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United States House of Representatives

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Mr. Chairman and Members of the Committee:

I am Mr. L. Michael Kaas, a mining engineer and a Professional Engineer licensed in the State of Minnesota. In 2004 I retired after 28 years in the Federal government and 12 years in the private sector. Twenty years of my government service was at the U. S. Bureau of Mines where I held several senior management positions in the minerals information and analysis program and in the environmental technology research program.

After the Bureau of Mines closed in 1996, I was instrumental in organizing the U. S. Bureau of Mines Alumni Association. It was a completely web-based community of past Bureau employees, many of whom found themselves job hunting and utilized the website, [www.bureauofmines.com](http://www.bureauofmines.com), to network with one another. The website served that purpose well and was actively maintained for several years.

I appreciate the opportunity to appear before you today. I commend the Committee for recognizing the necessity of maintaining an independent and authoritative non-fuel mineral commodity information capability in the Federal government. As the world's largest consumer of minerals, America's economy and standard of living depend on the availability of mineral materials. The domestic mineral materials industries mine, process, and ship nearly \$500 billion of non-fuel mineral commodities annually. While the Nation has been blessed with abundant reserves of many minerals, we are dependent on imports for 50 percent or more of over 40 important non-fuel mineral materials. As the world's appetite for minerals grows, especially in countries like China and India, global competition for mineral supplies will surely increase. Industry and government will require comprehensive and unbiased non-fuel mineral materials information with which to base future plans and policies.

From 1925 until it closed in 1996, the Bureau of Mines had a worldwide reputation for excellence in minerals information collection, analysis, and dissemination. Since 1996, the U. S. Geological Survey, Mineral Information Team has continued the Bureau's legacy in the collection of mineral commodity data and in providing that data to the public and other government agencies. That job has not always been an easy one. First of all, not all of the minerals information functions of the Bureau of Mines were transferred to the Geological Survey. Some important information and analysis capabilities were eliminated altogether. The association and information sharing with the technical experts in the mining, metallurgical, and environmental technology research programs was also lost when they too were terminated. Since the transfer to the Geological Survey, Minerals Information Team budgets have been constrained, staffing levels have been reduced, and the International Minerals Section has been a perennial target for elimination.

Not all the news has been negative. The Minerals Information Team seized upon the power of the Internet and used it to provide more efficient and effective distribution of its publications. Materials flow studies by the Minerals and Materials Analysis Section have provided a more complete picture of the life cycle of several important mineral commodities, the role of recycling in materials supply, and the generation and management of waste products.

H. R. 6080 and the creation of the Mineral Commodity Information Administration (MCIA) with the incorporation of the Minerals Information Team will strengthen the financial footing of the current program. By elevating the stature of the mineral commodity information function through this new Administration, non-fuel minerals issues will likewise be elevated and should play a more prominent policy role. The establishment of a Mineral Commodity Advisory Committee will provide valuable outside input to the new Administrator. The Act properly affirms the need for government to respect the confidentiality of minerals data. Protection of confidential data was a key factor in the success of the Bureau of Mines' information sharing partnerships with producers and consumers. It continues to be so at the Geological Survey.

H. R. 6080 and the new Mineral Commodity Information Administration could also provide the means to strengthen and enhance the current Minerals Information Team's program in three important ways:

First, the new program should take a more global and forward-looking view. More than ever before, non-fuel mineral materials production and trade is a truly global business. It is appropriate that mineral commodity statistical surveys should continue to provide in-depth domestic production, consumption, and trade data. However, the gathering of foreign minerals information should be enhanced. Rather than being downsized, staffing of the International Minerals Section should be increased from its current level. This will help ensure that an accurate and thorough understanding is maintained of the mineral materials economies and trends in all major foreign mineral producing or consuming countries. The two recommendations that follow also support the need for a more global, forward looking perspective.

Second, the engineering and economic analysis capabilities in the new program should be strengthened. This will permit the organization to provide comprehensive, forward-looking assessments of minerals supply.

Minerals availability analyses are an example of an output of this type of enhanced capability. Availability curves depict the relative economic viabilities of significant individual deposits. These curves can show the estimated total quantity of recoverable material as a function of the total production cost of each deposit and other financial parameters. Based on the production rates at each deposit, curves can show when existing mines will be exhausted and when new deposits should come on-line. In the last 10 years, access to information on deposits in the former Communist Block countries has improved. This additional information will increase the value of new supply analyses.

In a simplified fashion, here is how this analytical process would work:

- (1) The Mineral Commodity Advisory Committee would select the commodities for which analyses would be conducted. The selections would be based on the level of concern about future supply shortfalls.
- (2) Existing mines and undeveloped deposits of the essential commodities worldwide would be tracked and basic data would be collected.
- (3) Engineering and cost analyses, essentially mini-feasibility analyses, would be conducted for each deposit. Capital and operating costs would be estimated. By using consistent cost estimation and financial analysis methodologies for these analyses, comparable data on each deposit would be produced regardless of its location.
- (4) Supply analyses would then be conducted using the engineering and cost data for selected groups of deposits. Availability curves would be produced for a variety of economic conditions.

The analytical methods I have just described were included in the Bureau of Mines Minerals Availability Program that was terminated in 1996. They are well documented in many publications. The software tools and other methods developed by the Bureau could provide a jump-start for the process at the new Mineral Commodity Information Administration.

Finally, this new Administration should build a capability to track worldwide mineral materials technology developments. Mineral production and utilization as we know it would not be possible without the enabling technologies. Whether they burst upon the scene or are the result of continued incremental improvements, advanced technologies permit us to discover new deposits and economically recover lower-grade mineral resources. The domestic taconite/iron, copper, and gold industries all utilize advanced technologies to stay competitive. Advanced technologies also facilitate the recovery of valuable materials from waste streams and allow the development of innovative new uses for minerals. To fully anticipate and analyze the impacts of new technologies on future minerals production and consumption, active contacts should be maintained with universities, research institutes, and companies engaged in the development of new mineral materials technology.

I encourage the Committee to consider additional language for H. R. 6080 to more explicitly address these opportunities for further strengthening of our Nation's mineral commodity information and analysis capabilities.

Thank you very much for listening to my remarks. I will be glad to take any questions.