
APPENDICES

HISTORY, MANAGEMENT, AND PROBLEMS OF STOCKPILING IN THE UNITED STATES

A. INTRODUCTION

The stockpiling experience of the United States involves a number of separate programs, each with a goal of its own. The Stockpiling Act of 1946 had as its objective the accumulation of an inventory of strategic and critical materials. The Defense Production Act (DPA) of 1950, as amended, aimed at improving the mobilization posture of the United States by encouraging and assisting the creation of productive capacity where needed. The right to deliver materials to the Government if the market could not absorb them at acceptable prices was an inducement in a number of DPA contracts. The barter program under the Agricultural Trade and Adjustment Act of 1954 (P.L. 480) was designed to exchange perishable surplus agricultural commodities for strategic and critical metals and minerals, and thereby assist in stabilizing the markets for these materials.

Although not its purpose, the Defense Production Act of 1950 developed into an economic balance wheel by providing markets for metals, minerals, and other materials when prices were low and the market needed some support and later selling materials under disposal programs, presumably when there were shortages and prices were higher. Whether by intent or accident, these disposals did actually provide some financial support to the Vietnam war.

B. LEGISLATIVE HISTORY OF STOCKPILING

Although the national stockpile was acquired basically under Public Law 520, 79th Congress, the Strategic and Critical Materials Stockpiling Act of July 23, 1946 (60 Stat. 596, 50 U.S.C. Sec. 98d), the concept of such a stockpile was first put forth after World War I, when shortages of materials had frequently upset production schedules and delayed essential programs. The Army General Staff subsequently considered material requirements in its planning and in 1921 drew up a list of 42

materials required for military operations. This was known as the Harbord List.¹

It was not until 17 years later, however, that the first official step was taken toward stockpiling. This was an appropriation of \$3.5 million to the Department of the Navy for the accumulation of reserves of strategic raw

¹Munitions Board, Stockpiling Report to the Congress, Jan. 23, 1950. Washington, D. C., Government Printing Office, 1950, pp. 16 & 18.

materials.² (For comparative purposes, this amount may be set alongside the \$3,013 million appropriation of stockpiling funds in the fiscal year 1951 or the \$906 million expenditure of stockpiling funds in the fiscal year 1953.)³

Meanwhile, the Army-Navy Munitions Board (ANMB),⁴ supported by other agencies, made recommendations to Congress which culminated in the Stockpiling Act of 7 June 1939 (53 Stat. 811). This act, which was the first official recognition by Congress of the need for a stockpile, authorized \$100 million, and Congress appropriated \$70 millions. Under this act the Treasury was authorized to accumulate stockpiles over a 4-year period. (Again, for comparative purposes, obligations of stockpiling funds incurred during the 4-year period, July 1, 1950, through June 30, 1954, aggregated \$3,515 million; and expenditures during the same period totaled \$3,051 million.)⁶

As the prospect of U.S. involvement in World War II increased, it became clear that more money and broader authority were needed. The act of July 25, 1940, gave the Reconstruction Finance Corporation (RFC) broad authority to produce, acquire, and transport materials for defense. The RFC conducted most of the Government procurement activity in strategic materials during World War II through the Rubber Reserve Company, the Metals Reserve Company, and the Defense Supplies Corporation.

²Backman, Jules, et al. *War and Defense Economics*. New York, Rinehart, 1952.

³General Services Administration. *Stockpile Report to the Congress, Statistical Supplement, July–December 1974*. Washington, D. C., General Services Administration, 1974. p. VI.

⁴The Army-Navy Munitions Board was renamed the Munitions Board in 1947, but for convenience and to avoid confusion the initials ANMB are used throughout. This board was abolished in 1953 when its functions were transferred to the Office of Defense Mobilization (ODM), a predecessor to the Office of Emergency Preparedness (OEP).

⁵Munitions Board. *Stockpile Report to the Congress*, Jan. 23, 1950. Washington, D. C., Government Printing Office, 1950. p. 16.

⁶General Services Administration, *Stockpile Report to the Congress, Statistical Supplement, July–December 1974*. Washington D. C., General Services Administration, 1975, pp. 16, 17.

At the time of the 1939 Stockpiling Act, the ANMB developed three separate lists of materials based on accessibility: strategic, critical, and essential. In 1941 new definitions of strategic materials were drawn up based on the need for stockpiling as against other measures, and three criteria were to be used:

1. Deficiency or insufficient development of natural resources to supply the industrial, military, and naval needs of the country for common defense;
2. The acquisition and retention of stocks of these materials within the United States and encouragement of conservation and development of sources of these materials within the United States; and
3. The reduction and prevention wherever possible of dangerous and costly dependence of the United States upon foreign nations for supplies of these materials in time of national emergency.

Postwar additions to the residue of wartime stockpile were initiated under the Surplus Property Act of 1944, which authorized the transfer of materials not required for defense or other essential purposes.

The producers of mineral raw materials recognized the threat of dumping surplus mineral stocks on postwar markets at the close of World War II. This stimulated considerable interest in a national stockpiling program. On June 3, 1943, a bill (S. 1160) was introduced in the Senate. The purpose of the bill was "to stimulate production of strategic and critical minerals for the present war effort and to assure an adequate supply of such minerals for any future emergency by continuance, intact, in the postwar period of all stockpiles surviving the present War and by necessary augmentation thereof primarily from domestic sources, and for other purposes,"⁸

After public hearings on the bill, a revised version (S. 1582) was introduced on December

⁷*Ibid.*

⁸U. S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, 1953. Washington, D. C., Government Printing Office, 1953.

