILOI-MNLA-BCLD	187,960	1%	5,353.69	33.67
	MNLA-ILOI-ROAS	21,760	0%	5,158.51	3.76
<b>C.A. GOTHONG LINES, INC.</b>					
OUR LADY OF GUADALUPE					
	MNLA-ILOI	39,440	0%	2,478.01	3.27
<b>SULPICIO LINES, INC.</b>					
COTABATO PRINCESS					
	MNLA-ESTC-ILOI-ZBGA-CTBT-MNLA	22,199,916	74%	1,490.86	1,107.52
	MNLA-ILOI-CEBU-CTBT-ZBGA-ILOI-ESTC-MNLA	201,474	1%	6,709.08	45.23
DIPOLOG PRINCESS					
	MNLA-ILOI-ZBGA-DGAS	609,792	2%	1,667.86	34.03
	MNLA-ESTC-ILOI-ZBGA-CTBT	1,303,155	4%	1,444.91	63.01
	MNLA-ESTC-ILOI-ZBGA-DGAS-ZBGA-ILOI-MNLA	219,748	1%	1,869.95	13.75
PALAWAN PRINCESS					
	MNLA-PLMP-ILOI	118,680	0%	2,654.12	10.54
	MNLA-ILOI-DGAS	65,736	0%	2,206.44	4.85
	MNLA-ILOI-ZBGA-DGAS-MNLA	294,298	1%	1,887.98	18.59
** TOTAL **		29,883,939	100%		1,968.69

TABLE B.9

**COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED  
ON CONTAINERSHIPS FOR MOVEMENT BETWEEN MANILA & DAVAO, 1992**

Operator	Vessel	ROUTE	TEU-Mths	Proportion of Total TEU-Mths	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>						
<b>A. CONCARRIER - 6</b>						
		MNLA-CEBU-MNLA	304,976	1%	17,689.39	161.67
		MNLA-CEBU	962,752	3%	7,704.90	222.29
<b>A. SUPERCONCARRIER - II</b>						
		MNLA-BCLD-MNLA-DVAO	181,621	1%	7,644.05	41.60
		CEBU-MNLA-BCLD-DVAO-ILOI-MNLA	984,520	3%	6,125.36	180.72
		MNLA-BCLD-DVAO-ILOI-MNLA	281,026	1%	8,149.17	68.63
<b>A. SUPERCONCARRIER - I</b>						
		CEBU-MNLA-DVAO	713,064	2%	10,447.31	223.24
		MNLA-DVAO	1,790,640	5%	8,473.92	454.71
		MNLA-DGAS-BCLD-DVAO-DGAS-MNLA	208,159	1%	11,643.55	72.63
		CEBU-MNLA-DVAO-DGAS-MNLA	350,616	1%	9,079.20	95.39
<b>A. SUPERCONCARRIER - 3</b>						
		MNLA-CDOR-CEBU-MNLA-DVAO	167,400	1%	10,518.99	52.77
		MNLA-CDOR-BCLD-DVAO-ILOI-MNLA-ILOI-ROAS	174,680	1%	10,758.07	56.31
		MNLA-ILOI	592,620	2%	7,060.95	125.39
		MNLA-DVAO	79,584	0%	9,861.55	23.52
		MNLA-CDOR-MNLA-DGAS-MNLA-DVAO	738,675	2%	4,207.60	93.14
		DGAS-MNLA-DVAO	1,101,920	3%	10,667.14	352.24
		CEBU-MNLA-DGAS-MNLA-DVAO	400,050	1%	6,311.40	75.66
		MNLA-DVAO-DGAS-MNLA	225,435	1%	7,118.11	48.09
<b>WILLIAM LINES, INC.</b>						
<b>WILCON - X</b>						
		MNLA-ILOI-ZBGA-DVAO-MNLA	13,366,782	40%	11,039.03	4,421.77
<b>WILCON - XI</b>						
		MNLA-ILOI-ZBGA-DVAO-DGAS-MNLA	10,745,904	32%	14,928.71	4,807.33
		<b>** TOTAL **</b>	<b>33,370,424</b>	<b>100%</b>		<b>11,577.09</b>

TABLE B.10

COMPUTATION OF AVERAGE PREVAILING COST PER TEU LOADED ON PASSENGER/CARGO VESSELS FOR MOVEMENT BETWEEN MANILA & DAVAO, 1992

