

Sanitized Copy Approved for Release 2010/12/13 : CIA-RDP87B00342R000100090001-7

Mr. Casey and David Low attended this meeting.

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TRANSMITTAL SLIP

TO: Executive Secretary

ROOM NO. **BUILDING**

REMARKS:

*hold copy
for NSC*

FROM: NIO/Econ (David Low)

ROOM NO. **BUILDING**
7B42

FORM NO. 241
1 FEB 56

REPLACES FORM 36-8
WHICH MAY BE USED.

(47)

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The Director of Central Intelligence
Washington, D.C. 20505

NIC 02394-85
13 May 1985

National Intelligence Council

MEMORANDUM FOR: Director of Central Intelligence
Deputy Director of Central Intelligence

FROM: David B. Low
National Intelligence Officer for Economics

SUBJECT: NSC Meeting on National Defense Stockpile Goals

1. Apparently for domestic budget-related reasons, the NSC decided to take over from FEMA the task of determining U.S. needs for stockpiles of strategic minerals and metals. Richard Levine, a member of the economics cluster at NSC, set up interagency teams to evaluate the future wartime needs and availability of these commodities. Based on this analysis, the NSC will argue at the 14 May NSC meeting that stockpiles can be reduced from the current level of \$10.9 billion to a range of \$230 to \$680 million. It will also argue that portions of the surplus stock created by these new findings should be sold at a rate of up to \$500 million per year over the next five years and will present to the NSC options for using revenues from these sales.

2. This is a radically different result than the FEMA-led exercise yielded in 1979. It thus could prove quite controversial. In addition, the draft NSDD (see Tab A) places the responsibility for this issue firmly in the hands of the NSC, and that also may be controversial (FEMA, Interior).

3. A CIA-led team, chaired by Maurice Ernst, evaluated the reliability of key foreign suppliers in wartime, and you may be asked to comment on the results of this study group (see Tab D). In a letter sent to Mr. McFarlane on 17 January, you concurred with the findings that lower stocks are consistent with the analysis performed based on the assumptions given, commented that establishment of a new base level of stocks and decisions relating to the proceeds from sales are issues of



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SUBJECT: NSC Meeting on National Defense Stockpile Goals

domestic concern and not subject to Agency comment, and suggested that other scenarios be examined on an annual basis. In essence, we were trying to detach ourselves from being used in what is obviously a highly politicized domestic turf and budget issue.

4. The NSC will argue that FEMA's estimate of the need for a \$17.3 billion inventory (the current goal) is too high.

- According to the NSC, by eliminating non-essential civilian needs in wartime, private sector demand will be much lower than estimated by FEMA.
- As to domestic supplies, the NSC is more optimistic than FEMA on the ability to increase rapidly domestic production.
- Also, past FEMA analysis counted only resources in the United States and Canada as "secure" for military use in wartime. Under assumptions supplied by NSC, the CIA-led group counted non-contiguous foreign suppliers as "highly reliable" in wartime and the NSC assumed these countries could rapidly increase output and exports.

5. The CIA-led analysis generally supports the availability of imports, but only under the scenario and assumptions dictated to us for use in the study. Key assumptions include:

- A three-year conventional war with the Soviet Union fought in Europe, the Persian Gulf, and Korea with one year for preparation.
- Minimal shipping losses in the Atlantic and Pacific.

Other scenarios and assumptions such as disruptions directly affecting some African nations, of course, could have produced significantly different results.

6. At a preliminary briefing of the results by NSC in January, State Department focused on problems caused for foreign countries should the US begin sales from the stockpiles. NSC responded by adding a recommendation for an interagency group to establish criteria for sales to minimize market impacts. In your January letter to McFarlane you said that CIA

SUBJECT: NSC Meeting on National Defense Stockpile Goals

would assist in any studies relating to reactions of producing countries. DOD did not take a position at the January meeting, and it is not clear whether Secretary Weinberger will support criticism by his staff of the study or agree to suggestions to reduce stockpiles.

7. Tabs attached include:

- A. Draft NSDD
- B. Proposed stockpile goals
- C. Your letter to Mr. McFarlane
- D. Background and Talking Points on Reliability of Suppliers
- E. Limitations of the NSC study
- F. IEEW article on world metals prices
- G. Briefing board presentation to be used by NSC at the NSC Meeting
- H. Handout package to supplement the briefing boards



David B. Low

Attachments:
As stated

SUBJECT: NSC Meeting on National Defense Stockpile Goals

A/NIO/Econ: [redacted] (8 May 85)
NIO/Econ/DL [redacted] 13 May 1985 NIC 02394-85

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WASHINGTON

Tab A

SECRETNATIONAL SECURITY DECISION
DIRECTIVE NO.U.S. National Defense Stockpile Goals, Mobilization
Planning Factors and Implementation Measures (U)Statement of Policy

It is the policy of the United States to maintain a broadly based deterrent against different types of conflict. It is essential that the United States have appropriate mobilization capabilities including available supplies of strategic and critical materials to support the conduct of a protracted conventional war, both in terms of direct defense production and essential civilian requirements. (S)

The National Defense stockpile goals are to be sufficient to meet all wartime military, industrial and essential civilian material requirements that cannot be satisfied through total domestic production and reliable imports. The National Defense stockpile will contain, for the forty-two materials investigated, those materials noted in the attached list. (S)

Study Process

In June 1983, the Assistant to the President for National Security Affairs established an interagency group to develop appropriate stockpile goals and mobilization planning factors. On July 13, 1984, the first seven mobilization planning reports (war scenario, defense expenditures, GNP planning levels, energy supply and demand, domestic and international material supplies, sealane attrition factors, and country wartime reliability ratings) were approved for stockpile planning and related industrial preparedness programs including Section 232 investigations. This NSDD implements the complete NSC study and recommendations. (S)

Study Findings

The NSC stockpile and mobilization study has concluded that there is no systemic threat of wartime nonfuel mineral shortages, but there are isolated shortages of minerals used extensively in defense applications and imported from unreliable sources. The study concludes that, during a war, Defense, industrial and essential civilian requirements for petroleum can be met through reductions in non-essential civilian consumption. However, to ensure that DOD has immediate access to secure supplies during this conflict,

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Declassify on: OADR

a standby reserve of up to 50 million barrels of crude oil will be established. This crude can be used by DOD to supplement its primary supply from domestic and international sources. (S)

Implementation of Study Results

This crude stockpile will be funded by the disposal of \$500 million a year in excess nonfuel materials for a five-year period. All funds from stockpile sales are to be used to purchase crude oil for DOD or to purchase other nonfuel materials for which an unmet goal has been established. To ensure that the DOD oil stockpile is funded at a rate consistent with this program plan and to permit flexibility in material sales, the Administration will seek authorization to sell approximately \$800 million a year in materials but will cap the actual annual sales at the \$500 million level. (C)

To help ensure that the disposal of excess stockpile materials does not cause undue disruption to the markets for materials consumers, processors, and producers, and to provide an additional reserve for U.S. emergency needs, the United States will maintain a Strategic and Critical Materials Supplemental Reserve for the next five years. This Reserve will consist of those materials not proposed for sale and which have a current value of about \$6 billion. (C)

The NSC study reports on war scenario, wartime DOD expenditures, worldwide petroleum supply/demand and prices, GNP and investment levels, industrial sector output levels adjusted for austerity, wartime reliability of exporting nations, and sealane attrition factors shall be used, as appropriate, as the basis for all related mobilization planning activities.