8, 1943. Wide differences of opinion developed on many features of these bills, but there was substantial support for two of the objectives of the proposed legislation: (1) the creation of stockpiles for national defense, and (2) the freezing of stocks at the end of the war to provide the nucleus for permanent stockpiles and prevent undue dislocation of postwar markets, g

The discussions on the bill brought out the divergent interests of the minerals industries. The producers feared the potential competition of postwar surpluses, and the consumers hoped to secure bargains in raw materials. From the viewpoint of the producers, the freezing of surplus stocks of minerals and metals at the end of World War II was a prerequisite to any program designed to cushion the effects of sudden termination of war production. The industry supported this position by referring to World War I and claiming that lack of controls on the disposal of stocks of metals and scrap at that time brought on a deflation of the metal markets and resulted in widespread unemployment due to forced curtailment of

production from 1920 to 1922.¹⁰ Consumers, on the other hand, maintained that there should be no restraints on raw material supplies if industry were to meet the tremendous demand that many expected to follow the end of the war. They argued that the freezing of war stocks might retard the production of goods for civilian consumption or induce inflationary tendencies in the raw material markets inimical to the maintenance of postwar stability.¹¹

Subsequently, other bills along similar lines were introduced in Congress. The executive departments also initiated studies in an attempt to develop a program which would reflect the views of the executive branch. As of July 1, 1944, however, no positive action had been taken by either branch of the Government. Pressures for legislation to assist industry in its problems of reconversion from war-time to peacetime production received priority in the competition for congressional attention. For the moment the possible effects of disposals of Government stocks on recovery of the minerals industry were not considered.¹²

C. LEGISLATIVE AND EXECUTIVE AUTHORITY FOR STOCKPILING PROGRAMS

The authority for the accumulation of stockpiles of strategic and critical materials was derived from the following statutes:

- The Strategic and Critical Materials Stockpiling Act (Public Law 520, 79th Cong., 60 Stat 596, U.S.C. 98d), approved by the President, July 23, 1946, as amended by Reorganization Plan No. 3, effective June 12, 1953. This law provided the basic authority for the acquisition and retention of strategic and critical materials to decrease and prevent, wherever possible, a dangerous and costly dependence of the United

States upon foreign nations in time of emergency.

- The Defense Production Act of 1950 (Public Law 774, 81st Cong.) (64 Stat 798, 50 U.S. C. 2061), as amended, provided broad authority for the expansion of productive capacity including the making of purchases or commitments to purchase metals, minerals, and other materials and for the encouragement of exploration, development, and mining of critical and strategic minerals and metals.

⁹ *Ibid.*

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Ibid.*

- The Agricultural Trade Development and Assistance Act of 1954 (Public Law 480, 83d Cong.), of which title I provided for the creation of a supplemental stockpile of strategic and critical materials; and title III provided for barter of agricultural commodities for strategic materials which entail less risk from deterioration and spoilage, as well as substantially less storage cost.
- The Agricultural Act of 1956 (Public Law 540, 84th Cong.), Section 206, further facilitated barter of surplus agricultural commodities by stipulating that materials acquired by barter in excess of the needs of other programs should be transferred to the supplemental stockpile.
- Certain specialized minerals legislation including the Domestic Minerals Program Extension Act of 1953 (Public Law 206, 83d Cong.), and the Domestic Tungsten, Asbestos, Fluorspar, and Columbium-Tantalum Production and Purchase Act of 1956 (Public Law 733, 84th Cong.) which authorized the acquisition of specific amounts of certain named minerals.

1. Agency Responsibilities¹³

Public Law 520, 79th Congress, the basic act supporting the present stockpiling program, designated the Secretaries of War, Navy, and Interior, acting jointly through the agency of the Army and Navy Munitions Board, to determine which materials should be stockpiled and the quantities and qualities of each. In making these determinations the Secretaries of State, Treasury, Agriculture, and Commerce were required to designate representatives to cooperate with the Army and Navy Munitions Board. The responsibilities of each Federal agency under Public Law 520 are listed below:

a. The Treasury Department, Procurement Division, was charged with the responsibility of purchasing the materials for the stockpile, so far as practicable, from supplies of materials in excess of current industrial demand and in accordance with the Buy American Act. It was also responsible for the storage, security, and maintenance of strategic and critical materials; for the rotation of inventories where necessary; and for the disposal, under certain safeguards, of those materials which had become deteriorated or obsolescent.

b. The Interior and Agriculture Departments were charged with responsibilities toward research on the materials within their areas. These assignments of responsibilities were amended by Reorganization Plan No. 3, effective June 12, 1953. These amended responsibilities provided that—

- (1) The National Security Council was responsible for establishing broad defense policies, including those applicable to materials.
- (2) The Office of Emergency Preparedness (OEP) (and predecessor agencies) was responsible for coordinating all mobilization activities of the executive branch of the Government, including programs intended to assure an adequate supply of materials in time of emergency. The agency was also responsible for stockpiling certain medical supplies and items for survival and rehabilitation,
- (3) The Department of the Interior was responsible for recommendations on means for insuring adequate supplies of metals, minerals, and fuels to meet mobilization requirements. This included recommendations for the appropriate level of the domestic production component of the mobilization base. This Department also had a responsibility for research and development of strategic minerals pursuant to section 7(a) of the Stockpiling Act. It was also responsible for the mineral purchase

¹³Senate Armed Services Committee, *Subcommittee Hearings on National Stockpile*, July 24, 1957. Washington, D. C., Government Printing Office, 1957.

program under Public Law 733, which authorized the acquisition of specific amounts of certain named minerals.

- (4) The Department of Agriculture was responsible for recommendations on actions in regard to supplies of agricultural commodities, including food. This Department was also responsible for the barter activities in connection with the disposal of surplus agricultural commodities. It also had a responsibility for research on and development of agricultural materials pursuant to section 7(b) of the Stockpiling Act.
- (5) The Department of Commerce was responsible for recommendations as to actions on all other materials. It also developed requirements estimates for the industrial and civilian elements of the economy. It was responsible for the administration of the Export Control Act.
- (6) The Department of Defense was responsible, among other things, for providing estimates of military requirements.
- (7) The General Services Administration had responsibility for acquiring materials for the strategic stockpile and for the negotiation, consummation, and administration of necessary contractual arrangements for expanding supplies under the Defense Production Act. It also had responsibility for the storage of Government-owned materials.

Other agencies from time to time became involved in specific materials situations.

2. Organization of OEP Interdepartmental Committees

Within the OEP (and predecessor agencies), responsibilities with respect to materials were centered in Assistant Director for Production and Materials. To facilitate his working relationships with the various agencies, he and his staff called upon a number of interagency advisory groups in formal session or in day-to-

day communications with the various members as necessary or appropriate.

At the working staff level, seven interdepartmental committees reviewed basic supply-requirements data for specific materials and recommended necessary action to the OEP staff, who prepared reports which were usually included in the OEP's proposals as reviewed by the Interdepartmental Materials Advisory Committee (IMAC). These reviews covered the following materials:

- Light metals;
- Nonferrous metals;
- Nonmetallic minerals;
- Iron, steel, and ferroalloys;
- Chemicals and rubber;
- Forest products; and
- Fibers.

An eighth committee, the Stockpile Storage Committee, advised on the effective deployment of stockpile inventories, including technical advice on the storage, custody, preservation, and security of stockpile materials.