Operator	Vessel	ROUTE	TEU-Mile	Proportion of Total TEU-Mile	Average Cost per TEU (Pesos)	Contribution to Average (Pesos)
<b>ABOITIZ SHIPPING CORP.</b>						
	ABOITIZ SUPERFERRY - I					
		MNLA-CDOR-MNLA	1,176,336	6%	8,881.01	539.73
<b>SULPICIO LINES, INC.</b>						
	DAVAO PRINCESS					
		MNLA-CEBU-DVAO	503,480	3%	7,670.70	199.53
		MNLA-DVAO-CEBU	642,327	3%	6,912.64	229.39
	DIPOLOG PRINCESS					
		MNLA-CEBU-DVAO	871,660	5%	4,848.15	218.33
		MNLA-ESTC-CEBU-ZBGA-CTBT-DVAO-ESTC-MNLA	105,060	1%	6,736.71	36.57
<b>WILLIAM LINES, INC.</b>						
	ZAMBOANGA					
		MNLA-ZBGA-DVAO-DGAS-ZBGA-MNLA	1,544,270	8%	10,564.46	842.85
		MNLA-ZBGA-DVAO-DGAS-MNLA	14,161,465	73%	9,907.43	7,248.55
		MNLA-ZBGA-DVAO-GAS-MNLA	351,513	2%	9,090.93	165.09
		** TOTAL **	19,356,111	100%		9,480.03

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Table B.11

**Containership Cost Per Loaded TEU at 60 Percent Load Factor, 1992\***  
(Pesos/TEU)

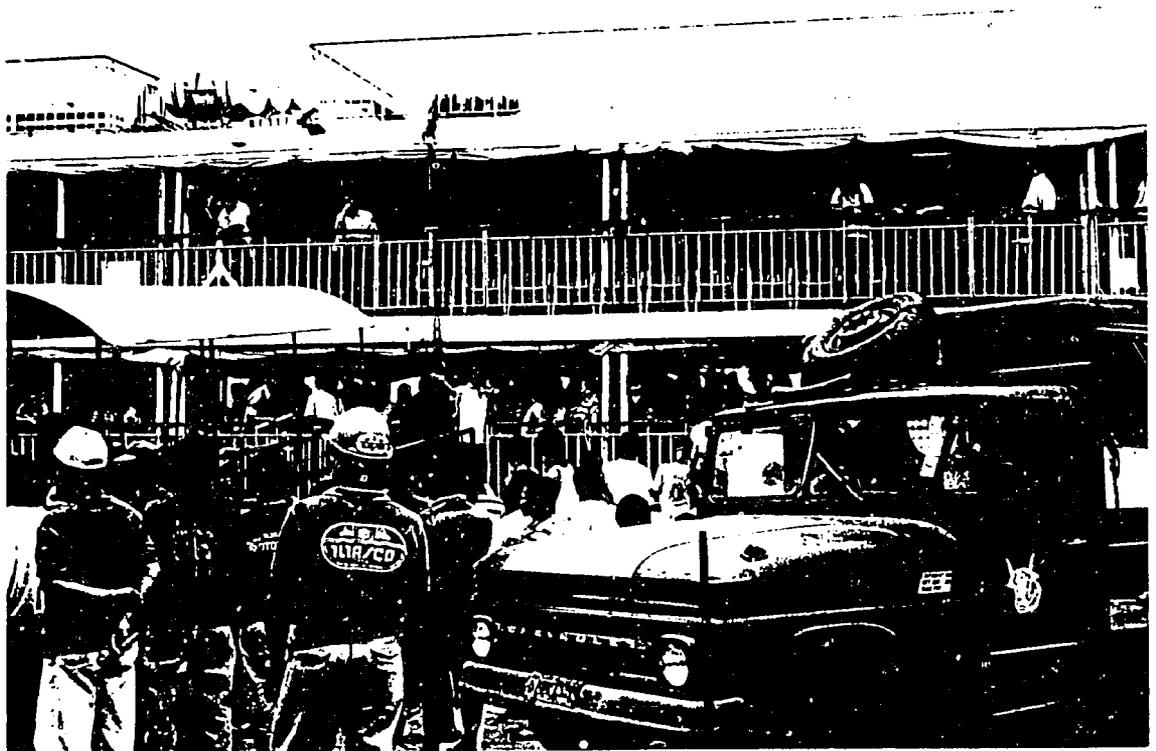
Containership Size & Voyage Freq.	Liner Shipping Route & Single-direction Voyage Distance		
	Manila-Iloilo (340 n.m.)	Manila-Cag.de Oro (504 n.m.)	Manila-Davao (842 n.m.)
<b>2000 DWT Containership</b>			
100 voyages / year	4,425	5,939 **	9,060 ***
50 voyages / year	5,689	7,203	10,324
34 voyages / year	6,878	8,393	11,514
<b>4000 DWT Containership</b>			
100 voyages / year	2,976	4,031 **	6,205 ***
50 voyages / year	3,749	4,804	6,979
34 voyages / year	4,477	5,532	7,706
<b>6000 DWT Containership</b>			
100 voyages / year	2,697	3,656 **	5,633 ***
50 voyages / year	3,393	4,352	6,329
34 voyages / year	4,048	5,008	6,984

\* Computed by using the DOSOCOMO theoretical cost model

\*\* Service frequency possible only with vessel having cruising speed of 15 knots or above.

\*\*\* Theoretical value only, as service frequency is unrealistic

ILOILO RIVERPORT



ANNEX C

COMPUTATION OF AVERAGE LANE-METER COSTS OF RORO FERRIES

None of the RORO ferry operators in the Philippines submit complete annual reports to MARINA. Moreover, most RORO ferries are identified in MARINA's records as "passenger ferries", with no indications of passenger car unit (PCU) or bus equivalent unit (BEU) capacities. Because of the dearth of actual cost and traffic information in the MARINA database where RORO ferries are concerned, the LSRS had to rely entirely on the DOSOCOMO theoretical cost model for the estimation of RORO ferry lane-meter costs.