The Assistant to the President for National Security Affairs must approve any exceptions to this policy prior to use in a mobilization planning function. (S)

The NSC interagency group will have the responsibility to develop future stockpile goals. Stockpile acquisition and disposal plans will be decided through the NSC system. The NSC interagency group will prepare necessary changes in existing Presidential policy documents, executive orders and laws required to fulfill the provisions of this NSDD. NSC, DOD, DOE, and OMB will develop an implementation plan for the creation of a crude oil stockpile for DOD. (C)

Attachment

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NSC BASE CASE STOCKPILE GOALS COMPARED TO FEMA'S 1979 GOALS AND PRESENT STOCKPILE INVENTORY
(Millions of Dollars)

MATERIAL	NSC STUDY BASE CASE	1979 GOAL	EXISTING STOCKPILE INVENTORY	SURPLUS (DEFICIT)	
Antimony		998.2	106.0	106.0	
Bauxite (Metal Equiv.)		1,383.9	782.7	782.7	
Bauxite, Abrasive Grade		316.6	128.6	128.6	
Bauxite, Refractory		282.9	40.4	40.4	
Beryllium		234.8	204.2	204.2	
Bismuth		5.3	5.0	5.0	
Cadmium		19.2	10.4	10.4	
Chromium	14.4	1,035.2	1,006.8	992.4	
Cobalt	106.0	1,069.1	577.4	471.4	
Columbium		44.0	23.0	23.0	
Copper		1,514.7	44.0	44.0	
Diamonds, Industrial Stones		190.4	371.8	371.8	
Fluorspar		464.5	212.8	212.8	
Germanium	35.1	N/A	0.0	0.0	35.1
Graphite					
Ceylon	8.6	12.3	10.7	2.1	
Malagasy	38.0	60.0	53.6	15.6	
Other	1.5	2.0	2.0	0.5	
Iodine		39.9	51.3	51.3	
Lead		582.9	318.5	318.5	
Manganese		375.6	489.5	489.5	
Mercury		3.2	53.8	53.8	
Mica					
Muscovite Block	0.4	33.1	27.8	27.4	
Muscovite Film	0.2	1.1	13.8	13.6	
Muscovite Splittings	19.5	19.0	26.1	6.6	
Phlogopite Block	0.4	1.1	0.7	0.3	
Phlogopite Splittings	0.9	1.9	3.3	2.4	
Molybdenum		0.0	0.0	0.0	
Nickel		892.3	143.7	143.7	
Platinum Group					
Iridium		35.0	9.5	9.5	
Palladium		481.4	201.4	201.4	
Platinum		520.7	179.9	179.9	
Quartz, Natural	0.1	3.6	12.4	12.3	
Rubber		1,103.6	154.4	154.4	
Rutile		34.4	12.7	12.7	
Silver		0.0	1,326.8	1,326.8	
Silicon Carbide		13.0	36.2	36.2	
Tantalum	5.0	419.0	142.0	137.0	
Tin		549.8	2,450.8	2,450.8	
Titanium Sponge		2,131.5	353.4	353.4	
Tungsten		324.4	496.1	496.1	
Vanadium		104.5	6.5	6.5	
Zinc		1,521.4	403.9	403.9	
SUBTOTAL	230.1	15,925.6	10,493.9	10,298.9	35.1
ALL OTHERS		1,374.4	406.1		
TOTAL		17,300.0	10,900.0		

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Table B

Tab C

Washington, D. C. 20505

17 JAN 1985

MEMORANDUM FOR: Assistant to the President for
National Security Affairs

SUBJECT: National Defense Stockpile Goals and
Mobilization Planning Study

1. I believe the basic conclusion in the Executive Summary of the Study prepared by the NSC that lower stockpile goals for strategic minerals are warranted is consistent with the analysis conducted by the Study team. As to the actual setting of new base needs, sales of surplus stocks, and the establishment of a defense-related oil reserve, these are issues of domestic concern and not subject to Agency comment.

2. On the matter of our stockpiles, I suggest that the concerned agencies continue to review these goals on an annual basis taking account of differing wartime scenarios and up-to-date evaluations of the reliability of key suppliers. Also, should the Cabinet decide to proceed with disposal of surplus materials, we are prepared to assist in any studies relating to the possible reactions of producing countries.

