Security Information

5 March, 1952

Information on Petroleum Products in China Requested in Reference to Case K-7780

1. Petroleum Product Import Pattern 1930/1937 - 1949/1951:

Readily available information on imports of petroleum products into China and Manchuria prior to 1937 shows a consistent pattern. However, what little data can be collected for any post World War II year does not exhibit the same characteristics. It should be emphasized that the years following 1937 were years of wars and revolutions in China and Manchuria, when portions of China were dominated by one or the other of the temporarily successful protagonists. As a consequence, statistics for those years are extremely difficult to use. Import figures for the immediate postwar years, likewise, cannot be taken as indicative of normal requirements for petroleum products in China for a different reason. The period from 1946-1949 was one of reconstruction, when efforts were being made to rehabilitiate a country devastated by years of war. The demand for petroleum products was very elastic under such circumstances. Temporary shortages of coal, and a wrecked transportation system which kept the coal from industrial boilers, forced the consumption of fuel oils above "normal" historic use patterns.

Statistics for the imports of petroleum for 1949, 1950 and 1951, are impossible to secure in their entirety. The import statistics for these years shown in Table 1, below, are for petroleum products shipped from Hong Kong to China and Macao, the nearby Portuguese port from which, it is generally believed, many of these petroleum products were re-shipped to Communist China.

(See Table 1).

From another source, it has been possible to reconstruct a pre-war import pattern by area. This table is, however, only an approximation and can be depended upon only to give a rough description of the distribution of petroleum before 1940.

(See Table 2).

2. Ports of Entry and Transportation:

Historically, Shanghai and Hong Kong have been the major ports of entry for petroleum products. The other major port cities, however, have also served as points of destination. River port cities along the Yangtze have been key points for the distribution networks established by the American and British oil companies which established and developed the Chinese petroleum market.

TABLE 1. Imports of Petroleum Products into China and Manchuria

1935 - 1937, 1949-- 1951

	Gasoline		Fuel Oil (Diesel & Other Heavy Oils)		Kerosene		Lube Oil	
	Quantity a/	Value	Quantity a/	Value	Quantity a/	Value	Quantity a/	Value
China b/								
1935	117,614	$4,253,257	335,805	$4,159,678	293,151	$8,216,280	29,790	$1,395,742
1936	130,562	4,019,092	264,381	2,862,704	299,595	7,034,224	37,649	1,387,092
1937	157,178	4,868,260	218,431	2,636,539	339,528	8,410,554	35,896	1,536,284
Manchuria c/								
1935 d/	25,857	633,497	37,507	918,922	11,609	284,421	15,834	387,933
1936 d/	11,161	242,129	16,792	364,386	10,747	233,210	15,279½	331,554
1937 d/	50,394	1,215,503	17,425	420,291	65,558	1,581,260	15,327	369,687
China (excluding Manchuria) e/								
1949 f/	52,414	4,847,000	73,000	3,476,000	30,368	3,327,000	28,644	2,142,000
1950 f/	37,191-	3,494,000	50,000	2,940,000	14,991	1,392,000	21,431	1,644,000
1951 f/ g/	30,457	2,780,000	6,000	282,000	1,043	87,000	1,277	106,000

a. In metric tons. 8.3 barrels/metric tons used as conversion factor for all products, in order to maintain consistent handling throughout paper. This will tend to overstate light products and understate heavy. Error in totals should be less than 10 %.

b. Memorandum by Chinese Petroleum Corporation to US State Department, 1948. Based on official Chinese customs returns.

c. OIR paper #390, Chinese Communist Petroleum Position, 1949-50. Based on annual returns of the Foreign Trade of Manchukuo, 1936 and 1937.

d. These approximate values are figured by using average prices per metric tons of all products in China for these same years as follows: 1935, $24.50; 1936, $21.70; 1937, $24.12. This method gives an approximate range but does not allow for price difference for individual products.

e. Office of International Trade, Department of Commerce. Based on official Hong Kong Board of Trade returns.

f. These figures are for POL products shipped from Hong Kong to Macao and China. It is generally believed, however, that most of the POL shipped to Macao found its way eventually to China.

g. First three-quarters of 1951 only.