Table C.1 shows costs per lane-meter and per passenger estimated for two sizes of RORO ferry on each two routes, over a range of service frequencies. The higher frequencies shown are not actually possible, and are only shown to give an idea of the direct inverse relationship between service frequency and unit cost. Some of the ferries operating between Batangas and the Mindoro north coast ports, including Calapan, regularly operate two round-trips per day, and three round-trips would be possible over an extended operating day. Between Cebu and Tagbilaran only a single round-trip is operated in 1994, but two round-trips could be operated over an extended operating day.

A passenger car requires 5 lane-meters and heavy two-axle trucks and elongated cargo jeepneys require 8.5 lane-meters. Articulated cargo vehicles require up to 14 lane-meters. Thus, costs for each of these three vehicle types, on two routes, with 1994 operating schedules, are estimated to have been as shown below, in 1992.

Cost of Vehicle Accommodation by RORO Vessel, 1992  
(pesos per vehicle per one-way voyage)

Voyage	Passenger Car	Large Rigid Trucks	Articulated Cargo Vehicle
Cebu-Tagbilaran	3,090	5,250	8,650
Calapan-Batangas	1,650	2,800	4,620

Note: Costs based on ferries operating one round-trip per day on the Cebu-Tagbilaran route and two round-trips per day on the Calapan-Batangas route. The costs shown in Table C.1 for a 750 GRT RORO ferry provide the basis for the calculations.

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Table C.1

**RORO Ferry Cost Per Vehicle-Lane-Meter & Passenger, 1992 \***  
(Pesos)

Vessel Size & Service Freq.	Ferry Route & Single-direction Voyage Distance			
	Cebu-Tagbilaran (43 n.m.)		Batangas-Calapan (24.n.m)	
	Cost/Passenger	Cost/Lane-meter	Cost/Passenger	Cost/Lane-meter
<b>1500 GRT (1800 DWT) RORO Ferry</b>				
1 round -trip/day	54	759	48	671
2 round -trips/day	35	493	29	405
3 round -trips/day	29	404	22	317
4 round -trips/day	25	360	19	272
5 round -trips/day	24	333	17	246
<b>750 GRT (1100 DWT) RORO Ferry</b>				
1 round -trip/day	58	618	52	550
2 round -trips/day	31	399	31	330
3 round -trips/day	31	326	24	257
4 round -trips/day	27	289	21	221
5 round -trips/day	25	267	19	199

\* At 60 percent load factors. Larger vessel has capacity for 700 passengers and has 204 lane-meters to accommodate vehicles, based on a 68-meter LOA and 13.5 meter breadth. The 1992 assessed value was approximately P40 million. Smaller vessel has capacity for 400 passengers and has 165 lane-meters to accommodate vehicles, based on 55-meter LOA and 12.5-meter breadth. Assesed 1992 value was approximately P20 million, which means that capital cost per passenger space and per lane-meter is significantly lower for this vessel than for the largest vessel, which would not always be the case between RORO ferries of these two sizes. The higher frequencies shown in the table are not actually possible, but are shown only to demonstrate how cost reduction would theoretically continue with increasing sevice frequency.

## ANNEX D

### COMPUTATION OF THE COST OF LINER SHIPPING PASSENGER ACCOMMODATION

The LSRS used DOSOCOMO to compute the costs of passenger accommodation by liner shipping, based on actual cost and traffic information contained in operator annual reports to MARINA. Table D.1 presents all of the 1992 information available in the database of MARINA's DSO on liner shipping passenger accommodation on routes connecting Manila to Cebu and Davao and connecting Cebu to Cagayan de Oro and Ormoc. As shown in the last column of the table, much of this information gives completely unrealistic results. This is the case where very low levels of passenger traffic have been reported, as between Iloilo and Bacolod. It is not possible, on the basis of information in hand at DSO, to obtain realistic estimates of passenger accommodation costs for the Iloilo-Bacolod, Manila-Davao, and Cebu-Davao routes.