At the Deputy Assistant Director's level, advice was obtained from the IMAC on OEP staff and commodity committee recommendations to insure consistency with overall governmental policies and programs. The Deputy Assistant Director for Production and Materials submitted his recommendations to the Director of OEP through the Assistant Director for Resources and Production.

At the Director's level, there was the Civil and Defense Mobilization Board (CDMB), consisting of heads of the agencies having defense mobilization responsibilities, which advised on the broader aspects of defense programs and policies—not only in the production and materials field, but in all mobilization areas. The CDMB, for example, reviewed mobilization plans to insure coordination between current defense programs and actions required in the event of any of a number of types of emergencies.

D. SELECTION OF STOCKPILED MATERIALS

The determination as to what and in what quantities materials must be stockpiled could be made only after careful consideration of certain criteria. Materials could be designated as strategic and critical if they were required for essential military or war-supporting uses during an emergency and if supplies were estimated to be insufficient to meet the requirement. Such supply problems could arise from insufficient domestic natural resources, inadequate domestic processing facilities, dangerous dependence on vulnerable foreign sources of supply, and potential transportation hazards,

Computation of the stockpile objective for any material involved consideration of three general factors:

1. The estimated duration of the emergency;
2. The estimated annual requirements during the emergency;
3. The estimated year-by-year supply from sources other than the stockpile. These sources included: (a) domestic production, including such expansion thereof during the emergency as might be deemed practicable and desirable during war conditions; and (b) imports, to the extent they might safely be assumed to be forthcoming, including such increases above normal levels as would result from stimulation of foreign production prior to and during the emergency,

1. Determination of Objectives

Following the decision as to what to stockpile, a decision had to be made as to how much of each material should be stockpiled. Obviously, the objective (quantity) had to be based on the gap between wartime requirements and wartime supply, and adjusted for potential reductions which could result from losses in transport, sabotage, political interference, or other hazards which could reduce available supply. In determining stockpile ob-

jectives, the total national requirements for each strategic and critical material for mobilization was compared with the estimated total (factored) supply. If a shortage was indicated, a stockpile objective was recommended,

Stockpile objectives were of two types: (a) basic objectives and (b) maximum objectives. The basic stockpile objective was developed from the deficit remaining after allowing for U.S. production and imports from free world sources, the latter discounted for estimated strategic risks involved in securing the material in time of war. The maximum objective was based on discounting completely all offshore sources of supply.

A stockpile objective which varied to a considerable extent from the calculated deficit might be established if there were significant considerations which could not be accounted for in the statistical analysis. Such considerations might include excessive concentration of domestic productive or processing capacity, rotation problems, potential substitutability of alternate materials, or the likelihood that subsequent calculations could result in substantially different objectives.

2. Supply Considerations

Supply data were usually developed by subcommittees of the OEP working committees, generally composed of representatives of the Department of State, the GSA, and either the Department of the Interior (in the case of metals, minerals, and fuels), the Department of Agriculture (in the case of agricultural products), or the Department of Commerce (in the case of other materials). Future supply estimates were usually based on historical data; the existing supply situation was analyzed with due regard to known or foreseeable changes in both foreign and domestic supplies in times of emergency. Consideration was given to potential changes in market patterns, especially for foreign sources of supply. The

estimates of supply were submitted to the OEP working committees for review, exchange of supplementary knowledge of events and factors which might tend to modify the estimates, and final revision.

3. Factoring of Supply

After review and approval by the working committee, the OEP member of the working committee would discount the estimates of foreign supplies in accordance with factors developed on the basis of advice of the Department of Defense, the Department of State, and other agencies. These discounts were intended to apply safety factors to estimates of supply for possible losses. Domestic supply estimates were also factored for possible loss of heavily concentrated industries.

4. Estimates of Mobilization Supply

These included potential primary production in the United States, secondary recovery from scrap materials, and imports from foreign sources of supply. Although this was a general pattern, each material was considered as a separate situation.

In preparing estimates of supply for purposes of determining stockpile objectives, it was customary to prepare some historical data on country-by-country production, together with imports into the United States from each country. While this was intended to form some guidance as to the capability of each producing country, it could sometimes be misleading. High output in some previous year could have been achieved at the expense of future capacity to produce. Low past production might merely reflect lack of markets. Despite these pitfalls, however, it was necessary to use historical data. It was up to the working committee to recognize the conditions underlying

unusual phenomena with regard to output of materials in foreign areas.

5. Production Estimates

Historical data on domestic primary and secondary production would be easier to interpret. One only needed to be aware of past strikes, inventory recessions, price fluctuations, foreign spurts of economic activity, and other factors which could influence production and affect markets. Next, a series of estimates of production for the current period and for the immediate future was presented. This was usually based on known expansion programs and the most recent experience modified to reflect the economic outlook. Finally, estimates of potential foreign output and its availability to the United States under mobilization conditions were prepared, primarily on the basis of information secured by the Departments of State and Interior.

When the estimates of mobilization supply were prepared, it was generally assumed that all economic facilities would be operated at capacity, that prices would be approximately at or slightly above current prices, and that labor would be available and stable. It was also assumed that economic stabilization would hold the general price and wage line. Expansion of domestic producing capacity was assumed only where plans and schedules for expansions of Government or industry were known. In making estimates of secondary supply, the committee tried to recognize the factors which would tend to restrict the generation of old scrap, as well as those factors which could contribute additional supplies. When the estimates of domestic and foreign mobilization supply were presented, notes were submitted by the committee explaining the factors contributing to the estimate,

E. MOBILIZATION REQUIREMENTS

1. Military Requirements

Direct military requirements require no definition; for stockpiling purposes, however, the data represented a second translation. The first, prepared by the DOD, translated the military programs for the production of planes, missiles, ships, weapons, material, and equipage into the required fabricated steel, copper, aluminum, and other mill products. The second, required for stockpiling purposes, translated the requirements for mill products into requirements for basic raw materials such as refinery products.

