VI. Summary

THEMES OF THE CONFERENCE

Four, clear, unmistakable themes emerged from the Henniker IV Conference on national materials policy.

First, there was almost universal recognition of the need for a national materials policy, clearly expressed, well understood and agreed to, formally promulgated, and cooperatively implemented. The scope of such a national policy should, of course, include research and development goals and institutions, but it should extend much further. In particular, the policy should deal explicitly with enlisting the close mutual support of Government and industry by providing a national basis for cooperation of these two sectors in the public interest.

Second, there was an underlying concern over indications of excessive present and prospective bureaucratization of the relationship between Government and industry, or indeed Government and the public at large. This concern was manifest in such expressions as "overweening growth of bureaus and agencies, " "over-r emulation," and a persistent tendency toward reacting violently to crises instead of carefully, systematically, and perspicaciously analyzing trends in national affairs to avert and diminish crises before they occur. A specific example that commanded general acquiescence was that cited by George Eads: the idea of materials shortages as a self-fulfilling prophecy, caused by a "shortage mentality" that motivated actions that disrupted supply, violated the market, distorted prices, and led to uneconomical industrial inventories and distress buying.

Third, there was a general recognition that materials illustrated par excellence the need for the systems approach. That is the idea that everything is related to everything else. Materials policy for the United States needed to be formulated while bearing in mind the policy needs— for resources, markets, and capital—of other nations of the world. Materials policy in the United States could not be formed independently of policy for energy and the environment. The institutions of the Federal Government dealing with materials needed to be coordinated with each other, and all of them with other institutions, State, local, and private. Cooperation of the universities, industry, and Government again became seen as essential. An example of this interdependence was the discussion of renewable resources.

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Were they materials or substitutes for materials? Should policy aim to exploit biological resources for engineering applications, or as a source of energy, or both? Ultimately, the issue turned on the question of entropy: what was the "energy cost" of any particular policy, process, or application? And energy cost, economic cost, and social cost all interacted in the decision process.

Fourth and last, there was the warning, stated well in the discussion of national security aspects of materials: we do not devise sound policy or creative implementation with dollars, with institutions, nor masses of people; we achieve these necessary purposes only by creative approaches, fresh ideas, and innovative concepts. Instead of throwing dollars at problems, we must think about them.