**TABLE D.1**

**COMPUTATION OF PASSENGER ACCOMODATION COSTS  
ON PRINCIPAL INTERISLAND ROUTES, 1992**

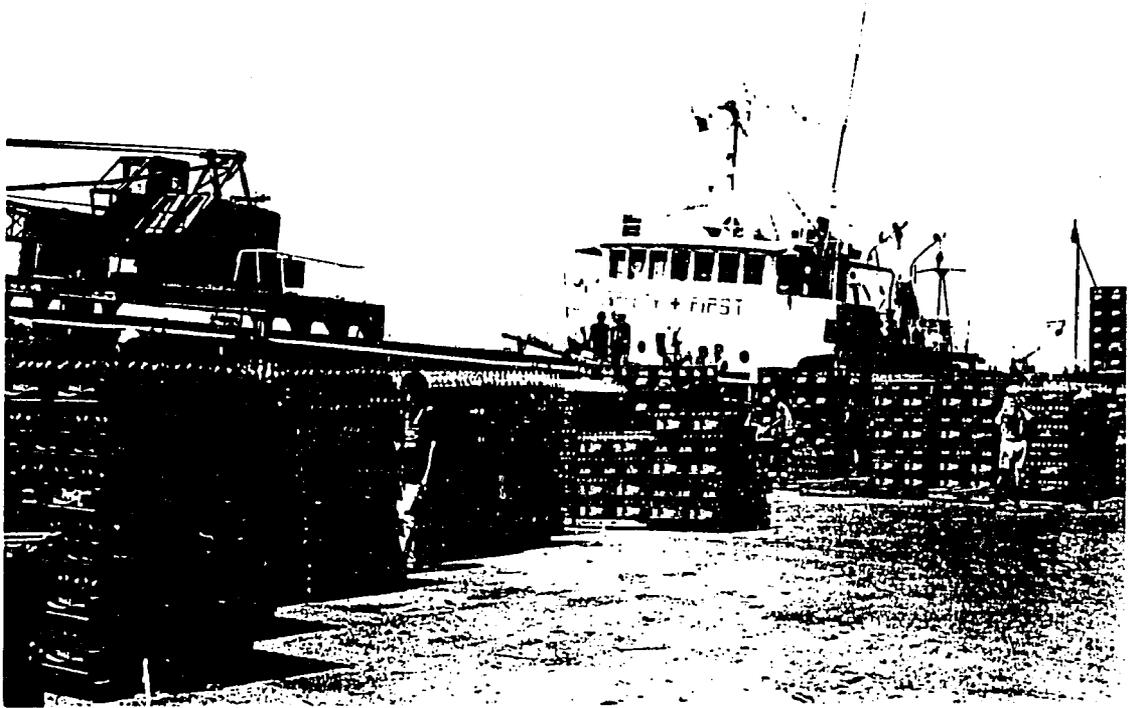
VESNAME	YEAR BUILT	GRT	DWT	PAX Capacity	ROUTE	PAX-MILE	ORIG	DEST	DIST. (NM)	LF (%)	Cost per Pax (Pesos)	
											At 100% LF	Prevailing
<b>C.A. GOTHONG LINES, INC.</b>												
OUR LADY OF GUADALUPE	1973	938.17	819.24	824	CEBU-CDOR	3,323,700	CEBU	CDOR	135	31.79	73.29	230.57
					CEBU-CDOR-CEBU-MNLA-JGNA-CEBU	609,986	CEBU	CDOR	135	32.73	73.29	223.95
					CEBU-CDOR-CEBU-MNLA	5,386,032	CEBU	CDOR	135	44.88	73.29	163.30
					CEBU-CDOR-CEBU-JGNA-CEBU	335,506	CEBU	CDOR	135	44.84	73.29	163.44
					CEBU-CDOR-CEBU-TCLB	1,128,222	CEBU	CDOR	135	49.72	73.29	147.41
					CEBU-CDOR-CEBU-JGNA	347,882	CEBU	CDOR	135	58.31	73.29	125.68
					CEBU-CDOR-CEBU-TCLB-MNLA	887,744	CEBU	CDOR	135	43.16	73.29	169.80
					CEBU-CDOR-CEBU-MNLA-JGNA	514,374	CEBU	CDOR	135	94.30	73.29	77.72
					CEBU-CDOR-CEBU-TCLB-JGNA-CEBU	272,414	CEBU	CDOR	135	60.00	73.29	122.15
					CEBU-JGNA-CDOR-CEBU	147,826	CEBU	CDOR	135	60.00	73.29	122.15
					CEBU-CDOR-JGNA-CEBU	341,757	CEBU	CDOR	135	69.36	73.29	105.67
					CEBU-CDOR-MNLA-TCLB-JGNA-CEBU	1,459,488	CEBU	CDOR	135	80.22	73.29	91.36
					CEBU-CDOR-JGNA-CEBU-MNLA	863,059	CEBU	CDOR	135	75.79	73.29	96.70
					CEBU-CDOR-CEBU-MNLA-TCLB	846,630	CEBU	CDOR	135	49.64	73.29	147.65
					CEBU-CDOR-MNLA-JGNA-CEBU	1,178,372	CEBU	CDOR	135	97.82	73.29	74.93
					CEBU-CDOR-JGNA-CDOR-TCLB-CEBU	321,360	CEBU	CDOR	135	60.00	73.29	122.15
					CEBU-CDOR-JGNA-TCLB-CEBU	195,782	CEBU	CDOR	135	30.00	73.29	244.30
					CEBU-CDOR-JGNA-CDOR-TCLB-MNLA-CEBU	606,134	CEBU	CDOR	135	60.00	73.29	122.15
					CEBU-CDOR-JGNA	102,341	CEBU	CDOR	135	60.00	73.29	122.15
<b>SULPICIO LINES, INC.</b>												
CAGAYAN PRINCESS	1973	925.66	800.00	842	CEBU-CDOR	4,105,485	CEBU	CDOR	135	44.59	89.46	200.64
					CEBU-CDOR-JGNA	960,273	CEBU	CDOR	135	14.13	89.46	633.28
<b>TRANS-ASIA SHPG LINES INC</b>												
ASIA JAPAN	1973	1030.02	443.54	668	CEBU-CDOR	8,129,970	CEBU	CDOR	135	100.17	65.85	65.73
					CEBU-DGTE-DPLG-ZBGA	13,396,860	CEBU	CDOR	135	88.43	65.85	74.46
ASIA THAILAND		1078.40	532.01	555	CEBU-CDOR	6,682,770	CEBU	CDOR	135	117.36	38.43	32.74
					CEBU-MASN-JGNA-BUTN-JGNA-CDOR-TGEL	26,077,264	CEBU	CDOR	135	111.28	38.43	34.53
					CEBU-MASN-JGNA-BUTN-JGNA-CDOR-TGEL	26,077,264	CEBU	CDOR	135	111.28	38.43	34.53
<b>WILLIAM LINES, INC.</b>												
ILIGAN CITY	1969	1512.44	1600.00	515	CEBU-ILIG-OZMS-CEBU	6,299,964	CEBU	CDOR	135	48.46	60.58	125.02
<b>ABOITIZ SHIPPING CORP.</b>												
ELCANO	1955	2047.61	2080.33	893	CEBU-ORMC	7,355,270	CEBU	ORMC	65	45.26	34.06	75.26