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TABLE 1. Imports of Petroleum Products into China and Manchuria (continued)

	Lube Greases		Paraffin Wax		Pitch and Asphalt		Total	
	Quantity a/	Value	Quantity a/	Value	Quantity a/	Value	Quantity a/	Value
China b/								
1935	1,077	$77,820	29,555	$1,757,316	9,607	$149,139	816,601	$20,009,232
1936	935	69,316	25,523	1,165,891	9,279	142,857	767,924	16,681,176
1937	1,335	111,738	32,994	1,447,055	8,291	153,975	793,653	19,144,408
Manchuria c/								
1935 d/	1,236	30,282	4,246	104,027	4,222	103,439	100,510	2,462,509
1936 d/	1,028	22,329	3,066	66,532	2,212	48,000	60,280	1,308,080
1937 d/	1,610	38,833	5,818	140,330	2,417	58,274	158,500	3,823,020
China (excluding Manchuria) e/								
1949 f/	h/	h/	h/	h/	h/	h/	184,426	13,792,000
1950 f/	h/	h/	h/	h/	h/	h/	123,613	9,470,000
1951 f/ g/	h/	h/	h/	h/	h/	h/	38,777	3,215,000

h. These products are excluded in the list of exports from Hong Kong to Macao and China. See footnote f/

Imports Totals, by years, China and Manchuria

Year	Quantity a/	Value
1935	917,111	$22,471,732
1936	828,204	17,989,256
1937	952,153	22,967,428

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TABLE 2. Pre-War Import Pattern of Petroleum Products into China by Area

Average Year 1934 - 1939 — Metric Tons e/

	Gasoline	Kerosene	Liquid Fuels	Lube Oils	Total
North China a/					
Hopeh Province	19,860	26,785	20,480	1,120	68,065
Shantung Province					
China, East Coast b/					
Fukien					
Chekiang					440,000
Kiangsu					
South Central China c/					
Szechwan					
Anhwei					
Hunan					
Hupeh	32,760	93,985	-	0	126,745
Kiangsi					
Kwangsi					
Kweichow					
Yunnan					
South China d/					
Kwantung Province	22,640	24,050	93,710		140,400
Hainan Island					
TOTAL					775,210

a. JANIS 72 North China, Resources and Trade, Chapter IX, p. 37.
b. This estimate is based on calculations of average total consumption for pre-war years minus the total of other imports listed in other areas in the JANIS studies. This only gives a a rough approximation of areal distribution of POL, therefore.
c. JANIS 71 South Central China, Resources and Trade, Chapter IX, p. 73. Based on imports into selected port cities for the year 1937.
d. JANIS 77 China South Coast, Resources and Trade, Chapter IX, pp. 39-46.
e/ Conversion factor, all products, 8.3 barrels/metric ton.

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In South China, Hong Kong, Swatow, Amoy and Foochow were, before and after World War II, large ocean terminals for receiving petroleum products from tankers. These products were packed into five gallon tins, pumped into barrels or piped to secondary inland petroleum merchandising stations nearby. Such cities included Canton, Kongmoon, Woochow, Samshui and Hengchow. Supplies for Yunan Province were brought by rail from Indo China before the war, and after the completion of the Burma Road, Kunming served as a bulk package redistribution point. Packaged and barreled goods moved inland by water, truck, animal and human back. The railroads carried some petroleum products, but ranked far below watercraft in volume. Actually, the amounts carried inland have always been insignificant and limited mainly to the product kerosene, which before the war was used to light the proverbial lamps of China. The bulk of petroleum products have been consumed in the narrow coastal belt that contains the Chinese port cities.

In North China, Shanghai, Tsingtao and Tientsin were the principal ocean terminals. Yangtze river terminals included Wuhu, Chinkiang, Pukow, Kiukiang, Hankow, Cheglingki, Changsha, Ichang, Chungking, Tungchow, Hsiakwan (Nanking), Nanchang, Chagteh, Shasi, Wanhsien, Soochow, Kashing, Haimen, Ningpo and Wenchow.