(S)
William J. Casey



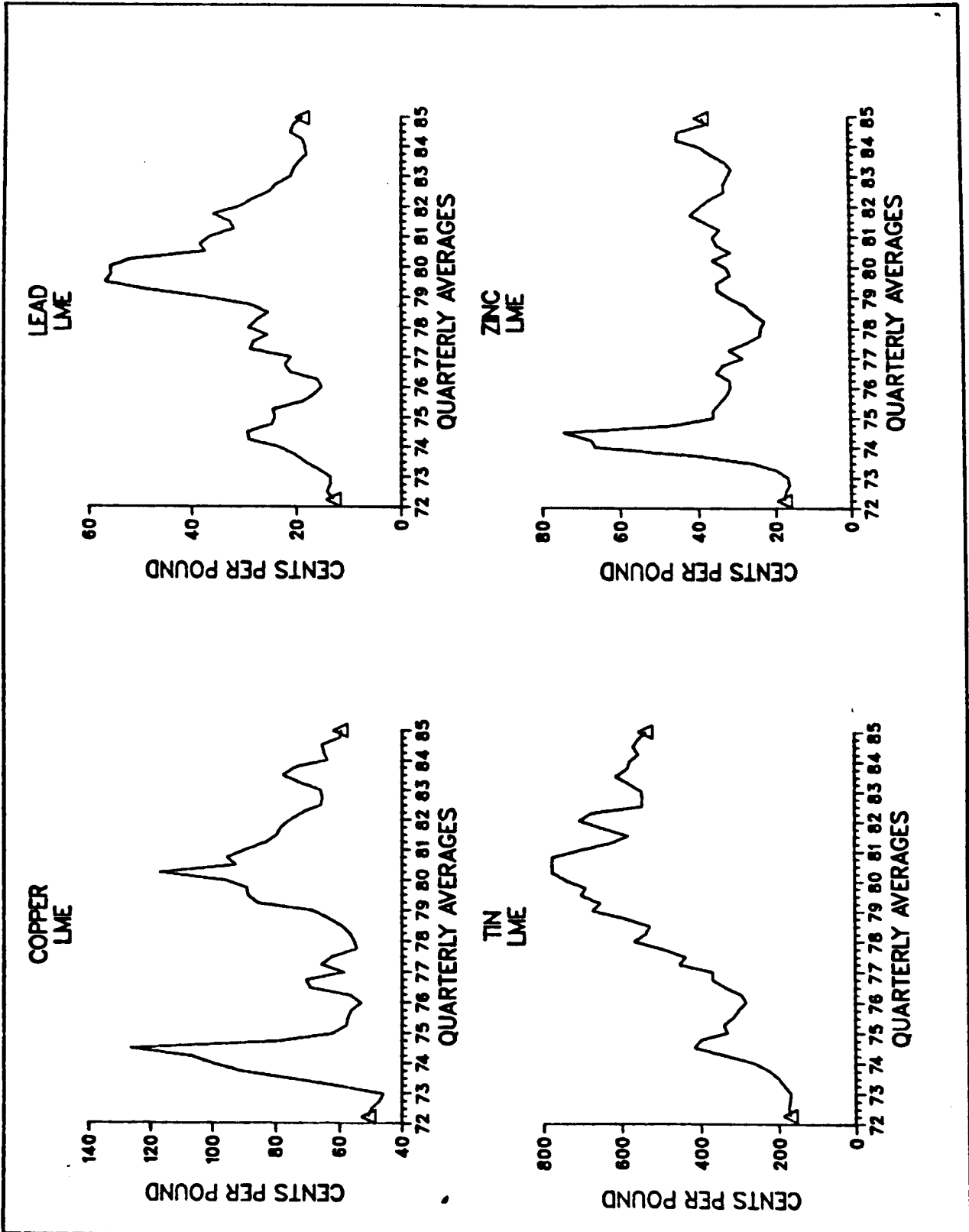
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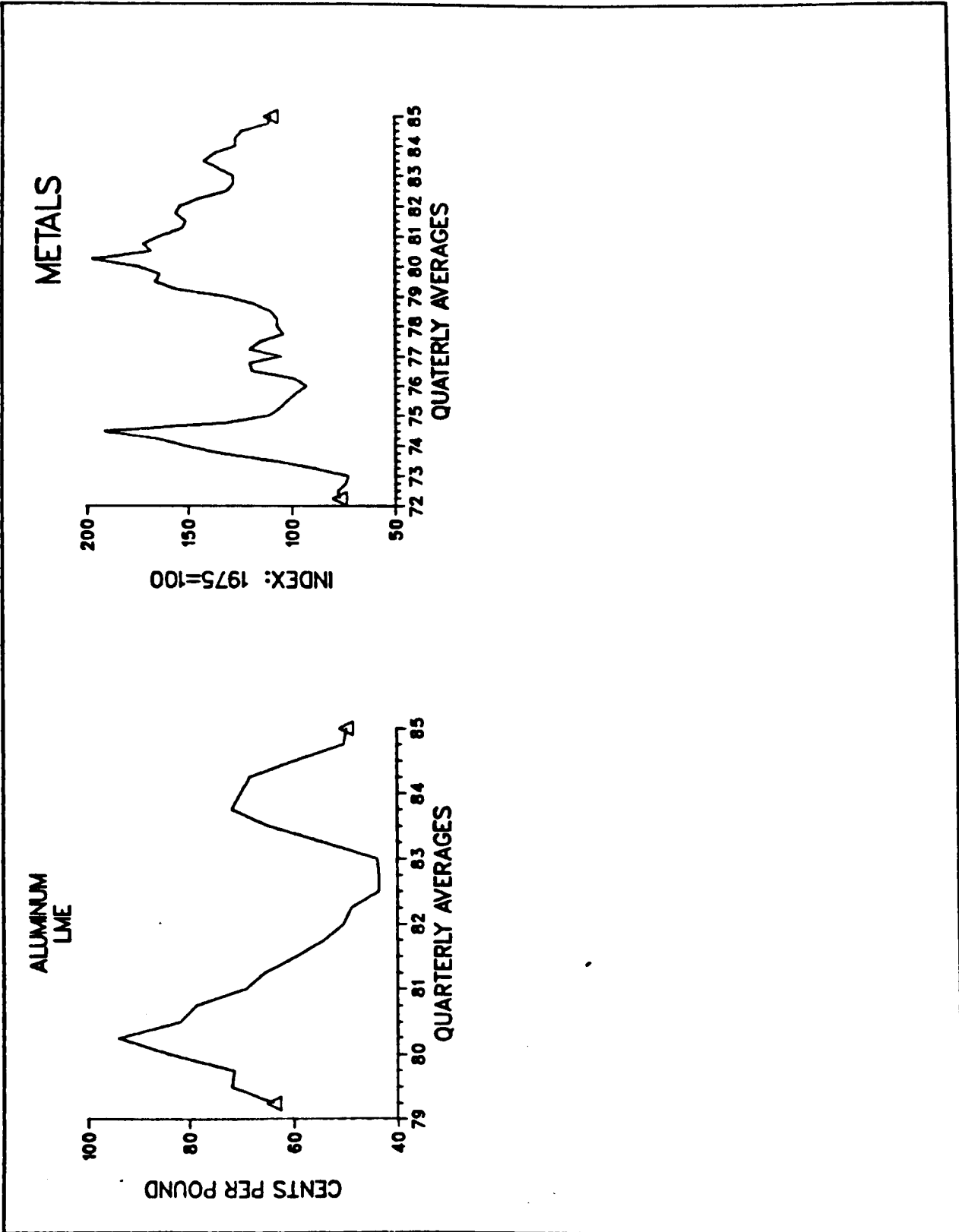
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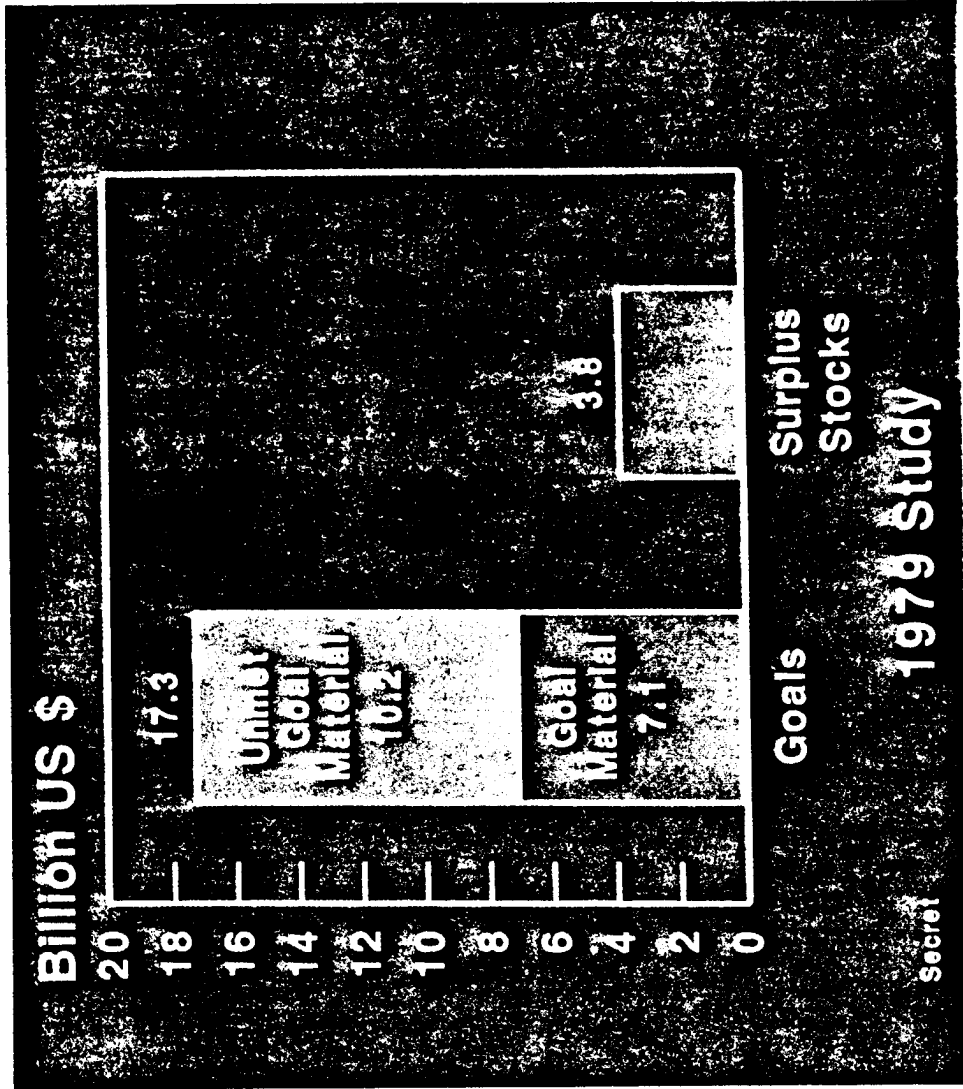




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1984 Stockpile/Mobilization Study:

Composition of the Present Stockpile



Secret

Secret

1984 NSC Study Recommended Actions

A. Create a two-tiered stockpile.

Tier I - derived from the 1984 stockpile study or a sensitivity case. **\$2B-.7B**

Tier II - keep a portion (\$6.0B) of the existing stockpile stocks (\$10.9B) so as not to disrupt markets. **\$6.0B**

Total stocks to be kept -- \$6.2B-6.7B

B. Sell a portion of remaining materials (2.5B out of about \$4.0B) over five years in a manner that minimizes market impacts.