2. Indirect Requirements

The mill-product requirements for direct military needs were developed from bills of materials whenever possible. The bills of materials also listed requirements for component units, such as electrical motors, fasteners, wheels, and other units purchased in the manufactured state. Although these components were just as essential to the aircraft, weapons, and equipage in which they were installed as the mill products required for "direct military" purposes, they were classified as "indirect military." These "indirect military" requirements estimates were obtained from industry through the Department of Commerce industry divisions. In this manner total requirements for all electrical motors, for example, were obtained at one time through one source,

3. War Industries Requirements

The third category of material requirements represented the war-supporting industries which supplied machine tools and other items without which the direct military requirements could not be produced. These, too, were developed through the Department of Commerce industry divisions,

4. Civilian Requirements

Frequently, there is a tendency to look upon civilian requirements during wartime as a lux-

ury. On the contrary, it would be a serious error to overlook the essential civilian requirements. Power, communications, water, and transportation facilities have to be maintained, repaired, and operated or else the mobilization manpower supply would suffer and absenteeism rise.

5. Export Requirements

Finally, allowances had to be made for exports of raw materials to our allies. Export requirements for direct military, war-supporting, and essential civilian requirements were subject to the same screening process as domestic requirements.

The determination of the material requirements in these classes posed a variety of problems. During a wartime emergency, the determination was relatively easy, since current data on inventories, recent shipments, and order books were usually available in claimant applications for material allocations. For purposes of estimating requirements for stockpiling, however, the benefit of such recent and current experience was not available in peacetime.

6. The Time Factor

From the beginning of postwar stockpiling in 1944, it had been assumed for the purposes of computing stockpile objectives, that a future war would last 5 years and that the stockpile would have to be large enough to cover all material shortages for such a period.¹⁴ The military officers in the Munitions Board who originally had established this guideline had assumed that a future war would be like World War II and then added approximately another year, just in case.

This was a rough assumption with no supportive judgment to justify it. It was assumed that the estimate of duration would be super-

¹⁴Snyder, Glenn. *Stockpiling Strategic Materials*. San Francisco, Chandler, 1966.

sealed by a more carefully developed estimate. Yet this assumption remained the basis for stockpiling for the next 14 years.

Section 2 of Public Law 520, the Strategic and Critical Materials Stock Piling Act of 1946, provided that—

the Secretary of War, the Secretary of the Navy, and the Secretary of the Interior, acting jointly through the agency of the Army and Navy Munitions Board, are hereby authorized and directed to determine, from time to time, which materials are strategic and critical under the provisions of this Act and to determine, from time to time, the quality and quantities of such materials which shall be stockpiled under the provisions of this Act. In determining the materials which are strategic and critical and the quality and quantities of same to be acquired, the Secretaries of State, Treasury, Agriculture, and Commerce shall each designate representatives to cooperate with the Secretary of War, the Secretary of the Navy, and the Secretary of the Interior in carrying out the provisions of this Act.

7. The Interior Department and Mobilizations

While Interior was like all other departments in seeing national security as the reason for the stockpile, the route the Department would follow to attain it was different in several fundamental ways. Unlike State and the military departments, Interior favored a large stockpile. Materials would cover a wide

area of need. The assumed period of disruption would be long. The period of hostilities protracted.

Emphasis would be placed on domestic purchasing. This, of course, would enhance national security by building up the mobilization base through development of a healthy domestic industry. The same objective would be supported by tight restrictions on stockpile disposal and the transfer of all war surplus materials to the stockpile. Clearly, tight restrictions on disposal minimized the threat of depressed prices and injury to domestic industry,

During the first 4 years of the program, Interior wanted the objectives to be about twice as high as the military departments thought necessary. A compromise was reached by adopting two sets of goals: minimum objectives, which were worked out and preferred by the staff of the Army-Navy Munitions Board (ANMB); and the maximum established after the war. This is consistent with the suggestion for monetization of stockpile reserves mentioned in the RFP,

From the foregoing, it appears that most of the basic policy issues which surround a materials stockpile were debated at length in the period between the end of World War II and July 1946 when the Stockpiling Act was signed into law,

F. THE STOCKPILE POLICY CONTROVERSY¹⁶

In general, stockpile legislation reflected the “tight control” advocates. The stockpile’s purpose was to protect national security, the act had a national emergency setting, the military was prominent in its administration, and the constraints on disposal were strong.

Nonetheless, it soon became apparent that actions under the stockpile program had im-

portant economic effects—whether intended or not. Thus, it was argued that national security would be best served by acquiring a balanced program; i.e., spreading procurement over a wide spectrum of materials. Opponents pointed out that stockpile dollars would stretch further if procurement were delayed for materials for which demand equaled or exceeded supply. Industry would not be

¹⁵Snyder, Glenn. *Stockpiling Strategic Materials*. San Francisco, Chandler, 1966.

¹⁶*Ibid.*

deprived of the quantity purchased for stockpile and pressure on prices would be relieved. Of course, the converse was true if prices were depressed by supply goals advocated by the Department of the Interior. However, the ANMB people tended to ignore the compromise. They believed that national security in stockpiling could only be expressed in a single objective based upon objective calculations of probable supplies and requirements in wartime. As far as the Munitions Board was concerned, the only function of the maximum objective was to permit the free transfer of surplus materials from other agencies to the stockpile where such transfers would raise the inventory of a material above the minimum objective. When it became apparent that the ANMB was ignoring the maximum objectives, Interior challenged the objectives and demanded they be raised.

1. ANMB and Interior: A Difference of Opinion

The differences of opinion between the ANMB and the Interior Department from early 1947 until 1950 were concerned principally with the question: How much material should be assumed to be available to the United States from foreign sources during a global war?

a. The Military Position.¹⁷—The ANMB used a set of strategic assumptions, e.g., military accessibility, shipping losses, and concentration of supply. Under military “accessibility, the Joint Chiefs of Staff (JCS) indicated which countries and regions would be accessible to the United States during the war and which would not. Estimates of shipping losses were applied as percentage reductions of the rate of normal peacetime shipments of materials from each accessible source. Ten percent was the maximum discount for this factor. The JCS recommended that if all or nearly all of the supply of a commodity were concentrated in a single source outside the Western Hemisphere, that supply should be discounted completely,

¹⁷ Ibid.