In Manchuria, Newchang was the chief port of entry for petroleum products before 1935. Dairen, in Kwangtung Leased Territory, was and is, a major petroleum product supply center. 1/

Present ports of entry for supplies of petroleum products reaching China from the USSR are somewhat speculative. It is believed that the majority of these products are being shipped into Manchuria and China over the Trans-Siberian

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1/ Petroleum Facilities of China, Manchuria, and Korea. Prepared by The Enemy Oil Committee, July, 1945, p. 64 f. This work includes the most complete list of petroleum facilities in China. They were derived from information furnished the Committee by the major oil companies who dominated the pre-war and immediate post-war Chinese market.

railroad and connecting railroad links. Manchurian transloading points are located in the border towns of Manchouli and Suifenho. However, the actual capacity of the Chinese to transport petroleum products in bulk by railroad tank cars is uncertain. Estimates of the number of tank cars in China vary from 200 to 400 cars with an average loading capacity of 30 metric tons. Considerable volumes of petroleum products, therefore, could be moved into China in railway tank cars over the China-Manchurian coastal railway network. However, the different gauge of Manchurian railroads does not allow continuous shipment of petroleum products in Russian tank cars.

Evidence is accumulating that petroleum products are being pumped into small Chinese tankers at Dairen and moved into Shanghai and other northern Chinese port cities in coastal shipments. This method may be dictated by the shortage of tank cars as well as by considerations of better speed and of greater volume. Packaged petroleum products would not suffer from these same shipping difficulties.

The movement of Russian oil tankers from the Soviet Far East to North Chinese Ports has been observed and confirmed. (See Section 5).

3. Domestic consumption, wartime, immediate post-war by group and area:

An economy like China's that must import practically all of its petroleum products, and that has been beset by twenty years of political and military confusion, cannot have a normal consumption pattern in the accepted sense of that term. Under the necessity of unavailability, China progressed far toward the development of liquid fuel substitutes during the last war. Furthermore, this same scarcity has forced the development of the practice of ruthless and rigid fuel allocation systems under the Nationalists and the Communists. Just how flexible the Chinese economy can be under the denial of petroleum products, or just how little is needed to run the economy during extreme emergencies, may be determined, in part, from the following table. This material was collected by an experienced American observer during the last war. It represents the official allocation schedule of the Chinese Nationalists. It was in effect at the time of the completion of the Burma Road and when the Nationalists, fighting alongside the Chinese Communists, had taken the offensive against the Japanese. It is significant, however, that very few of the major oil-consuming centers were then in Chinese hands. This schedule, it should be noted, includes military needs. It should be especially noticed that when military

and governmental organization allotments are subtracted from the total, little was left to be distributed to the Chinese civilian economy. Total civilian consumption, according to this information, reached only about 6300 metric tons in 1945.

(See Table 3 -- Fuel allocation chart).

If Table 3 gives some idea of the lower possible limits of the consumption of petroleum products in China under World War II conditions, Table 4 illustrates the pliability of the upper limits of domestic consumption. Working backward from material furnished by one American oil company official, a rough pattern of consumption by area in post-war China can be derived. It is an estimate and rests on information for the year 1947. The report from which this estimate was worked out was one on the activities of the Chinese Petroleum Corporation, an agency set up by the Chinese Nationalists to share in the marketing of petroleum products. Basing the calculations on the percentage of import allocations set up by the Chinese government in late 1946, the totals listed in the table were reached. For example, if the CPC were reported to be selling 400,000 gallons of motor gas in the Shanghai area per month, and this quantity represented an allocated 10.5% of the total imported for sale by all companies in this area, the total sold in Shanghai equaled 3,809,524 gallons, or 11,403 metric tons per month.

(See Table 4 - 1947 domestic consumption by area).

4. Military and civilian consumption estimates, 1951 and 1952:

Total annual military consumption estimates vary in range from 175,000 metric tons to almost 500,000 tons per year. The low figure here given is derived by calculations based upon information from Chinese Communist sources; the higher figure is furnished by G2. According to the Chinese Communist Press, the refinery at Yumen was furnishing about 40 per cent of their total military needs in 1951. 2/ Present estimates of Yumen refinery production range from 70,000 to 100,000 tons annual production. Taking the more conservative lower figure, 70,000 equals 40% of X. X, therefore, equals 175,000 metric tons.