C. Use the sales revenue for some other DOD or mobilization function.

D. Use Stockpile Goals Study planning assumptions for other appropriate mobilization preparedness areas.

Secret

History of the Stockpile

1950's

Stockpile built for 5 year war.

1960's

Requirements reduced to 3 year war, some materials sold.

1970's

Stockpile studied—Nixon Administration adopts 1 year war requirement. 1979 goals adopt 3 year war scenario.

1980's

**Considerable attention focused on stockpile due to:
a) oil disruptions, b) large unmet 1979 goals.**

1981

Administration purchases new materials.

1983

NSC begins comprehensive study—1984 goals developed.

Secret

Policy Significance of the Stockpile

Stockpile methodology broadly applied to other areas:

Industrial Mobilization Policy

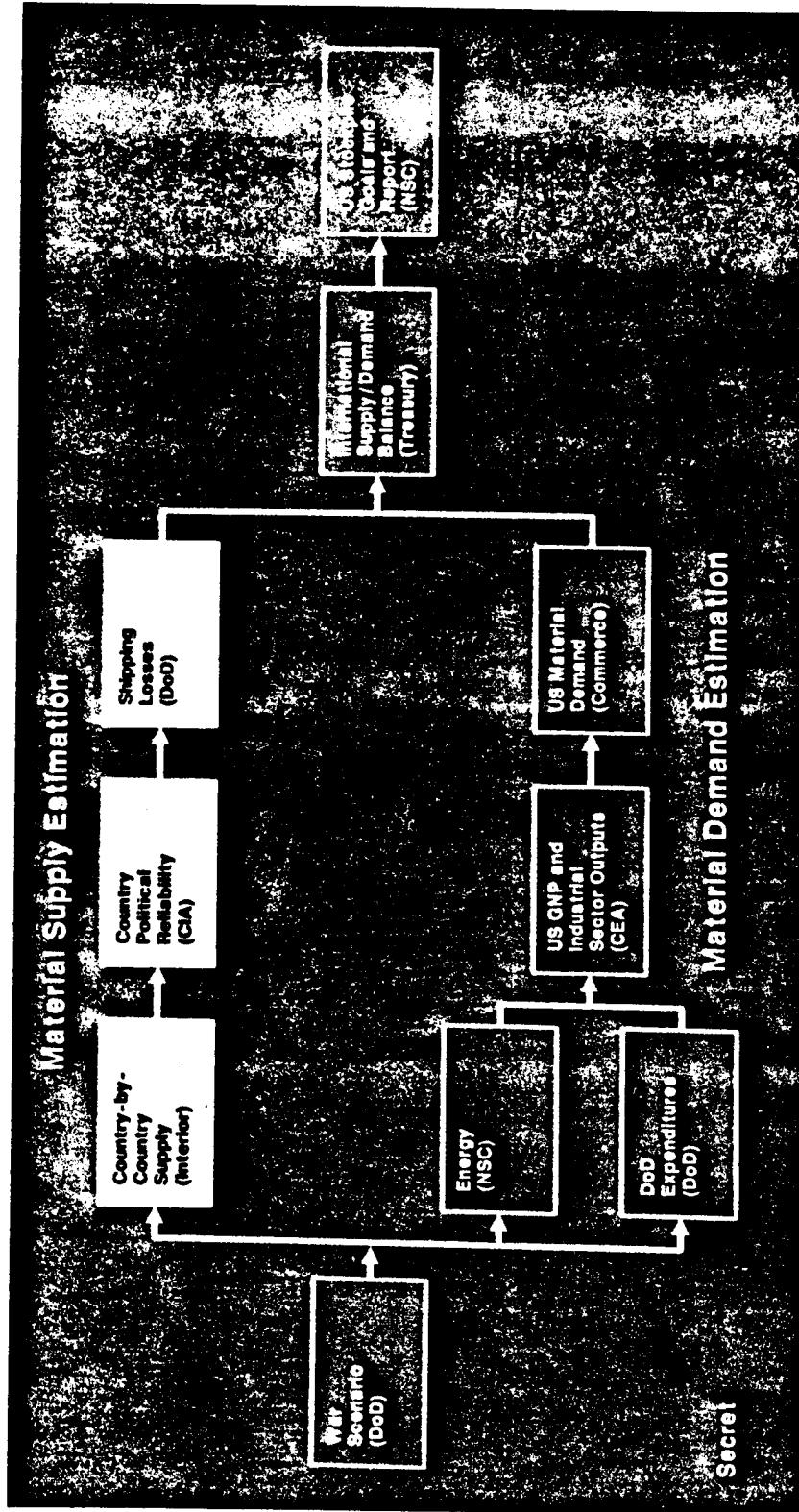
- to support subsidies, "buy American" proposals to maintain domestic industry.
- planning used to calculate other industrial mobilization needs.

Trade Policy

- 232 trade cases -- are imports eroding the mobilization base?
- barter

Secret

NSC Study Methodology, Tasks and Agency Participation



Secret

Secret

Comparison

1984

1979

War Scenario

- 3-year conventional war against the USSR.
- 3 fronts (Europe, Asia, Middle East-Persian Gulf).
- Indefinite duration, conventional war against the USSR.
- 2 fronts (no Middle East-Persian Gulf front).

Defense Build-up

- \$766 billion peak war-year spending.
- \$697 billion peak war-year spending.

Secret

1979

U.S. Economy

- GNP growth at 7% annually.
- Civilian-related GNP increases by approximately the same amount as DOD GNP component.
- Economy not significantly constrained by oil cutback.

1984

- GNP growth at 4+% annually.
- DOD-related GNP increases 10 times more than the civilian GNP component.
- Oil prices reach \$100 per barrel, constrain the economy.

Civilian Austerity

- Austerity assumed in consumer durable goods.
- Automobile production averages 1/3 of prewar year.
- Housing--300,000 units per year.
- Very little austerity assumed.
- Automobile production averages 5 percent more than prewar year.
- Housing--750,000 units per year.

secret

1984

1979

Materials Supply

- Non-naval ship loss rate at .5 percent average over 3 years.

- Shipping losses estimated at between 1-2 percent.

- Reliable for DOD and essential civilian needs

- Country reliability rankings based on mechanistic approach, i.e., only Canada considered a reliable supplier for DOD needs.

Unreliable

Mexico
Australia
Philippines
Japan
Malaysia

S. Africa
Chile
Sri Lanka
Peru
Bolivia

India
China
Zaire
Zambia
Zimbabwe

- Reliable imports at \$38.4B

- Reliable imports at \$22.4B

- U.S. production increases by 27% from war year 1 to war year 3.

- U.S. production increases by 10-12% from war year 1 to war year 3.

