

*Diminishing Natural Resources: Recognizing Limitations,
Responding to the Challenges*

AGENDA

Government-University-Industry Research Roundtable Meeting

* Celebrating 25 Years *

October 20, 2009 (dinner)

The National Academy of Sciences Building
2101 Constitution Avenue, N.W.
The Great Hall
Washington, DC 20418

October 21, 2009 (meeting)

The National Academy of Sciences Building
2101 Constitution Avenue, N.W.
The Lecture Room
Washington, DC 20418

This particular meeting is intended to provoke cross-sector (government, academe, industry) thinking and dialogue around America's consumption of various strategic metals and materials, especially core natural resources and commodities used in the development of innovative technologies. We will consider rare earth metals as well as reserves of more commonplace elements – recognizing that the planet's expanding population and rising standards of living is placing unprecedented demands on finite natural resources. Our objective will be to examine a number of interrelated issues including availability of mineral and natural resources; where the U.S. is self-sufficient and where there may be global tensions over supplies; the flow of materials within the industrial system; and means for achieving critical materials sustainability. Overall we will consider how the federal government, universities and corporations can best collaborate in pursuing innovative technologies R&D while remaining cognizant of natural resource limitations.

Tuesday, October 20, 2009 (evening only)

Location: The National Academy of Sciences Building – The Great Hall

6:00-6:30 PM Cocktails

6:30-8:00 PM Dinner

Moderator: **C.D. (Dan) Mote, Jr., President, University of Maryland, College Park**

THE CHALLENGE OF SUSTAINABILITY

Steven Koonin, Under Secretary for Science, U.S. Department of Energy

Wednesday, October 21, 2009

Location: The National Academy of Sciences Building – The Lecture Room

7:30-8:00 AM Continental Breakfast

8:00-8:15 AM Welcome Remarks

Lydia Thomas, President and CEO (Ret.), Noblis; GUIRR Co-Chair

8:15-8:40 AM ERA OF INSUFFICIENT PLENTY
John Voeller, ASME White House Fellow, 2003-2006, Consultant on Homeland Security 2007-2008, Office of Science and Technology Policy, Executive Office of the President

8:40-8:45 AM Discussion

8:45-9:10 AM MINERAL SUPPLY AND CONSUMPTION – SEARCHING FOR A TWENTY-FIRST CENTURY BALANCE
David Menzie, Chief, International Minerals Section, U.S. Geological Survey

9:10-9:15 AM Discussion

9:15-9:40 AM THE CRITICALITY OF MATERIALS
Thomas E. Graedel, Clifton R. Musser Professor of Industrial Ecology, Environmental Engineering and Geology and Geophysics, Yale University

9:40-9:45 AM Discussion

9:45-10:10 AM THE GEOPOLITICS OF STRATEGIC MINERALS
Kent Butts, Director, National Securities Issues Group, The Center for Strategic Leadership, U.S. Army War College

10:10-10:15 AM Discussion

10:15-10:30 AM Break

10:30-10:55 AM GE'S ASSESSMENT AND APPROACHES TO MATERIALS SUSTAINABILITY
Steven J. Duclos, Chief Scientist and Manager, Materials Sustainability, GE Global Research

10:55-11:00 AM Discussion

11:00-11:25 PM INDUSTRIAL POLICY: A DIFFERENT PERSPECTIVE ON STRATEGIC AND CRITICAL MATERIALS AT THE DEPARTMENT OF DEFENSE
Rick Lowden, Senior Materials Analyst, Office of the Secretary of Defense, Office of the Under Secretary of Defense Acquisition, Technology and Logistics, Office of Industrial Policy

11:25-11:30 PM Discussion

11:30-11:55 PM ADVANCED OPTOELECTRONIC TECHNOLOGIES FOR RECYCLING STRATEGIC MATERIALS
David Spencer, Founder, Chairman and CTO, wTe Corporation

11:55-12:00 PM Discussion

12:00-1:30 PM Lunch – The Members Room

Introduction: **C.D. (Dan) Mote, Jr., President, University of Maryland, College Park**

AN ECONOMIST'S PERSPECTIVE ON CRITICAL MINERALS AND MATERIALS

Roderick Eggert, Professor and Division Director, Division of Economics and Business, Colorado School of Mines

1:30-2:15 PM Open Discussion – Panel Q&A

2:15-2:45 PM Updates and Discussion on Current GUIRR Projects

Moderator: **Lydia Thomas, President and CEO (Ret.), Noblis; GUIRR Co-Chair**

- § Data Overload – Tom Garrison
- § Food Safety/Food Defense – Harold Schmitz
- § International Research Collaborations – Jim Casey
- § Federal Demonstration Partnership – Susan Wyatt Sedwick
- § University-Industry Demonstration Partnership – Anthony Boccanfuso

2:45-3:00 PM Proposal of New Topics or Projects for GUIRR

3:00 PM Adjourn