(Continued)

**COMPUTATION OF PASSENGER ACCOMODATION COSTS  
ON PRINCIPAL INTERISLAND ROUTES, 1992**

VESSEL NAME	YEAR BUILT	GRT	DWT	PAX Capacity	ROUTE	PAX-MILE	ORIG	DEST	DIESEL (NML)	LF (%) PAX	Cost per Pax (Pesos)	
											At 100% LF	Prevailing
<b>LEGASPI</b>	1955	2047.61	2080.33	912	CEBU-ORMC-CEBU-MNLA-SGAO	1,754,028	CEBU	ORMC	65	98.03	33.61	34.29
					CEBU-ORMC	1,869,335	CEBU	ORMC	65	40.95	33.61	82.07
					CEBU-ORMC-CEBU-ORMC-MNLA-SGAO	563,069	CEBU	ORMC	65	30.00	33.61	112.04
<b>SULPICIO LINES, INC.</b>												
<b>CEBU PRINCESS</b>	1971	1097.00	800.00	784	MNLA-ORMC-CTBG-MSBT-MNLA	391,373	CEBU	ORMC	65	60.00	65.02	108.36
					MNLA-ORMC-CTBG-MSBT-MNLA	391,373	MNLA	CEBU	392	60.00	272.53	454.22
<b>COTABATO PRINCESS</b>	1970	7977.00	2494.60	2145	MNLA-ILOI-CEBU-CTBT-ZBGA-ILOI-ESTC-MNLA	2,108,106	MNLA	CEBU	392	60.00	221.31	368.85
<b>DAVAO PRINCESS</b>	1973	3935.21	1741.14	1091	MNLA-CEBU-DVAO	536,772	MNLA	CEBU	392	15.00	555.96	3,706.38
					MNLA-DVAO-CEBU	822,832	MNLA	CEBU	392	20.00	555.96	2,779.79
<b>PHILIPPINE PRINCESS</b>	1971	4717.55	2863.57	1633	CEBU-MNLA-CEBU	768,163	MNLA	CEBU	392	60.00	248.15	413.59
<b>SURTAAO PRINCESS</b>	1971	1035.71	1000.00	812	MNLA-CIBN-PLMP-MASN-SGAO-BUTIN-BUTIN-CEBU	291,346	MNLA	CEBU	392	60.00	212.86	354.77
<b>WILLIAM LINES, INC.</b>												
<b>SUGBU</b>	1977	6524.55	3322.00	2006	MNLA-CEBU	471,811	MNLA	CEBU	392	2.31	237.32	10,283.64
					MNLA-CEBU	471,811	MNLA	CEBU	392	2.31	237.32	10,283.64
<b>TACLOBAN CITY</b>	1963	2041.75	1164.00	1026	MNLA-ILIG-OZMS-CEBU-ILIG-OZMS-MNLA	800,896	MNLA	CEBU	392	15.00	754.22	5,028.14
<b>ABOTTIZ SHIPPING CORP.</b>												
<b>ABOTTIZ SUPERFERRY - I</b>		4511.48	2908.00	2400	MNLA-CDOR-MNLA	1,451,520	MNLA	DVAO	829	4.29	369.14	8,613.24
<b>SULPICIO LINES, INC.</b>												
<b>DAVAO PRINCESS</b>	1973	3935.21	1741.14	1091	MNLA-CEBU-DVAO	536,772	MNLA	DVAO	829	15.00	999.71	6,664.74
				1091	MNLA-DVAO-CEBU	822,832	MNLA	DVAO	829	20.00	999.71	4,998.56
<b>WILLIAM LINES, INC.</b>												
<b>ZAMBOANGA</b>	1975	5747.99	2082.00	1875	MNLA-ZBGA-DVAO-DGAS-ZBGA-MNLA	1,909,125	MNLA	DVAO	829	12.00	492.43	4,103.61
				1875	MNLA-ZBGA-DVAO-DGAS-MNLA	3,657,035	MNLA	DVAO	829	2.67	492.43	18,423.20
				1875	MNLA-ZBGA-DVAO-GAS-MNLA	934,875	MNLA	DVAO	829	30.00	492.43	1,641.45