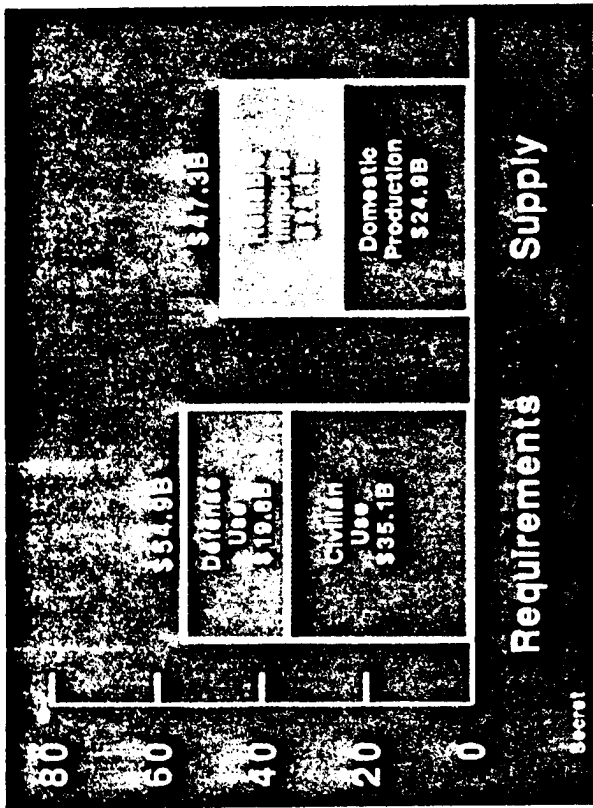
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U.S. Three Year War Material Requirements, Supply Availability, and Stockpile Goals (42 Materials)

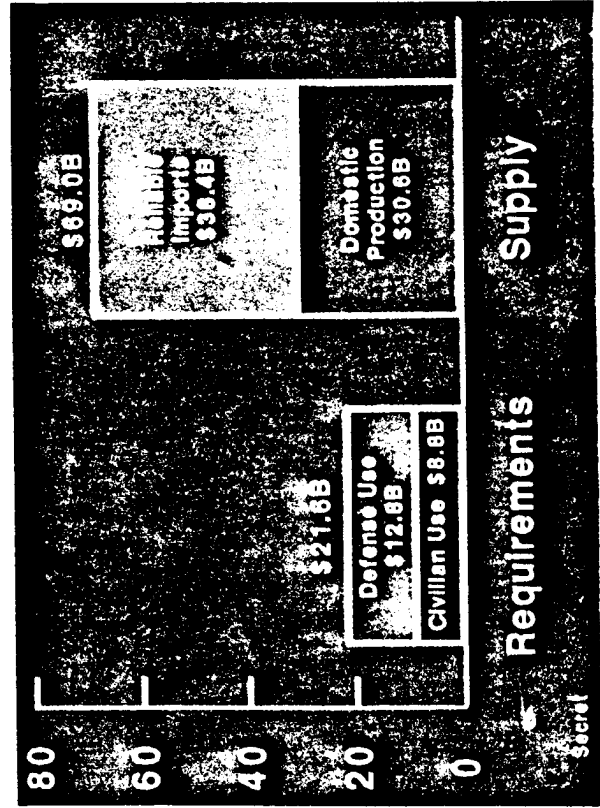
Stockpile goal \$17.3B (60 materials).

Stockpile goal \$230M (42 materials).

1979 Study

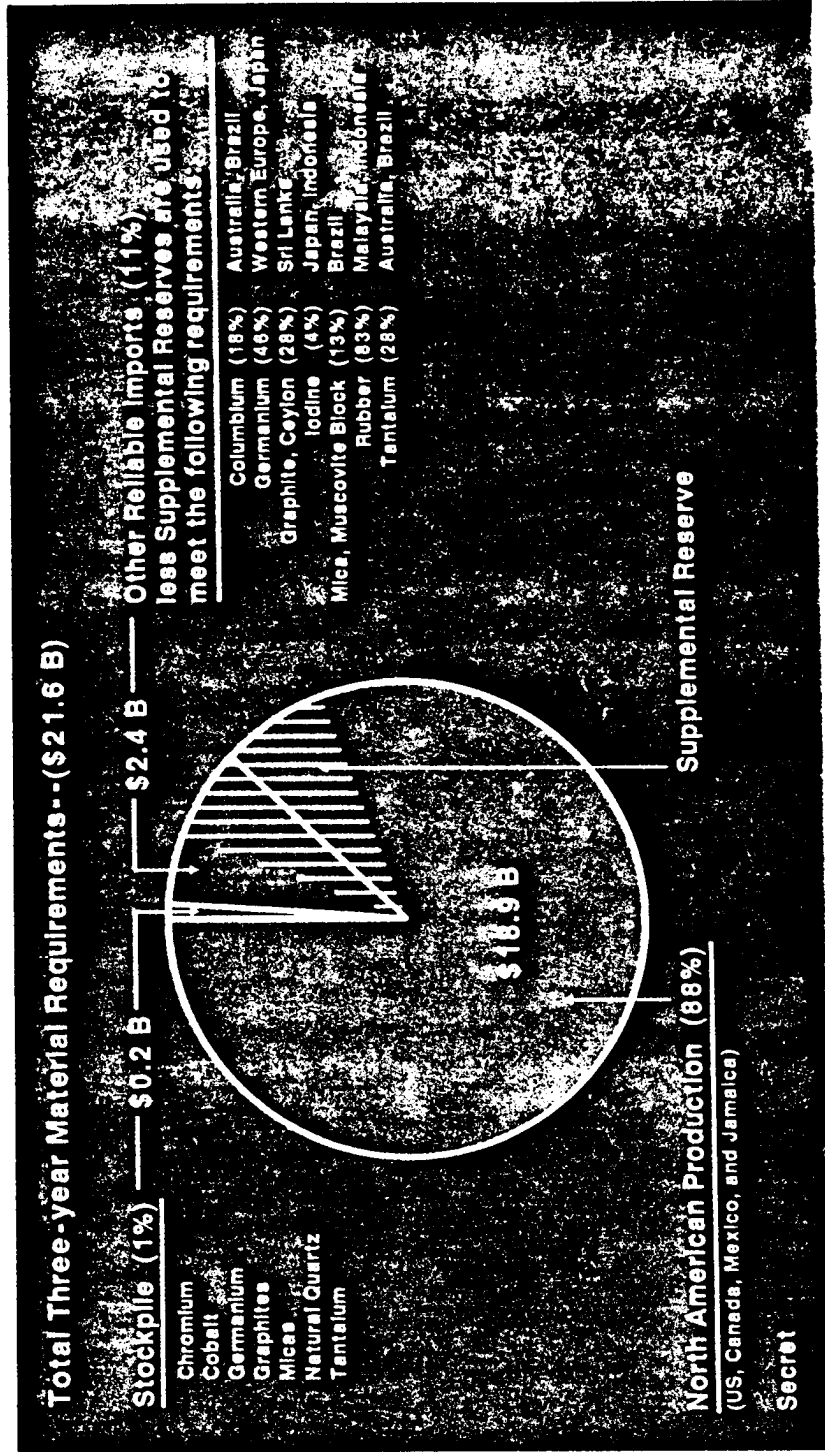


1984 Study



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NSC Study U.S. Wartime Materials Requirements, Supply and Sources



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Examples of Material-By-Material Goal Changes and Reasons**Millions of U.S. Dollars****1979 Goal 1984 Goal**

Titanium	\$2,130	0	1979 counted no U.S. capacity. Existing capacity can meet most needs.
Zinc	\$1,320	0	Used in autos, housing. Supplies from Canada, Australia.
Chromium	\$1,000	\$14	Available in Brazil and South Africa. U.S. has resources, recycling ability.
Cobalt	\$1,070	\$106	Wartime supplies from Australia, Canada and proven U.S. reserves.
Nickel	\$930	0	Supplies available from Canada, Australia and several Asian nations.

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NSC Study Findings

- Existing stockpile goals of \$17.3 billion developed under prior Administration are based on:
 - a "guns and butter" world war; and
 - seriously flawed methods.
- 1984 stockpile goal for the 42 major materials is \$230 million.
- No systematic threat of wartime non-fuel material shortages.
 - U.S. and reliable suppliers have capacity to meet about 99 percent of wartime requirements.
 - Much nondefense consumption is in uses (autos, construction) not essential to wartime national security objectives.
- Petroleum is the commodity in shortest supply. Supplies to U.S. decrease by 20 percent. DOD consumption more than triples. Defense, industrial and essential civilian oil requirements can be met with sharp reductions in nonessential consumption.