b. The Interior Department Position.¹⁸—The JCS made no specific evaluation of non-military factors which might limit the availability of foreign supplies during war. The Department of the Interior challenged the assumptions of the JCS and the ANMB. It pointed to the loss of access to the principal peacetime sources of tin, rubber, manila fiber, and other materials, as well as to the loss of access to the Mediterranean Sea and other areas. The Interior Department did not consider the Western Hemisphere to be a safe source of supply either. Interior also warned of the unpredictability of the political allegiance of foreign countries. In brief, Interior felt that no supplies of materials should be expected from outside the Western Hemisphere in time of war and that the Western Hemisphere should be discounted by 75 percent to take account of shipping losses, shortage of ships, and possible political developments adverse to the United States. Where supplies of a material came from a single source, that source should be discounted completely,

c. The Debate.—While the ANMB ignored the industrial support of the military, the Interior Department argued for full consideration of the need to support war-supporting industrial requirements. Interior also argued that accumulation of a large stockpile should be looked upon as a capital asset rather than an expense. It also pointed to the long-range upward trend of minerals prices, indicating a potential profit. Interior also maintained that a large stockpile would reduce or eliminate the need to use costly or inefficient substitutes for scarce materials in wartime production. Interior pointed out that stockpiling materials also stockpiles energy, labor, and transportation, thereby releasing these for other wartime needs. It would also release military forces from the job of guarding sea lanes and source areas. Acquisition of a larger stockpile would contribute to the economy of our friends and allies abroad, stimulate the development of the domestic mining industry, and contribute to

¹⁸ Ibid.

the self-sufficiency of the United States in strategic materials.

The ANMB argued that there was no justification for taking less of a "calculated risk" in stockpiling than in other defense programs. Larger stockpile objectives would require larger appropriations, and the stockpile appropriations would be carried in the national defense budget. Congress would be more likely to accept the stockpiling program if it were presented in terms of moderate reasonable figures. The strategic assumptions of the JCS and the ANMB were based on strategic plans for fighting the war, and felt that it was unnecessary and illogical to stockpile more than was necessary on the basis of these plans and assumptions.

The ANMB also claimed that a stockpile of the size proposed by Interior would have a damaging inflationary effect on the national economy, and the existence of such a large stockpile would create uncertainty and instability in world commodities markets.

The advisory members of the Strategic Materials Committee became involved in the debate. A formal vote was taken for each source area on the percentage discounts to be applied in estimating probable wartime supplies. In most cases Interior was supported by the majority in favor of maximum discounts. Thus, there were to be no supplies assumed during wartime from any source outside the United States, Canada, and Mexico. The ANMB and the State Department members protested against the total writeoff of supplies from South and Central America, but apparently were only mildly opposed to the 100-percent discounting of Eastern Hemisphere supplies. A small discount was voted for Canada and a larger discount for Mexico.

Decisions of the Strategic Materials Committee were not authoritative. After the Committee had taken its vote on supply discounts late in 1947, the results which favored the Interior position were submitted to the Joint Chiefs of Staff for comment. The JCS replied in the spring of 1948 indicating their disap-

proval of the Committee's figures by simply ignoring them and by issuing a new set of strategic assumptions which differed in no significant respect from those already in use.

d. The Compromise Position.¹⁹—In an attempt to reach some sort of compromise, the ANMB prepared an "interpretation" of the new JCS assumptions which, in effect, changed them considerably toward the Interior viewpoint.

The JCS judgment about which countries would be militarily accessible was unaltered, except that certain areas were considered totally inaccessible. Where a single source accounted for more than half of the total accessible supply of material, supplies from that source were discounted completely if outside the Western Hemisphere, and fractionally if in South America or the Caribbean area. For purposes of making this concentration discount, a source was defined not as a country, but as an area. In addition, the interpretation called for a further partial discount of all remaining Asian supplies because of the uncertainty as to whether such supplies would be available even if militarily accessible. Furthermore, shipping losses considerably larger than those estimated by the JCS were assumed. The new formula was approved by the ANMB and the JCS. Interior, however, was not satisfied.

e. The NSRB Decision²⁰—The impasse was finally turned over to the National Security Resources Board (NSRB) for solution with the explanation that the JCS-ANMB assumptions would provide "reasonable" national security, with a certain "calculated risk," while Interior's formula would provide greater security at greater cost. The NSRB was also told that the rates of acquisition in the near future would be the same under both plans, since these would be governed by availability of funds.

The NSRB, late in September 1948, decided in favor of the JCS-ANMB. The NSRB indi-

¹⁹ *Ibid.*

²⁰ *Ibid.*

cated that strategic estimates, in stockpiling as elsewhere, was a military responsibility, although the concurrence of Interior was still required on stockpile goals with respect to the nonmilitary aspects” of their formulation.

f. Further Problems.—Now that the strategic aspect of the stockpile was decided, new problems arose with respect to the degree of wartime expansion of production and the level of civilian requirements. The ANMB assumed substantial expansion of wartime production. Interior maintained that except in special cases, expansion of production should not be assumed because it would use up valuable energy, resources, and manpower at a time when these were required to fight a war. On the contrary, ANMB argued that manpower could be lost from civilian production to increase the availability to the military.

In order to estimate requirements, the ANMB proposed substantial increases in military requirements, such as peak year of World War II plus one-third and multiplied by 5. War-supporting industries were also to be increased by one-third. Civilian requirements, however, were to be established generally at WWII levels with additions only enough to account for population growth. Interior opted for the year 1970, whereas the ANMB preferred to use the year following the year in which the objective was reviewed. The 1970 date would have substantially increased the requirement estimate—and the stockpile objective.

The problems were resolved in favor of Interior’s position on domestic production and essential civilian requirements, and in favor of the ANMB on the assumed date of the outbreak of the war.

g. New Objectives Established.²¹—With these issues out of the way, the review of stockpile objectives under the Industrial Feasibility Test (JCS Plan 1725/22) proceeded smoothly, and by June 30, 1950, new objectives had been established for 34 materials and staff work completed on 20 more. In 26 cases an in-

crease was established or recommended, 12 objectives were reduced, 10 remained unchanged, and 5 were removed from the stockpile list,

h. Problems of Precision.—The practical application of the strategic assumptions of the JCS uncovered a number of problems of ambiguity which bothered the civilian agencies. These problems pertained to the application of discounting factors to estimates of supplies from sources which could be affected by such contingencies as sabotage, political unreliability, concentration of supply, and accessibility. During these first reviews the NSRB had become involved in the effort to establish a workable stockpile program, specifically seeking precision in the assumptions leading to the establishment of objectives. The NSRB was supported in this effort by the Bureau of the Budget because of the Bureau’s basic interest in administrative efficiency and the effect of stockpile goals on annual appropriation planning. In general, the Department of State did not take an active stand in the debates on stockpile policies, but rather seemed to defer to the military positions.

In response to pressures for increased precision, the ANMB asked the JCS for a new set of assumptions which, would provide more specific evaluations of non-military contingencies. In May 1950 the JCS provided a new set of guidelines which included only an appraisal of military accessibility and shipping losses. The guidelines specifically excluded political considerations and other factors relating to conditions within source countries.