CEBU PORT



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ANNEX E

COMPUTATION OF COSTS OF CORN ACCOMMODATION AS LINER  
BREAKBULK CARGO & TRAMPER BULK CARGO

Some dry cargoes lend themselves to accommodation in bulk, which may, then, constitute the least-cost method for their accommodation. In the Philippines, sizable proportions of the interisland and coastal movements of corn are accommodated by trumper shipping. Two types of bulk capacity are being provided for these trumper services: dry bulk carrier ships and tug/barge sets. This annex provides a cost comparison of these two bulk cargo capacity options. A final section of the annex indicates the cost estimates for accommodating corn as breakbulk cargo on liner vessels. However, the limited and unclear cost and traffic information available in the DSO database (from operator 1991 and 1992 reports) make accurate cost estimates impossible.

Dry Bulk Carrier

To be efficient, a tramping vessel must correspond to all of the conditions and characteristics of the trade, in terms of distance and speed, fuel consumption, loaded draft at points of loading and discharge, and warehouse capacities, sizes of shipment lots, and required handling gears. For the purpose of identifying typical costs associated with bulk carriers in the Philippines, a vessel with the following characteristics is selected:

Vessel size	-	2600 DWT
Place & year built	-	Japan, 1975
Classification	-	Phil. Coast Guard
Gears	-	2 x 25mt swl
Holds/hatches	-	1/1
Speed	-	10 knots
Loaded draft	-	5.3 meters
LOA	-	75 meters
Grain/bale	-	3167/2860 cubic meters
Engine	-	Hanshin 6LU38 Jpn 6 Cyl 2100 BHP x 315 RPM
Gen set	-	Yanmar 6kfl 115PS x 1200 RPM

The main engine and auxiliary engines consume the following fuel at sea and in port:

Fuel at sea:

Main Engine fuel SF0200 - 3926 liters/day @ ₱ 3.9325/liter

System oil	-	18.7 liters/day @ ₱ 31.882/liter
Aux eng. (1 unit) ADO fuel	-	578.5 liters/day @ ₱ 6.5486.6/liter
G40 system oil	-	12.5 liters/day @ ₱ 31.882/liter

Fuel in port:

Aux eng.(2 units) ADO fuel	-	1387.2 liters/day @ ₱ 6.5486/liter
G40 system oil	-	24.9 liters/day @ ₱ 31.882/liter
L068	-	9.6 liters/day

The dry bulk carrier described above requires an 16-member crew, the salaries of whom would add to P 104,630 per month, as shown below.

Master.....	₱ 14,500
Chiefmate.....	10,600
Second Mate.....	6,080
Third Mate.....	5,250
Radio Operator.....	5,250
Quarter Master (3).....	4,000
Chief Engineer.....	13,500
Second Engineer.....	10,500
Third Engineer.....	6,500
Electrician.....	5,250
Ordinary Seaman (3).....	4,000
Cook.....	4,300

Meal allowance (₱ 30/day/person given in cash)	₱ 16,740.00/mo
SSS/Medicare/ECC.....	₱ 4,869.86/mo
Insurance Protection & Indemnity.....	₱ 22,616.20/31 days
Marine Hull.....	₱ 52,096.43/31 days

The above insurance is covered directly with London underwriters in order to come out cheaper by avoidance of expensive documentary stamp. Domestic hull premium is 6 to 10% for individual vessel of not more than 10 to under 12 years old. There is a big surcharge for vessels that are 12 years old and above. Industrial vessels used mostly for support operation by big trading firms if they are well maintained may pay as low as 4 to 5%. Bigger and newer ships like William Lines with its greater number of units may have as low as 3% premium. Local retention is 5 to 10 percent.

Protection and indemnity charges a minimum of US\$ 5,000 for every ₱ 10 million worth of asset, which is the minimum that is covered. Vessel owners/operators with foreign connections prefer to get their vessels covered abroad, say in Hongkong, because the local requirement on documentary stamp is too expensive and makes the local underwriter uncompetitive. The disadvantages, however, of getting a foreign coverage is the 6 months to one year delay in payment of claims that are reported by some companies.

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Local insurers and reinsurers are wary of the hull coverage; the cargo insurance is preferred for being less risky. Marine open policy is half of Clause A. Clause A is all risk and the rates range from 0.5% to 1.0%. On sharing of risk, big shipments are covered up to 90% by reinsurers. Some large insurance companies sometimes self-reinsure, especially on values below ₱ 1 million. In the case of big importations, however, local banks require local cover in their LCs. On cargo cover, the local insurance companies are competitive although many of them would prefer a total loss only cover (0.05% in the case of interisland corn) versus the more comprehensive cover with an average charge of 0.10 to 0.30% of value.