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Sensitivity Cases

(Changes Applied to All Three War Years)	Stockpile Goal (Million US \$)
1984 base case (derived from study).	\$230
Plus Increase defense spending by 15% and investment in domestic production capacity by 10%.*	468
Plus Cut back domestic materials production by 16%, reduce other non-Soviet bloc material production by 10%.	644
Plus Increase shipping losses 20 times to 10%.	\$696
*Capacity investment increases average 10% per year but would be higher in first year of the war and lower in the third year.	

Secret

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Recommendations

1) Adopt a two-tiered stockpile system.

Tier I National Defense Stockpile goals derived from the NSC study or a sensitivity case.

Options:

- A. \$230 million**
- B. \$681 million**

Tier II Supplemental Strategic and Critical Materials Reserve. Currently valued at \$6.0 billion for 42 major commodities.

(Note: The supplemental reserve to be kept intact for at least 5 years.)

2) Seek authorization to dispose of the remaining materials (\$4B) over the next 5 years. In no case would more than \$500 million of materials be disposed of in any one year and an interagency group will establish criteria for sales to minimize market impacts.

Secret

3) Use receipts from stockpile sales, in addition to purchasing any needed materials to:

Options:

- A. Let material receipts accumulate in the stockpile transaction fund.**
- B. Establish a Strategic Petroleum Crude Reserve for DOD for use in wartime—have an OPD-led energy policy group consider this option and report back in 30 working days.**
- C. Create an incoming receipts account to the military budget to help offset overall Defense spending.**
- D. Use to finance stockpiling of long lead time components for production of weapons systems in the event of an emergency.**

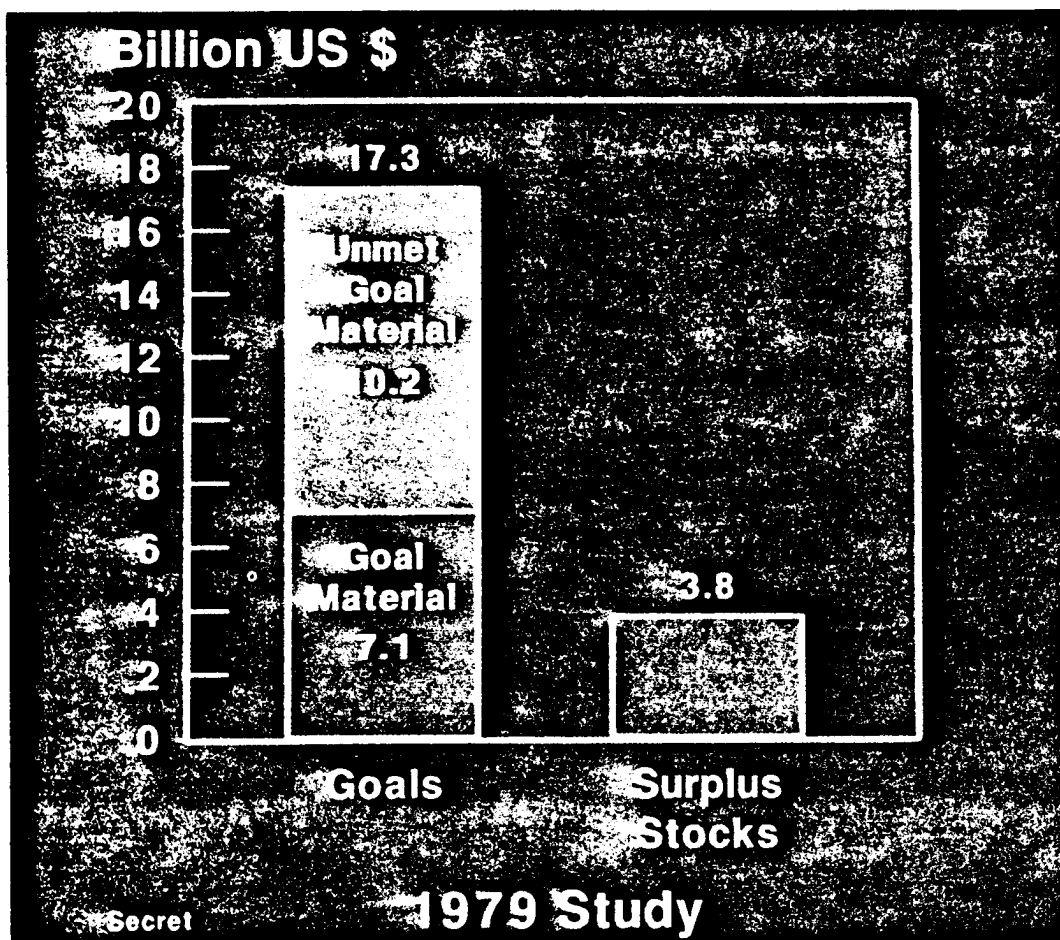
4) Use Stockpile Goals Study planning assumptions for other appropriate mobilization preparedness areas.

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1984 Stockpile/Mobilization Study

Composition of the Present Stockpile



- The National Defense Stockpile contains \$10.9 billion in non-fuel materials at present.
- Of this amount, \$7.1 billion is considered, under the existing 1979 stockpile goals, to be required material for use in wartime.
- \$3.8 billion—including silver, tin, tungsten—is considered surplus.
- The current stockpile goal, based on the 1979 study, is \$17.3 billion (60 materials) of which \$10.2 billion is unmet.

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1984 NSC Study Recommended Actions

A. Create a two-tiered stockpile.

Tier I – derived from the 1984 stockpile study or a sensitivity case. **\$.2B-.7B**

Tier II – keep a portion (\$6.0B) of the existing stockpile stocks (\$10.9B) so as not to disrupt markets. **\$6.0B**

Total stocks to be kept \$6.2B-6.7B

B. Sell a portion of remaining materials (\$2.5B out of about \$4.0B) over five years in a manner that minimizes market impacts.

C. Use the sales revenue for some other DOD or mobilization function.

D. Use Stockpile Goals Study planning assumptions for other appropriate mobilization preparedness areas.

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History of the Stockpile

- Origins predate World War II. Bulk of stockpile built in 1950s, based on a 5-year conventional war scenario.
- In 1960s, materials sold based on a 3-year war requirement. Nixon Administration further reduced stockpile and based needs on a 1-year war.
- Carter Administration restudied issue, updated Ford planning—which became the 1979 goals. These goals are in effect at present.
- In 1979, law passed to ensure that stockpile goals were based on a 3-year war and that the receipts of the sales of surplus materials would only be used to buy needed materials rather than to balance the budget.
- Before 1980 election, considerable attention focused on stockpile size and composition. The transition team recommended new stockpile purchases. In March 1981, the President announced new stockpile purchases. Planning for these purchases predated the present Administration: From 1981 to date, the Administration procured or has authority to procure \$583 million of materials. Planned sales of surplus stockpile materials amount to less than \$400 million.
- In late 1982, the NSC began an independent study of the stockpile.
- In July 1983, the Secretary of the Treasury, Director of OMB and Chairman of CEA requested the National Security Advisor to undertake a comprehensive study of the stockpile. This request was prompted, in part, by the stockpile goals methodology being applied in Section 232 trade cases to determine the adequacy of domestic industries for wartime expansion.
- In August of 1983, the NSC began the 1984 stockpile and industrial mobilization preparedness study.

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Policy Significance of the Stockpile

Stockpile materials goals and methodology have been broadly applied in other policy areas.