2. Establishment of Interdepartmental Stockpile Committee²²

In order to fill the gap which the JCS guidelines created, a subcommittee of the Interdepartmental Stockpile Committee was set up under the chairmanship of the State Department. This subcommittee included, in

²¹ *Munitions Board, Stockpile Report to the Congress*, January 23, 1950. Washington, D. C., Government Printing Office, 1950. p. 7.

²² Snyder, Glenn. *Stockpiling Strategic Materials*. New York, Chandler, 1966.

addition to the State Department, the Department of Commerce and the Central Intelligence Agency. The subcommittee considered general political orientation, sabotage, labor dependability, and governmental stability. On the basis of these four considerations, the subcommittee devised a set of “dependability ratings” for about 30 countries. Each factor was rated on a scale of 0–100, the lowest of the four ratings was adopted as the overall dependability rating. The subcommittee also considered the effect of concentration of supply sources and proposed discounts for concentration of more than half of the available supply of a commodity in a given region. The subcommittee further proposed an additional discount representing the extent of U.S. dependency on foreign sources of supply. Although the work of the subcommittee constituted a complete revision of the basic assumptions of supply, the “strictly military” assumptions of the Joint Chiefs were left intact.

3. The Factoring System

The Korean war broke out before the subcommittee had finished its work. The NSRB, anxious for a quick decision on the supply estimates, proposed a system which was more general in nature than the JCS formula. It assumed that no supplies would be available from outside the Western Hemisphere except from Australia, New Zealand, and Africa. It discounted supplies from these three areas by 75 percent; it discounted supplies from the Western Hemisphere except the United States, Canada, and Mexico by 50 percent. It assumed full supplies from these sources, with discounts for materials whose production was especially vulnerable to sabotage or bombing. In effect, the NSRB formula would have eliminated the guidance of the JCS and would have raised the stockpile objectives substantially.

The Interdepartmental Stockpile Committee considered both plans and voted to accept the State Department Subcommittee plan with some minor changes. The adopted plan, which

was called the Factoring System, included the following considerations:

- Military accessibility and shipping losses;
- Political dependability, including general political orientation, sabotage, labor dependability, and governmental stability;
- Concentration of supply, including concentration by region and total dependence on foreign sources; and
- Contingency factors.

With the adoption of the factoring system, another major review of stockpile objectives was conducted during the last 6 months of 1950. All but 10 of the objectives were increased, 3 materials were added to the list, and 3 were eliminated.

Thus, the factoring system provided a uniform procedure for calculating objectives. It reduced the range of uncertainty and freedom of choice, and thereby reduced but did not eliminate the vulnerability of the stockpile program to pressures from special interests.

4. Defense Production Act of 1950²³

Soon after the outbreak of hostilities in Korea, the need for new administrative machinery to control the use of scarce materials was recognized. The Defense Production Act was approved on September 8, 1950. Under this act the President was given authority to require the acceptance of contracts and to allocate materials when, in his opinion, any of these actions would promote the national defense. The President was empowered to authorize GSA, Army, Navy, and other agencies engaged in procuring materials for defense needs to guarantee the contracting firm or public agency against loss when necessary to expedite the flow of materials for defense needs. The President was also

²³See Case Study, found in App. B on “Expansion of Copper Producing Capacities”, Defense Production Act of 1950, as amended,

authorized to make loans, grant purchase commitments, and encourage the exploration, development, and mining of strategic materials.

One of the major purposes of the Defense Production Act was the expansion of the U.S. mobilization base. In the early 1950's the incentives provided by the act were used to induce private industry to invest funds in the construction of new plants. One of these incentives provided that the Government could negotiate a delivery schedule to permit the company developing the new facility to "put" unsold production to the Government. Such materials were subsequently placed in the Defense Production Act Inventory.

a. Sales from DPA Inventory²⁴—Later, the Office of Defense Mobilization (ODM), successor agencies, and eventually OEP administered the DPA program. Materials in the DPA inventory could be sold (or diverted from delivery) by the agency Director without either Presidential or congressional approval.

As a result of the depression of market prices of many materials below Korean war levels, deliveries under DPA floor price purchase contracts were heavy after 1952. During the **1950's** the large DPA deliveries, together with the relative administrative ease with which disposals could be made from the DPA inventory (compared with the difficulties of releasing material from the strategic stockpile), resulted in placing heavy emphasis on the use of the inventory for economic stabilization purposes.

Sales from DPA inventories were made in tight market situations. National security justification usually lay in the development of a healthy domestic industry. Strongly urged by the Commerce Department (as the consuming industry spokesman), sales of copper, nickel, and aluminum were made to industry. Perhaps surprisingly, such sales were sometimes supported by the producing industry as a reasona-

ble price to pay for reducing the threat of the stockpile and dissuading the search for substitute materials.

In November 1959 the U.S. Mint purchased copper from industry at what was deemed to be a relatively high price. This purchase was criticized because there was a substantial quantity of copper in the DPA inventory which could have been acquired at a substantially lower cost.

In May 1960 the Mint requested 10,000 tons of copper to be purchased from the DPA inventory. This was the first of a series of such sales to the Mint. Subsequently, from January 1961 through October 1964, there were eight more sales of DPA copper to the Mint totaling 97,000 tons.

When necessary, materials were transferred to the Strategic Stockpile to meet long-term objectives which were high as a result of a series of pessimistic assumptions relating to accessibility of foreign supply. This removed them as a market overhang.

b. Effectiveness of DPA of 1950.—The Defense Production Act of 1950 served to improve the capacity of the mining industry to meet the heavy demands of the Korean war. Much of this expansion was accomplished with Floor Price Purchase Contracts. While many of the facilities fostered by these contracts became productive in time to enjoy full demand at high prices and thereby released the Government from its obligation to purchase material at floor prices, some enjoyed only partial success, and some came into production after prices (and demand) had already fallen below the floor prices established in the contracts. Consequently, substantial quantities of lead, zinc, and other materials flowed into the DPA inventories. One example of the effectiveness of the Defense Production Act of 1950 in expanding productive capacity is found in the copper industry. For this analysis, see the case study, "Expansion of Copper Producing Capacities under the Defense Production Act of 1950, as amended," as found in appendix B.

²⁴See Case Study, found in App. B on "Releases of Copper from the Stockpile."