G2 gives the following estimate, based upon their logistical computations:

	Daily Military Requirements for Petroleum Products (in MT)
Chinese Air Force	300
Ground Forces	900
Naval Forces	50
	1250

TABLE 3. Chinese Nationalist Fuel Allocation

January - May 1945

	Gasoline		Alcohol		Vegetable Gas		Diesel		Vegetable Diesel	
	Quantity in Metric Tons a/	Percent	Quantity in Metric Tons a/	Percent	Quantity in Metric Tons a/	Percent	Quantity in Metric Tons a/	Percent	Quantity in Metric Tons a/	Percent
Government organizations	352	13.42	838	3.48	30	18.25	.8	1.66	16	1.4
Military organizations	1,457	51.17	21,215	88.76	105	62.81	-	-	826	75.1
Transportation Administration	807	30.75	1,504	6.25	8	4.64	46	98.34	179	16.2
Educational groups	26	1.00	42	0.18	10	5.83	-	-	5	0.4
Industrial and Commercial Institutes (including banks)	62	2.37	303	1.27	14	8.47	-	-	74	6.7
Private Individuals and others	34	1.29	13	.06	-	-	-	-	.6	0.0
Total	2,738	100.00	23,915	100.00	167	100.00	46.8	100.00	1,100.6	100.0

Total all products is 27,967 metric tons. (This is for a six months' period.) 27,967 X 2 is 55,934 metric tons. (Annual production for the same period given as 37,294 times 2 is 74,588.) Thus, 18,654 metric tons is unaccounted for. This may have found its way into the Black Market. It must also be remembered that to these amounts should be added POL coming over the Burma Road.

Source: Memorandum from M. J. Gavin to C. S. Snodgrass of the Petroleum Administration for War dated 2 August 1945 and entitled "Liquid Fuel Production and Distribution - China," PAW records, National Archives.

a/ 350 gallons per metric ton is used as the conversion factor. It must be emphasized, however, that the area over which the above quantities of petroleum products was distributed was small when compared to the territorial extent of Communist China today. The Nationalists had been squeezed into Southwest China and isolated back districts.

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TABLE 4. 1947 Domestic Consumption of Petroleum Products in China

	Areal Pattern					Metric Tons e/
	Motor gas	Kerosene	Diesel and Fuel Oil	Lube Oils	Total	Percent Total
Shanghai	136,840	112,252	864,000	12,000	1,125,092 a/	78
Nanking	23,950	101,017	9,600	24	432,591	9
Hankow	17,107	b/	6,000	b/	23,107	2
Chungking	10,000 c/	5,000 c/	4,880 c/	120 c/	20,000 d/	1
Tsingtao	17,107	12,000	b/	120	29,227	2
Tientsin	23,950	b/	6,000	180	30,130	2
Canton	17,107	b/	60,000	60	77,167	5
	246,061	230,269	950,480	12,504	1,439,314	99

25X1A

a/ With the exception of Chungking consumption, the other figures are derived from information given in [redacted] Army Attache report from Shanghai dated December 1948. This is only a rough approximation, however, since the same source reported 1,768,112 metric tons imported in this same year. This leaves 328,798 metric tons unaccounted for.

b/ Not available.

c/ Arbitrarily allocated.

d/ This figure derived from American Consulate report of 1948 POL sales in Chungking U.S.S. 244 dated 31 January 1949.

e/ Conversion factor, all products, 8.3 barrels/ metric ton.

Thus 456,250 metric tons of petroleum products were needed by the Chinese Communists in 1951 for military accomplishments, and approximately the same amount will be needed this year if conditions continue as they are at present.

Considered in relation to the evidence given in Table 3, both of these estimates may be high.

Civilian consumption depends, of course, upon the degree of restrictive measures taken by the Communists since their takeover. Pricing petroleum products above the ability of Chinese consumers to pay can effectively cut down domestic consumption, and strict rationing systems can keep consumption low. That the Communists are tightening up on consumption is evidenced by the comparison given below:

Rationing Schedule of Motor Fuel in Shanghai 3/

Under Nationalists	Under Communists
Private Cars----------24-60 gals. mo.	6-20 gals. month
Private Lorries-------70-98 gals. mo.	20 gals. month
Motor cycles----------8-12 gals. mo.	1½-2 gals. month
Taxis----------80 gals. month	abolished
Business lorries------140 gals. month	20 gals. month

25X1X One approach to an estimate of civilian consumption in 1951 and 1952, may be 25X1X taken by using the percentage estimates given by [redacted] If the domestic consumption area pattern for 1947 given in Table 4 is taken as an approximation of Chinese post-war "normal" 25X1X petroleum products needs, and [redacted] percentage estimates applied to them, the result should be an approximation of petroleum product requirements in China in 1951 and 1952. (See Table 6).