Industrial Mobilization Policy

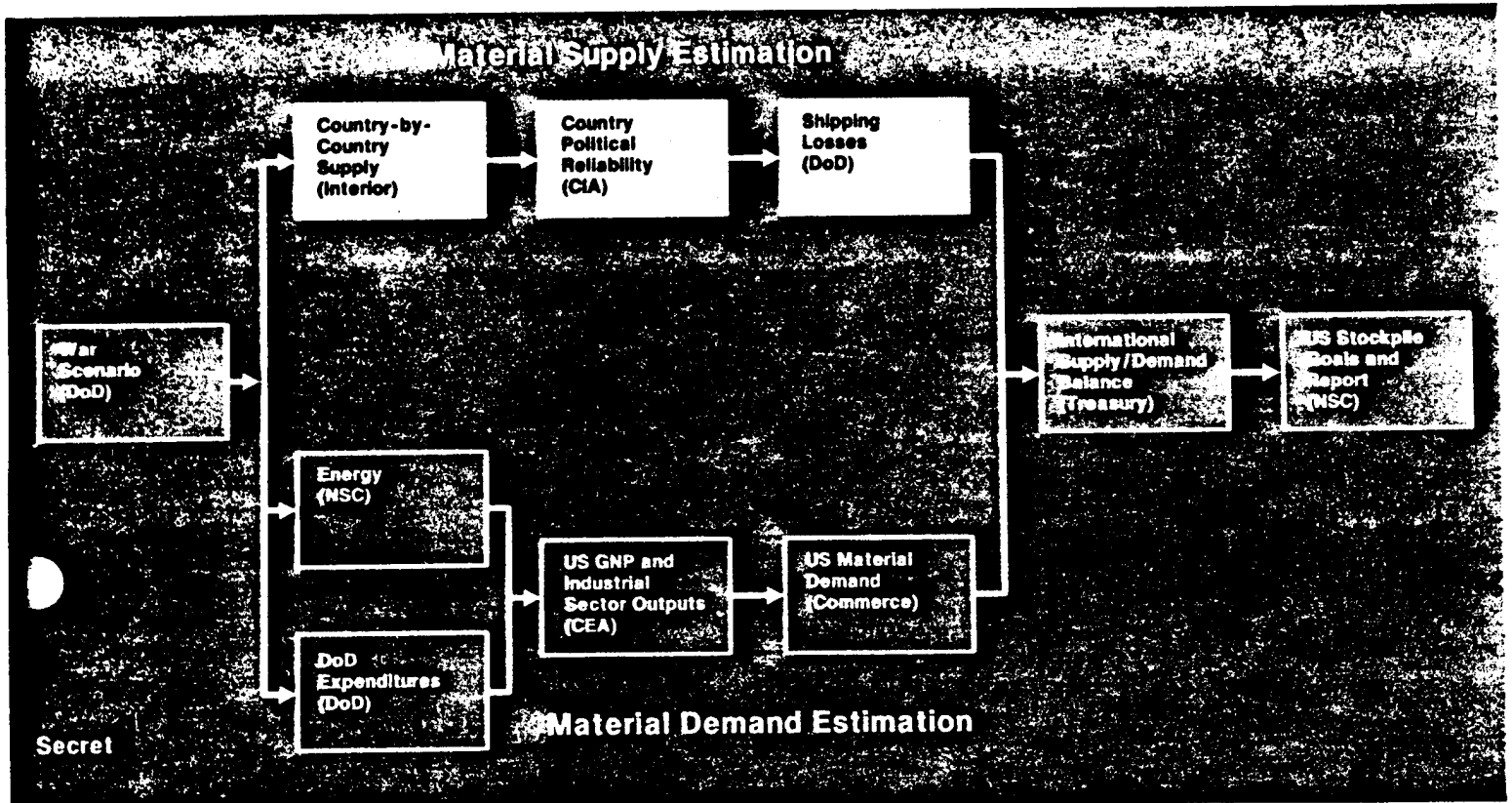
- The stockpile goals methodology and resulting U.S. industrial mobilization requirements have been used by both industry and government to support subsidies or "buy American" proposals to maintain domestic suppliers of materials or industrial items for wartime production.
- Many of the planning assumptions used to calculate the 1979 stockpile goals (e.g., war scenario, GNP level, political reliability, etc.) have been used for estimating other industrial mobilization resource needs. This helps ensure consistency in mobilization planning (the new 1984 study reports should replace the 1979 study in this function).

Trade Policy

- The Section 232 trade investigations are based, in part, on the existing stockpile methodology. These investigations seek to determine if imports are eroding domestic production capacity below a level needed for wartime production of a given good (e.g., machine tools, fasteners or materials).
- Various agricultural barter proposals (grain for materials) are based on stockpile goals and decided in this context.
- Stockpile acquisitions have trade implications.

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NSC Study Methodology, Tasks and Agency Participation



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Comparison of New (1984) Stockpile/Mobilization Planning Factors to Existing (1979) Study

1984**1979**

War Scenario

- | | |
|--|--|
| <ul style="list-style-type: none"> - 3-year conventional war against the USSR; 1 year of prior mobilization. - 3 fronts (Europe, Asia, Middle East-Persian Gulf). - Full mobilization to 5 million men. | <ul style="list-style-type: none"> - Indefinite duration, conventional war against the USSR; 1 year of prior mobilization (only first 3 war years stockpiled for, but investment for subsequent war years included). - 2 fronts (no Middle East-Persian Gulf front). - Full mobilization to over 4 million men. |
|--|--|

Defense Build-Up

- | | |
|---|--|
| <ul style="list-style-type: none"> - \$766 billion (1984 \$) peak war-year spending. - Defense spending increases 310 percent by the last year of the war over 1982 peacetime defense spending levels. - DOD spending levels provided by Secretary of Defense letter dated 15 February 84. | <ul style="list-style-type: none"> - \$697 billion (1984 \$) peak war-year spending. - Defense spending increases by 234 to 334 percent by the last year of the war over <u>lower</u> 1978 peacetime defense spending levels. - DOD spending levels developed by staff in 1979. |
|---|--|

SECRET**1984****1979****U.S. Economy**

- Rapid defense buildup induces growth. However, sharply reduced oil supplies caused by Middle East war damage constrain the economy. Oil prices reach \$90-\$100 per barrel.
- GNP growth at 4+% annually.
- DOD-related GNP increases 10 times more than the civilian GNP component.
- Extremely rapid increase in the civilian economy not significantly constrained by petroleum supply cutback.
- GNP growth at 7% annually.
- Civilian-related GNP increases by approximately the same amount as DOD GNP component.

Civilian Austerity

- Austerity assumed in consumer durable goods but not in nondurables and services.
- Total new automobile and parts production averages 1/3 of prewar year. Consumer auto purchases eliminated in first year of war. Spare parts production maintains existing 160 million vehicle fleet.
- Housing production averages 300,000 units annually.
- USG will stockpile materials for DOD and essential civilian uses, but not for auto, housing, home appliance or other nonessential consumer durables. Consumer durable production might occur if labor and materials are available after war needs are met.
- Very little austerity assumed.
- Total new automobile and parts production averages 5 percent more than prewar year. Consumer purchases during war average 1/3 of prewar level.
- Housing production averages 750,000 units annually.
- Consumer durables production averages 2/3 prewar level and includes campers, home appliances and toy production. Stockpile to ensure material availability for production of these goods.

SECRET

1984

1979

Materials Supply

- Shipping losses estimated by the Navy to reduce imports to the U.S. Non-naval ship loss rate at .5 percent average over 3 years.
- Allies were considered reliable suppliers. In addition, CIA/DIA/State ranked 39 mineral-exporting nations for political reliability as U.S. suppliers during the war.