Commissioning is generous to marine cargo agent or is rebated to the insured at 30-32% of the gross; 7.5% of the gross for both hull and P & I cover and 25% for fire. On the issue of the withdrawal of the London reinsurers from cover of natural calamities in Asia, particularly from the Philippines, this can mean higher premium all around as well as requiring policy holders to assume part of the risk, say up to 20%. This relates only to claims from natural calamities like typhoons and the like.

Many of the domestic bulk trampers are merely self-insured, especially the smaller sizes of 1000 dwt and below. The idea of setting up a domestic insurance club among the domestic liners and/or trampers owned and operated by local owners has been bruited about and has found keen interest among the VAFCSO, the ISOA and SMSA memberships. This can be patterned after the London Insurance Club where members receive 5% rebate of the total premium in case no casualty/ accident happened among the members during the year. In case of accident to any one of the members, members are obliged to pay 10% of the premium as additional cost. Generally the insurance premium depends on the size, age and destination of the vessel and on the recommendation of the surveyor.

The bulk carrier vessel acquisition cost on the second-hand market was the equivalent of ₱ 18 million, inclusive of expenses related to the purchase. Considering the age of the vessel at time of purchase, the estimated useful life can be taken as five years only. On that basis, and using straight line depreciation, the annual depreciation charge would be ₱ 3,600,000. The drydocking cost of ₱ 3 million must be incurred every other year, and can either be annualized (like depreciation), or can be charged as an outright expense in the year it is incurred.

Besides the above costs, the bulk carrier would incur ₱ 15,000 per round-trip voyage in port charges and about ₱ 25,000 on consumable materials and supplies.

## Tug/Barge Sets

In the Philippines, a tugboat is usually employed with two barges ( a common size is 1200 DWT apiece) as a tug/barge set for the purpose of accommodating bulk commodities such as grains or copra. The tug/barge operation compared to that of bulk shipping has a number of advantages. The barging business is comparatively simpler to operate in terms of technical requirements, manpower, licenses, permits and fees. Its shallow draft allows it to enter shallow and narrow rivers and coastal waters and even navigate under low bridges. The expensive tug prime mover can be employed for other towing services while the barge is being loaded or discharged, thus reducing the cost of waiting time for the tug. In domestic towing, however, the PCG requires all barges while loading or discharging to be attended by a tugboat. This ruling has made it difficult for tug/barge operators to be flexible in the employment of their tugboats.

The tug/barge tandem is ideal for short coastal or upriver hauling operations where bulk handling facilities are obtaining, as in the case of bulk grains and feeds lighterage in Manila anchorage. Many shippers, however, have shunned the tug/barge use for long hauls, especially when the tandem has had to pass through dangerous waters either because of faster pirate boats (as in the case of the waters off Zamboanga) or because of rough seas. The tug/barge set slowness makes them inviting targets for the swift pirate boats. Also while the tugboat is one of the safest of seacraft, the tandem separated by about 120 meters adversely affects maneuverability of the seacraft in rough weather. The heavy insurance claims from barge shippers of grains and paper in the 1970s have driven up the insurance premium on the use of barges.

All or nearly all of the barges are built locally, and most of the operators are using brand new barges. The price for tugboat newbuildings, however, has more than doubled from the early 1980s to 1994, while the barge cost has soared from ₱ 1,850 to ₱ 6,500/dwt.

For purposes of comparison in the same route and cargo, the tug/barge sets are considered hereunder according to November 1993 prices.

Barge acquisition cost 2 units x ₱ 6,500	
x 1200 dwt.....	₱ 15,600,000
Tugboat 960 HP acquisition cost.....	6,000,000
	-----
Total Acquisition.....	₱ 21,600,000
10 years at 18% PA.....	.166666
Amortization per annum.....	3,600,000
PLUS:	

Daily Operating Expenses..... 40,000  
-----

Fuel & Oil  
Salaries & Wages  
Living Allowance  
Operating Supplies; repairs & Maintenance  
Insurance, permits & Licenses  
Depreciation  
Miscellaneous  
Administrative Services

350 days income..... P 3,640,000  
PLUS: 15 days off hire..... 642,352.94  
-----

Operating Capital Expenses PA..... P 4,282,352.94  
per MO..... 356,862.75  
Tug + barge T/C per dwt/day..... 148.69

Other voyage particulars:

Tugboat speed ballast 7.0 knots; loaded 4.0 to 4.5 knots/hr.

Fuel consumption DO 75 li/hr at sea

Distance 750 n.m. x 2

Salaries..... P 75,500/mo

Tug: Master..... P 6,200  
Chief Eng..... 5,800  
Chief Mate..... 5,200  
Second Mate..... 4,700  
Second Eng..... 4,700  
Radio Operator..... 4,500  
Cook..... 3,600  
Quartermaster (2)..... 3,400  
Boatsman (2)..... 3,400  
Seaman (2)..... 3,400  
Oiler (2)..... 3,400  
Barge Patron (4)..... 3,800

Meal allowance (P 27.50 day/person in cash)..... P 16,197.50/mo.

