

April 5, 2007

MEMORANDUM TO: Commissioner Lyons

FROM: Andrew L. Bates, Acting Secretary **/RA/**

SUBJECT: COMPBL-07-0001 - DEVELOPMENT OF A U.S. DIGITAL  
INSTRUMENTATION AND CONTROL AND HUMAN-MACHINE  
INTERFACE TEST FACILITY

This memorandum is to inform you that all Commissioners have concurred in your proposal to direct the staff to conduct a workshop concerning approaches for an integrated digital instrumentation and control and human-machine interface test facility in the United States and report back to the Commission. The attached SRM provides staff direction on this issue.

This completes action on COMPBL-07-0001.

Attachment:  
As stated

cc: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Jaczko  
EDO  
OGC

April 5, 2007

MEMORANDUM TO: Luis A. Reyes  
Executive Director for Operations

FROM: Andrew L. Bates, Acting Secretary **/RA/**

SUBJECT: STAFF REQUIREMENTS - COMPBL-07-0001 - DEVELOPMENT  
OF A U.S. DIGITAL INSTRUMENTATION AND CONTROL AND  
HUMAN-MACHINE INTERFACE TEST FACILITY

The Commission has approved the conduct of a public workshop concerning approaches for an integrated digital instrumentation and control and human-machine interface test facility in the United States. Stakeholders with existing capabilities should be invited, as well as others who may be interested in participating, such as national laboratories, universities, other federal agencies, research and development centers, and vendors. If possible, the workshop should seek consensus on a set of over-arching principles that should be met for the success of any of the conceptual approaches discussed. The conference should seek to develop a defined set of viable concepts for such a facility, with corresponding potential benefits and challenges for each concept. In planning and conducting the workshop, the staff should utilize contractors and retired annuitants and take other such measures to minimize the impact on ongoing regulatory development activities.

The following questions, at a minimum, should be considered:

1. What potential participants might be interested in joint participation, collaboration, and funding of such a facility, and to what extent might this include industries outside the nuclear industry?
2. If nuclear industry participated, how could conflict-of-interest issues be addressed?
3. Do examples of similar facilities currently exist and, if so, what can be learned from their successes and challenges?
4. What siting options are most viable (e.g., universities where integration with graduate studies might be encouraged, national laboratories, etc.), taking both cost and ease of technical information exchange into account?
5. To what extent could such a facility be designed to be reconfigurable to the expected variety of plant control room and HMI designs?
6. To what extent could such a facility be designed to also be used as an advanced reactor training simulator for NRC staff?
7. What impediments, if any, to information sharing among participants and to external

stakeholders might exist?

8. What could be the benefits, or adverse impact, to existing and established international collaborative activities in this area?
9. What could be the NRC's legal, budgetary, and oversight role?

As it engages potentially interested stakeholders, the staff should aim for the establishment of a facility that will serve as a national technical center of excellence to support a wide range of agencies and industries that have needs and interests in the rapidly advancing areas of instrumentation and controls, digital safety systems, and human-machine interfaces.

The results of the workshop should be conveyed to the Commission in a paper with the staff's recommendation on whether or how to proceed. In developing its recommendations on whether or how to proceed, the staff should exercise caution with regard to any potential involvement, financial or otherwise, with licensees or contractors under any of the conceptual approaches developed.

cc: Chairman Klein  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Jaczko  
Commissioner Lyons  
OGC  
CFO  
OCA  
OPA  
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)  
PDR