G. THE MOBILIZATION READINESS PROGRAM²⁵

After the change of administration in 1953, the stockpiling program underwent some changes which in effect had some impact on the economy. The Defense Production Administration developed the Mobilization Readiness Program. This was a procedure for estimating mobilization requirements for steel, copper, and aluminum by claimant agency and industry division, along the pattern of the Controlled Material Plan (CMP) used during World War II and the Korean war. Reorganization Plan No. 3, effective June 12, 1953, designated the Office of Defense Mobilization (ODM) to assume the functions of the Defense Production Administration and the NSRB, both of which were abolished by Reorganization Plan No. 6, effective June 29, 1953.

Stockpiling procedures remained essentially as they had been except that a civilian agency was coordinating the program. The GSA continued to purchase the materials and manage the inventory. The DOD became one of the advisory agencies, with responsibility for the preparation of estimates of military requirements and, along with other advisory agencies, to cooperate with the ODM in establishing stockpile goals.

1. Cabinet Committee on Minerals Policy

The ODM had to consider what to do with the materials coming into the DPA inventory, especially those materials for which the objective had already been filled, and what could be done to help the domestic mining industry. The Interior Department, specifically, was requesting a comprehensive "national materials policy." Therefore on October 26, 1953, the President appointed a Cabinet Committee on Minerals Policy, referring to depressed conditions in the mining industry and specifically mentioned lead and zinc producers. The President charged the Committee with the following tasks:

- To make sure the United States had available mineral raw materials to meet any contingency during the "uncertain years" ahead;
- To make sure the United States could meet the ever-growing minerals requirements of an expanding economy; and
- To preserve the added economic strength represented by recent expansion of facilities by the domestic mining industry, through policies that would be consistent with other U.S. national and international policies.

The Committee recommended the establishment of mineral stockpile objectives which would authorize acquisition of materials beyond levels indicated by existing minimum objectives. The President accepted the recommendation and on March 26, 1954, authorized the ODM to establish new "long-term" procurement goals for metals and minerals. Nonminerals on the stockpile list were excluded. Purchases were to be spread out over a period of time and were to be confined to newly mined metals and minerals of domestic origin. In determining objectives, there was to be no wartime reliance on sources of minerals located outside of the United States, Canada, Mexico, and comparably accessible nearby areas as defined by the National Security Council. Purchases toward the long-term objectives were to take place at "advantageous prices" and at times when they would "help to reactivate productive capacity and in other ways to alleviate distressed conditions in domestic mineral industries that are an important element of the nation's mobilization base." Provision was also made for upgrading during slack periods in the processing plants.

Acquisitions toward the long-term objectives were to be obtained by direct purchases transfers from DPA purchases and expansion

²⁵Snyder, Glenn. *Stockpiling Strategic Materials*. San Francisco, Chandler, 1966.

programs, and from barter of surplus agricultural commodities. Thus, stockpile purchases were to acquire materials for war-time security and to promote the well-being of the mining industry.

2. Lead-Zinc Programs

The lead and zinc programs appeared to receive special attention. The objectives were increased to the level of "at least one year's normal U.S. use of any strategic and critical metal and mineral." This rule was to be used only when it would yield a higher objective than did the discounting of oversea imports. In practice, the rule applied only to lead, zinc, and, to a lesser degree, antimony,

3. Establishment of Long-Term Objectives

In order to establish and review the minimum objectives, the basic framework of the factoring system as established in 1950 was used. Determination of the long-term objectives involved a recalculation for each metal and mineral, applying the new assumptions contained in the President's directive, notably the assumption of no distant oversea imports and the additional requirement for stocks of lead and zinc for "one year's normal use,"

Public Law 480, the Agricultural Trade and Adjustment Act of 1954, added one more non-national security feature to the stockpile program. This legislation provided for a supplemental stockpile of strategic and critical materials purchased through the disposal of agricultural surpluses in foreign markets. Importantly, through barter arrangements, industrial raw materials were acquired in exchange for perishable farm products to reduce the storage costs for the total holdings. Disposal of materials from the supplemental stockpile was subject to the same constraints as sales from Strategic Stockpile.

4. New Revisions

The Mobilization Readiness Program was revised in 1956 by the ODM and retitled the

ODM Second Round Supply-Demand Analysis. It was again revised in late 1957. Under this program an overall estimate of industrial capability was based on an estimated gross national product for an assumed mobilization period. This estimated GNP was then broken down into component shares which were assigned to the military and to supporting industrial areas. Using the experience of 1952 material consumption as the base, the ODM developed new estimates of requirements for CMP mill products. These were then factored to convert to refinery product, with due allowance for alloy content and scrap generation.

For non-CMP materials, relationships were sought between the material in question and consumption of steel, copper, or aluminum. For instance, one part of the zinc requirements is based on the production of galvanized sheet and wire; another part, on zinc content of brass. Some materials are related to automotive production and automotive population; for example, lead for batteries and gasoline. Some materials seem to be without any relationship to other materials. In this case the estimated GNP index may be used,

5. Revisions of Time Factors and Objectives

From the beginning of stockpiling in 1944, stockpile objectives were calculated on the assumption that a future war would last 5 years. By 1954 the assumption was being challenged by the Air Force. Gradually, the military shifted to the idea of a 3-year mobilization effort. On June 30, 1958, the stockpiling policy was revised to assume a 3-year war. This had the effect of reducing all stockpile objectives by about 60 percent and created a number of surplus stockpile situations. The former "minimum" and "long-term" categories of stockpile objectives were renamed "basic" and "maximum," respectively. On June 30, 1958, only 10 materials were still short of the basic goals, and these plus 8 more were below the maximums. The balance of the 75 materials were held in excess

of the maximum goals and therefore were not subject to further procurement.²⁶

Methods of calculating the basic and maximum objectives were essentially the same as before except for the shorter time period. The maximum objectives were calculated on non-accessibility of supplies from outside the U.S. and Caribbean areas, while basic objectives assumed some imports for other areas.

Under DMO V-3 (dated December 10, 1959) the "six-month rule" was adopted. This rule provided for "basic" and "maximum" objectives. The maximum objective included an additional allowance to take into account the complete discounting of sources of supply beyond North America and comparably accessible areas. The maximum objective was to be not less than 6 months usage by industry in the United States during periods of active demand.

6. Stockpile Declassified

From the time that it was created in 1946, the stockpile was considered to be so related to national security that inventories and objectives were closely guarded secrets.

