

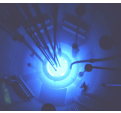
# Report of Nuclear Laboratory Requirements Subcommittee

**Date: May 18, 2004**



# Charge to Subcommittee on Nuclear Laboratory Requirements

“A key Department of Energy objective is to **make Idaho National Laboratory the leading nuclear energy research laboratory in the world in ten years** from its inception. To this end, Nuclear Energy requests NERAC’s assistance in **identifying what characteristics, capabilities, and attributes a world-class nuclear laboratory would possess**. The starting point of this analysis should be the January 16, 2003 report of NERAC’s Infrastructure Task Force. Nuclear Energy would expect members of this subcommittee to **become familiar with the practices, culture, and facilities of other world-class laboratories – not necessarily confined to the nuclear field – and use this knowledge to recommend what needs to be implemented at Idaho**. The subcommittee should submit its **report by the end of fiscal year 2004.**”

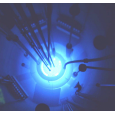


# Subcommittee Members

- Andy Klein, Chair
- Beverly Hartline
- Bob Long
- Mike Sellman
- Bob Schock

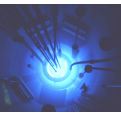
## Plus DOE-ID Support

- Linda McCoy, Chief Scientist
- Matea McCray, Project Engineer



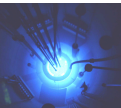
# Activities to Date/Planned

- Considerable literature to review on what others consider to be the characteristics attributes and qualities of world-class research and development laboratories
  - Not the first time this question has been asked
- Visit world-class labs (nuclear and non-nuclear) in US, Canada, Europe, Japan and S. Korea to collect data
- Survey to be sent to numerous laboratories
- Questionnaire to be sent to all NERAC members many other laboratories and others in and out of the nuclear community



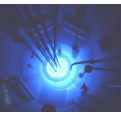
# Activities Continued

- Met in Boulder, CO on March 30 and 31 for initial meeting to discuss committee strategy and direction, world-class laboratories to visit, questions for visits, and survey development
- Teleconferences periodically
- Meeting here tomorrow (May 19)
- Meeting in Idaho in mid-August to visit ANL-W and INEEL and discuss/plan draft report
- Write draft report by September 1 send out for comment
- Receive review/comments on draft report by mid-September
- Finish report and deliver to NERAC & NE before October



# World-Class Laboratories to Visit

- Department of Defense
  - Naval Research Laboratory
  - Army Research Laboratory, Adelphi
  - Army Research Laboratory, Natick
- Department of Commerce
  - National Institute of Standards and Technology
- NASA
  - Jet Propulsion Laboratory
- Other FFRDC
  - National Center for Atmospheric Research
  - MIT Lincoln Laboratory
  - Charles Stark Draper Laboratory



# World-Class Laboratories to Visit

- Japan
  - JAERI/JNC Laboratories (Tokai-mura, Tsuruga (Monju), Oharai (HTTR))
- South Korea
  - KAERI
- Canada
  - Chalk River Laboratory of Atomic Energy of Canada, Ltd.
- Europe
  - CEA Laboratories (Paris, Saclay, Cadarache, and Grenoble)
  - CERN



# World-Class Laboratories to Visit

- Department of Energy
  - Argonne National Laboratory - East
  - Argonne National Laboratory -West
  - Idaho National Engineering and Environment Laboratory
  - Fermi National Accelerator Laboratory
  - Los Alamos National Laboratory
  - Oak Ridge National Laboratory





# Questionnaire Examples

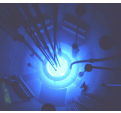
Questions to R&D organizations:

1. The National Research Council has established the following definition for a world-class R&D laboratory (Reference, National Research Council, "World-Class Research and Development," National Academy Press, Washington, DC, 1996.):

"A world-class R&D organization is one that is recognized by peers and competitors as among the best in the field on an international scale, at least in several key attributes."

Do you agree with this definition? If not, how would you change or improve it?

2. What do you consider to be the key characteristics, capabilities and attributes of a world-class R&D organization?
3. What do you consider to be the key characteristics, capabilities and attributes of a world-class nuclear-energy R&D organization?



# Provide us with your input!

- NERAC members and the broad public can email input to [klein-wcl@oregonstate.edu](mailto:klein-wcl@oregonstate.edu) for consideration by the subcommittee.