Reliable for
DOD and
essential
civilian
needs

Mexico
Australia
Philippines
Japan
Malaysia

Reliable for
essential
civilian
needs

S. Africa
Chile
Sri Lanka
Peru
Bolivia

Unreliable

India
China
Zaire
Zambia
Zimbabwe

- Reliable imports available to the U.S. are estimated at \$38.4 billion.

- Shipping losses estimated at between 1-2 percent.
- A priori judgment that only Canada can be considered a reliable supplier for DOD needs. Country reliability rankings based on mechanistic approach, i.e., Iran rated more reliable than France or Ireland. The People's Republic of China was rated among the reliable suppliers.

- Reliable imports were estimated at \$22.4 billion.

Materials Production

- Some domestic expansion—e.g., cobalt and titanium—because of higher materials prices and government incentives. U.S. production increases by 27% from war year 1 to war year 3.
- Imports available to the U.S. increase 15% from war year 1 to war year 3.

- U.S. production increases by about 10-12% from war year 1 to war year 3.
- Imports available to the U.S. increase by 8% from war year 1 to war year 3.

SECRET

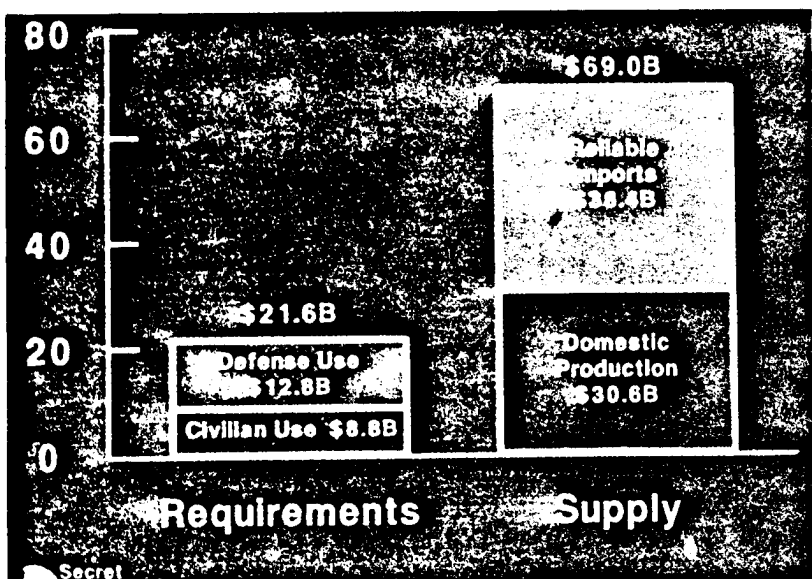
U.S. Three Year War Material Requirements, Supply Availability, and Stockpile Goals (42 Materials)

1979 Study



- Total supply significantly less than demand.
- Civilian needs nearly twice DOD needs.
- Reliable imports less than domestic production.
- Stockpile goal \$17.3B (60 materials).

1984 Study



- Total supply more than 3 times greater than requirements.
- Civilian requirements (adjusted for austerity) less than DOD needs. Defense material needs smaller than 1979 study because of use of a more refined DOD model.
- Reliable imports substantially higher than domestic production.
- Stockpile goal \$230M (42 materials).

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NSC Study

U.S. Wartime Materials Requirements, Supply and Sources

Total Three-year Material Requirements -- (\$21.6 B)

Stockpile (1%)

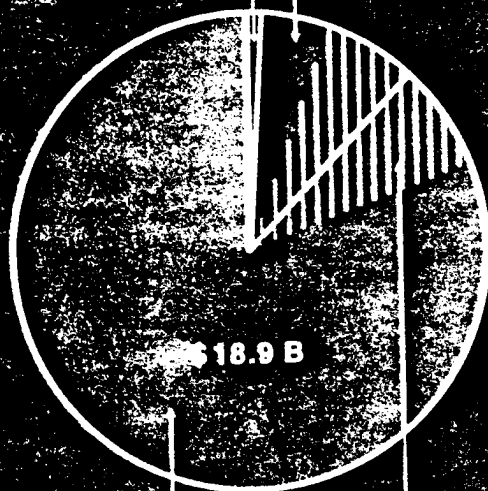
\$0.2 B

\$2.4 B

Other Reliable Imports (11%)

less Supplemental Reserves are used to meet the following requirements:

- Chromium
- Cobalt
- Germanium
- Graphites
- Micas
- Natural Quartz
- Tantalum



- | | |
|-----------------------------|-----------------------|
| Columbium (18%) | Australia, Brazil |
| Germanium (46%) | Western Europe, Japan |
| Graphite, Ceylon (28%) | Sri Lanka |
| Iodine (4%) | Japan, Indonesia |
| Mica, Muscovite Block (13%) | Brazil |
| Rubber (83%) | Malaysia, Indonesia |
| Tantalum (28%) | Australia, Brazil |

North American Production (88%)

(US, Canada, Mexico, and Jamaica)

Supplemental Reserve

Secret

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Examples of Material-By-Material Goal Changes and Reasons
Millions of US Dollars

	1979 Goal	1984 Goal	
Titanium	\$2,130	0	1979 counted no U.S. capacity. Existing capacity can meet most needs and new plants can be built in 8 months to process domestic ore.
Zinc	\$1,320	0	Extensive use in galvanizing (autos, housing). Abundant supplies available from Canada and Australia.
Chromium	\$1,000	\$14	Used largely in steel—available in Brazil and South Africa. U.S. has recoverable resources, recycling ability.
Cobalt	\$1,070	\$106	DOD needs are great, but below 1979 estimates and civilian substitution is above 1979 estimates. Wartime supplies available from Australia, Canada and proven U.S. reserves.
Nickel	\$930	0	Abundant supplies available from Canada, Australia and several Asian nations.

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NSC Study Findings

- Existing stockpile goals of \$17.3 billion developed under prior Administration are based on:
 - planning assumptions that are not consistent with Administration policy in that the stockpile was to support a "guns and butter" world war; and
 - analytical methods that are seriously flawed.

- 1984 stockpile goal for the 42 major materials is \$230 million.

- No systematic threat of wartime non-fuel material shortages.
 - Possible isolated shortages of minerals used in defense applications and/or imported from unreliable sources (cobalt, chromium, tantalum, germanium, mica, graphite). These materials should be stockpiled in sufficient quantities.
 - U.S. could produce three-fourths of its wartime materials requirements domestically. U.S. could import most remaining minerals from Canada, Australia, Brazil and Mexico over land or sea lanes which would be relatively secure.
 - U.S. and reliable suppliers have abundant capacity to meet about 99 percent of wartime requirements for the most significant minerals. Stockpile should supply the rest with a margin for safety.
 - Much of the nondefense consumption is concentrated in uses (autos, construction) which are not essential to wartime national security objectives and which should be postponed during a war.

- Petroleum is the commodity in shortest supply throughout the war scenario. Petroleum supplies available to the U.S. economy are estimated to decrease by 20 percent during the war—assuming a drawdown of Strategic Petroleum Reserve—while DOD consumption more than triples. Defense, industrial and essential civilian oil requirements can be met with sharp reductions in nonessential civilian consumption.

Secret**Sensitivity Cases**

(Changes Applied to All Three War Years)	Stockpile Goal (Million US \$)
1984 base case (derived from study).	\$230
Plus Increase defense spending by 15% and investment in domestic production capacity by 10%.*	468
Plus Cut back domestic materials production by 16%, reduce other non-Soviet bloc material production by 10%.	644
Plus Increase shipping losses 20 times to 10%.	\$696
*Capacity investment increases average 10% per year but would be higher in first year of the war and lower in the third year.	