In 1962 Senator Symington questioned the need for continued secrecy of the stockpile data, the President agreed, and ordered the declassification of information of stockpile objective and inventories.

7. Stockpile Releases

There followed a large number of requests for releases and sales to industry of materials which were in short industrial supply and for which the inventories exceeded the objectives. Copper was one of the most frequent targets.

These requests were resisted consistently. Although a surplus did exist, the determination of the nuclear objectives had not yet been completed, and preliminary estimates indicated a substantial need for more, not less copper. Furthermore, the strategic stockpile was

not intended to be an economic balance wheel: in fact, when the Stockpile Act of 1946 was debated in Congress, industry representatives expressed their apprehension over the possible misuse of the stockpile and were promised that the stockpile would never be used as an economic weapon.

In 1964 the copper industry was in a short-supply situation. One brass mill was most persistent in requesting some material from the stockpile inventory. The President complied by ordering the release of a relatively small quantity (20,000 tons) from the DPA inventories for defense and hardship cases. Pandora's box was now open. (A case study on "Releases of Copper from the Stockpile" can be found in appendix B of this assessment.)

It should be noted that some of the releases of copper were not for the purpose of providing assistance to industries, but rather to provide budgetary assistance to the prosecution of the Vietnam war and to relieve upward pressure on prices,

8. Justification for Stockpile Releases

In order to justify releases of material from stockpile inventories, the material to be released had to be either obsolete or surplus to the objectives. This may explain some of the changes in the guidance provided for the calculation of objectives in Defense Mobilization Orders (DMO) 8600.1A and 8600.1B. Each had the effect of lowering the objectives, thereby moving more material into the surplus category available for disposal.

On March 30, 1964, Defense Mobilization Order 8600.1 (formerly DMOV-7) eliminated the 6-month rule and established one objective (maximum) to be adequate for limited or general, conventional or nuclear war, whichever shows the largest supply-requirements deficit for a 3-year period to be met by stockpiling. Furthermore, the order provided that only domestic sources of supply or those in contiguous countries would be considered available during an emergency. The order also provided for discounting of potential wartime

²⁶General Services Administration, *Stockpile Report to the Congress, Statistical Supplement, January-June 1958*. Washington, D.C., General Services Administration, 1958.

supplies if such supplies were relatively concentrated, either locally or in North America. Domestic supplies were also to be discounted to reflect vulnerability to sabotage. In cases of excess concentration, provision was to be made for supplies during the estimated time required to restore capacity and operations.

The release of 200,000 tons of copper in March 1966 carried with it the suggestion that productive capacity should be increased. This led to the Second Expansion Program, discussed as a case study in appendix B of this assessment.

DMO 8600.1A (dated December 16, 1968) had the effect of increasing estimates of supply and thereby tended to reduce the stockpile objectives and make more material eligible for disposal. It stated that estimates of supply should be based on readily available capacity and known resources in the United States and such other countries as certified by the Joint Chiefs of Staff and approved by the Director of OEP. The usual discounts for concentration, sabotage, etc., were to be applied.

DMO 8600.1B (dated April 11, 1973) provided that the stockpile objectives be limited to meeting estimated shortages of material for the first year of a war. Requirements were assumed to approximate the consumption capacity of industry, taking into account necessary wartime limitation, conservation, and substitution measures.

As a result, accessibility constraints were relaxed, maximum substitution of materials assumed, and a very limited military force accepted as a planning assumption. Above all, however, the 3-year war assumption was discarded, and preparation was made for the first year of war. The rationale offered for this change assumed that the stockpile was needed merely during the transition from a peacetime to a wartime economy. It stated that beginning with the second year of war, the necessary adjustments would have been made and the need for stockpile withdrawals would vanish. This shift in planning assumptions had the advantage of eliminating debates as to the validity of

a 1-year war assumption. Experience does not lend much support to this view.

The net effect of the above changes in strategic planning assumptions was to create surpluses for most materials in the national inventory available for disposal. This was soon reflected in sales from the stockpile. Compared with the fiscal year 1972 total of \$146 million, 1973 sales more than tripled to \$558 million, and 1974 sales soared to \$2,051 million.²⁷

On June 30, 1973, OEP was abolished by Presidential order and its records and remaining functions transferred to GSA.

9. Policies of the 1960's

In retrospect, the decade of the 1960's was marked by the role played by the national stockpile in dealing with some of the economic consequences of the Vietnam war. When a high level of economic activity coincided with burgeoning requirements for the production of military equipment, materials shortages and upward pressure on prices were the inevitable result.

Department of Defense, Atomic Energy Commission (predecessor to the Energy Research and Development Administration and the Nuclear Regulatory Commission) and National Aeronautics and Space Administration contractors and subcontractors all possessed priority authority in the purchase of materials and equipment under the operation of the Defense Materials System. As a consequence, shortages of materials impacted entirely on the nonmilitary industrial and civilian economy, thus magnifying the shortage effects on the concerns not involved in war production.

Stockpile and DPA Inventory sales were made to soften the adverse impact and reduce upward pressure on prices of industrial materials. In some measures, stockpile sales were used to reduce demands for the imposition of wartime material and production con-

²⁷ Data from General Services Administration,

trols. Sales during the 10-year period ending in 1970 amounted to \$3.1 billion. During the 3-year period 1965-67, which marked the high years of materials requirements related to the production of military equipment for the Vietnam war, sales amounted to just under \$2 billion.

The OEP Stockpile Report to Congress for the July–December 1966 period had this to say in connection with the long-term contractual arrangement between the General Services Administration and the aluminum industry:

During the 13-month period ending December 31, 1966, industry purchased a total of 357,294 tons, valued at \$175.7 million, to meet the growing demands for aluminum products resulting from the Vietnam war and civilian economy. Of the total, approximately 83,875 tons were committed during the July–December period at a time when growth in productive capacities was unable to keep pace with mushrooming requirements for aluminum.

The huge sales of copper, nickel, tin, tungsten, and aluminum had the same objective. In short, Government policy had evolved to the point where stockpile was being used as a tool for economic stabilization.

10. Future Stockpile Policy

If present rules remain unchanged, the future stockpile program consists of establishing an orderly disposal program. The alternative is to make explicit a number of objectives which have largely been implicitly sought under the cloak of national security. This would permit the use of stockpiling to meet new national objectives and obviate the need for a large, quick disposal program. Experience gained in the evolution of the present stockpile program could be invaluable in guiding such a future program and helping to avoid negative and confusing actions.