SSS/Medicare/ECC..... 4,000.00/mo.

Insurance:

Most barges are self insured. If they should be insured the following is the rate from Prudential, Pioneer, Mercantile, Seaboard and Meridian: Hull premium for new tug+barges 3.25%.

Depreciation estimated useful life ..... 10 years  
Drydocking every year estimate (2 years)..... P 300,000 x 2 + P 200,000  
Port Charges Manila + Dadiangas..... P 15,000  
Materials & Supplies (consumables)..... P 65,000 P.M.

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## Liner Shipping Breakbulk Cargo

Table E.1 shows the estimated costs of liner shipping accommodation of breakbulk cargo between the ports of General Santos and Manila. As indicated in a footnote to the table, however, Solid Shipping Lines actually accommodate their cargo in 5-ft and 10-ft containers and estimate the capacities of their vessels in terms of bales. This might also be the cargo unit they have used in reporting traffic, which would explain the differences in cost per unit between Solid Shipping and Aleson Shipping Lines. There are many questions on what units are being reported in the reports received by MARINA, and incorrect guesses on the parts of encoders can lead to inaccurate unit cost computations.

TABLE E.1

**ESTIMATED CARGO FREIGHT TON/COSTS OF VESSELS PLYING ROUTES  
BETWEEN GENERAL SANTOS AND MANILA, 1992 \***

OPERATOR	VESSEL	TYPE	TEU Capacity	GRT	DWT	ROUTE	ORIG	DEST	DIST (NM)	LT (%) Cargo	Cost Cargo (P/mo)	
											(%) TEU	Traveling LT
<b>ALESON SHPG. LINES, INC.</b>												
	ALESON - I	GENERAL CARGO	51	488.78	1,202.00	GESA-MNLA	GESA	MNLA	754.80	20.04	116.85	582.98
	ALEXANDER	GENERAL CARGO	95	494.45	2,240.00	GESA-MNLA	GESA	MNLA	754.80	22.78	81.58	358.17
	NELSON	GENERAL CARGO	69	498.02	1,635.00	GESA-MNLA	GESA	MNLA	754.80	18.73	98.93	528.12
<b>SOLID SHIPPING LINES, INC</b>												
	MALIGAYA	GENERAL CARGO	60	2,222.50	2,286.64	MNLA-DVAO-GESA-MNLA	GESA	MNLA	754.80	5.81	948.03	16,306.61
			60	2,222.50	2,286.64	MNLA-GESA-MNLA	GESA	MNLA	754.80	5.67	948.03	16,713.39
	SOLID DOS	GENERAL CARGO	80	1,479.38	3,615.82	MNLA-GESA-MNLA	GESA	MNLA	754.80	4.64	585.58	12,625.48
	SOLID TRES	GENERAL CARGO	50	947.22	1,880.26	GESA-MNLA	GESA	MNLA	754.80	0.06	1,239.82	1,980,547.28
			50	947.22	1,880.26	MNLA-GESA-MNLA	GESA	MNLA	754.80	29.44	1,239.82	4,211.50
	SOLID UNO	GENERAL CARGO	80	986.88	2,003.74	GESA-MNLA	GESA	MNLA	754.80		707.63	
			80	986.88	2,003.74	MNLA-GESA-MNLA	GESA	MNLA	754.80	6.97	707.63	10,147.11
<b>ALESON SHPG. LINES, INC.</b>												
	FELICIANO JR.	GENERAL CARGO	68	498.82	1,609.00	MNLA-GESA	MNLA	GESA	754.80	12.55	103.14	822.00
	NELSON	GENERAL CARGO	69	498.02	1,635.00	MNLA-GESA	MNLA	GESA	754.80	13.18	98.93	750.82
<b>SOLID SHIPPING LINES, INC</b>												
	MALIGAYA	GENERAL CARGO	60	2,222.50	2,286.64	MNLA-GESA-MNLA	MNLA	GESA	754.80	5.67	948.03	16,713.39
	SOLID DOS	GENERAL CARGO	80	1,479.38	3,615.82	MNLA-GESA-MNLA	MNLA	GESA	754.80	4.64	585.58	12,625.48
	SOLID TRES	GENERAL CARGO	56	947.22	1,880.26	MNLA-GESA-MNLA	MNLA	GESA	754.80	29.44	1,239.82	4,211.50
	SOLID UNO	GENERAL CARGO	80	986.88	2,003.74	MNLA-GESA-MNLA	MNLA	GESA	754.80	6.97	707.63	10,147.11

\* It is not clear what unit of traffic the two shipping operators shown in the table were reporting in their 1992 annual reports. Solid shipping actually accommodates cargo in small containers and its vessels are therefore not general cargo vessels. No cargo tonnages were reported by operators plying the route with passenger/cargo vessels.