Previous estimates made by this office have been around 500,000 tons per year, and they have rested primarily upon the assumption of relatively high level of civilian productivity. However, the degree to which consumption of petroleum products can be scaled down under extreme necessity, according to the evidence of actual fuel allocation during World War II by the Chinese Nationalists (Table 3), can be very great.

2/ State Department Incoming Telegram #4533, Oct. 26, 1949.

3/ Compiled from Petroleum Press Service, August, 1948, p. 180; State Department Despatch from Hong Kong, #1804, May 22, 1951, "Notes on the Economy of Communist China, April 1-14, 1951."

25X1XGN4 [redacted]

Table 5

Domestic Consumption Estimates

1951-1952

Product	Estimate of % of Cutback a/	Metric Tons
Motor Gasoline	50% "or less"	73,030
Diesel Fuel Oils	50% diesel, 10-20% fuel oil--25% of total of two products used	237,620
Kerosene	50%	65,135
Lube Oils	no cutback	12,504
		388,289

25X1X

a/ [redacted] if the crisis demands, these amounts can be cut still more.

5. Shipments of petroleum products by maritime vessels, 1950-1951.

In 1950, one Russian Tanker carrying approximately 10,000 tons of POL arrived in a Northern Chinese Port. There were no other confirmed Asiatic or European Satellite tanker shipments reported for this period.

In 1951, the Polish tanker "Karpaty" carried 9500 tons of kerosene into China, and seven Soviet tankers carrying an average load of approxiamately 10,000 tons were reported moving toward Chinese ports. There were no reports of non-Soviet ships sighted in this traffic.

The Polish Tanker "Praca" was reported to have delivered 10,000 tons of kerosene to the Chinese Communists in January 1952.

Presently known totals 5/ of petroleum products reaching China in vessels belonging to the Bloc in 1950, 1951 and 1952, therefore, were:

1950 ----- 10,000
1951 ----- 80,000
1952 ----- 10,000
100,000 metric tons

In addition, the tanker "Kettleman Hills" is known to have offloaded 11,000 tons of kerosene at Tsingtao early in 1950. This tanker made two additional trips between Black Sea Ports and Dairen in late 1949 and early 1950. 6/

6. Petroleum Products Smuggling, quantities and methods.

It is the considered opinion of the responsible officers in the Office of Naval Intelligence that, with the exception of some small amounts of fuel oil getting into China by the method of excess bunkers, little or no petroleum products are being smuggled into Manchuria, North Korea and the rest of China. The area around Hong Kong

[redacted]

has been, and still is, a tender spot as far as smuggling has been concerned, but with the imposition of a local export ban on petroleum products in July 1950, and with the tightening up on petroleum product leakage by Hong Kong and Macao port authorities, supplies reaching the Chinese Communists are now thought to be negligible. Efforts to quantify the reports currently being received have thus far proved to be of questionable value. According to a sampling of such reports collected and analyzed for the year 1951, some 56,000 metric tons of petroleum products reached China through Hong Kong and Macao Clandestine transhipments. Local authorities in Hong Kong and Macao are continuing to increase their efforts to stop smuggling, and it can be reasoned from accumulating evidence that they are meeting with some success.

Methods of smuggling have been varied, and have changed as local controls have stiffened. Immediately after the imposition of export controls in Hong Kong, some enterprising "free-traders" would transfer the contents of their personal gasoline tanks in Communist territory, refilling them at local filling stations several times each day. In this period, however, the greatest quantities of petroleum products reached Red China in the holds and on the decks of the many junks plying between Hong Kong and the Communist mainland. Excess bunkers of small fishing craft, and larger merchant ships have been reported to have been pumped into Communist tanks.

Few areas in the Far East have not been reported as being points of origin of this traffic. The attractiveness of the price offered by Communists on the local markets has evidently made smugglers of many honest men. There is little evidence, however, that historically established oil companies or their employees have been at the center of it.

It is impossible to estimate the dollar values of this traffic since the values of the undetermined quantities have varied so greatly under the stimuli of scarcity, risk and local conditions.