

CIA

I. PROJECT TITLE: Nonfuel Mineral Supply-Demand Data Base

Submitting Agency: CIA

II. COSTS IN THOUSANDS: FY83 : FY84 : FY85 :

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III. DESCRIPTION OF PROJECT:A. Statement of need:

There is a persistent and justifiable Federal policy concern with the vulnerability of the United States and its allies to interruptions in the imports of nonfuel minerals that are critical to the maintenance of defense or essential civilian production or to the general strength of the Western economies. For example, the United States, Western Europe, and Japan all import more than 90 percent of their requirements of such important minerals as manganese, cobalt, chromium, and bauxite. Interruptions in this supply would severely affect steel production, stainless steel output, and the manufacture of jet engines, among other industries. The risks of supply disruption for these and other critical minerals are magnified by their restricted availability and the fact that they are disproportionately distributed among areas that are especially subject to instability or politically motivated supply interruption.

In response to this problem, the Agency has intermittently carried out ad hoc analyses of particular mineral supply or contingency situations. Such efforts, however, are hampered by the lack of a comprehensive, systematically compiled and coordinated governmental and private information base bearing on future nonfuel mineral consumption and supply. This proposal would greatly enhance the potential for quicker, more penetrating, and more reliable evaluative efforts.

B. Who will accomplish:

The proposed data base will be maintained by the Resource Analysis Branch of OGSR after having been established as the result of both staff and contract efforts. It would combine and coordinate those relevant governmental and commercial data bases already in existence or under development as well as raw data and intelligence that is reported currently in a variety of open and classified sources.

C. What is to be developed:

The proposed data base will consist of a variety of separate data sets, both quantitative and narrative, on consumption, capacity, production, inventories, prices, and recycling, as well as

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on the relevant economic, political, geographic, institutional, and other determinants of those variables. Predictions made by other authorities will also be included—especially predictions or contingency scenarios that relate to the risk of future supply problems. These data sets will be accessible to analysts through the Agency's interactive system. Software will be developed to provide both machine readable output and printouts suitable for distribution or for inclusion in finished reports. Adjunctive use will also be made of the MAGAS system to provide a variety of graphic displays and cartographic arrays. Under appropriate safeguards, the data sets will be made accessible in part to other government agencies.

The data sets would be established and maintained for each of the important commodity forms of those nonfuel minerals (tentatively, some 15-20) selected for their importance in the general economy and/or their critical defense applications. Particular priority would be given to those minerals characterized by the greatest apparent risk of potential supply problems. Further, they will consist not only of crude statistical and narrative inputs, but will permit those analytical summations and manipulations of the data determined to be useful on a routine basis.

D. Time phasing:

The bulk of the work of establishing the data base can be accomplished, under one or more outside contracts, during the first year of the program, with practical application and "debugging" commencing late that same year. Initial assessments of voids in the data base can then be made. Efforts to eliminate the gaps and bring the system online will continue well into the second year. Costs in succeeding years will be those for maintenance of the system.

In the detailed scheduling, priority will be given to those minerals and those elements of the system that are most relevant to providing assessments of situations with greatest risk and most serious consequences of a supply contingency.

IV. INTELLIGENCE COMMUNITY APPLICABILITY:

The project could lead to the development of new techniques for screening and integrating partially or largely inconsistent reports on the same subject. The most likely contribution will most likely be, however, the establishment of a rigorously derived data base on nonfuel minerals.

V. INTELLIGENCE CONSUMER BENEFITS:

The principal benefit to intelligence consumers will be the enhanced capability both for foreseeing the emergence of potential

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mineral supply problems and for evaluating the implications of contingency, policy, and other scenarios affecting mineral supply. These benefits would accrue both from direct evaluation of the entries in the data base and — especially for longer term problems — use of the data base in the System Dynamics models that have been developed by CIA.

VI. PROBABILITY OF SUCCESS:

There has by now been a sufficiently large body of successful experience with large data banks — both numerical and narrative and particularly within the CIA — that the probability of success for the one here proposed is very high. Furthermore, the proposed effort would be a success in terms of its impact on analyst productivity, and the upgraded analysis made possible even if some elements of the project failed to be achieved.