



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 15, 2008

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-08-0033

TITLE: APPROACHES FOR AN INTEGRATED DIGITAL  
INSTRUMENTATION AND CONTROL AND HUMAN-  
MACHINE INTERFACE TEST FACILITY IN THE UNITED  
STATES

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of May 15, 2008.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette L. Vietti-Cook".

Annette L. Vietti-Cook  
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Klein  
Commissioner Jaczko  
Commissioner Lyons  
Commissioner Svinicki  
OGC  
EDO  
PDR

VOTING SUMMARY - SECY-08-0033

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. KLEIN	X				X	4/30/08
COMR. JACZKO	X				X	5/1/08
COMR. LYONS	X				X	4/10/08
COMR. SVINICKI	X				X	5/8/08

COMMENT RESOLUTION

In their vote sheets, all Commissioners approved the staff's recommendation and provided some additional comments. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on May 15, 2008.

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: CHAIRMAN KLEIN  
SUBJECT: SECY-08-0033 – APPROACHES FOR AN  
INTEGRATED DIGITAL INSTRUMENTATION AND  
CONTROL AND HUMAN-MACHINE INTERFACE  
TEST FACILITY IN THE UNITED STATES

Approved xx Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: Below xx Attached \_\_\_ None \_\_\_

I appreciate the staff's efforts to solicit stakeholder input and analyze the options in response to the SRM on COMPBL-02-0001, and I agree with Commissioner Lyons' comments.



\_\_\_\_\_  
SIGNATURE

4/30/08

\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

**NOTATION VOTE**

**RESPONSE SHEET**

**TO:** Annette Vietti-Cook, Secretary  
**FROM:** COMMISSIONER JACZKO  
**SUBJECT:** SECY-08-0033 – APPROACHES FOR AN  
INTEGRATED DIGITAL INSTRUMENTATION AND  
CONTROL AND HUMAN-MACHINE INTERFACE  
TEST FACILITY IN THE UNITED STATES

Approved  X  Disapproved   Abstain

Not Participating

**COMMENTS:** Below   Attached  X  None

  
\_\_\_\_\_  
**SIGNATURE**

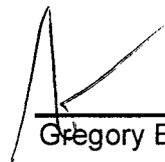
5/11/08  
\_\_\_\_\_  
**DATE**

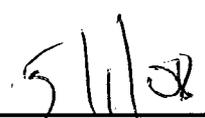
Entered on "STARS" Yes  X  No

**Commissioner Jaczko's Vote on SECY-08-0033  
Approaches for an Integrated Digital Instrumentation and Control and Human-  
Machine Interface Test Facility in the United States**

I support the staff's plans to manage digital instrumentation and control human machine interface using a NRC operated "hub and spoke" model.

Additionally, I would like to acknowledge Commissioner Lyons' dedication and leadership on digital systems issues. I also believe that the NRC should maintain independent assessment and evaluation capabilities of our employees and facilities to ensure we can adequately analyze the technical as well as policy aspects of this evolving technology. Similar to Commissioner Lyons' interests, I look forward to learning about the staff's plans to develop an NRC learning facility, especially in regards to simulators for new digital instrumentation and controls and new plant designs.

  
\_\_\_\_\_  
Gregory B. Jaczko

  
\_\_\_\_\_  
Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER LYONS  
SUBJECT: SECY-08-0033 – APPROACHES FOR AN  
INTEGRATED DIGITAL INSTRUMENTATION AND  
CONTROL AND HUMAN-MACHINE INTERFACE  
TEST FACILITY IN THE UNITED STATES

Approved X Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: Below \_\_\_\_\_ Attached X None \_\_\_\_\_



Peter B. Lyons

\_\_\_\_\_  
SIGNATURE

4/ 10 /08

\_\_\_\_\_  
DATE

Entered on "STARS" Yes X No \_\_\_\_\_

### Commissioner Lyons' Comments on SECY-08-0033

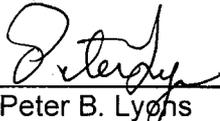
I approve the staff's recommendation for Option 1, the NRC Operated "Hub and Spoke" Model. I very much appreciate the staff's efforts in responding to the SRM on COMPBL-07-0001 by holding stakeholder workshops to explore options for a possible integrated research facility for digital instrumentation and controls (DI&Cs) and human-machine interfaces (HMIs). Although I am encouraged by the interest from some stakeholders in partnering with NRC on research in these areas, I am disappointed that none was interested in joint funding and support of an integrated research and test facility.

The extraordinary pace of technological development in digital systems and their application to nuclear power plant safety, control, and security systems will clearly continue into the future. Additionally, operational events involving digital systems continue to occur, indicating a need for ongoing improvement of NRC independent evaluation and assessment capabilities that keep pace with this advancing technology. Because of this and as I indicated in COMPBL-07-0001, I continue to believe that it is necessary to improve NRC's DI&C and HMI research and evaluation capability to maintain our future ability to independently evaluate the results of licensee, vendor, or applicant analyses during the licensing process, to establish sound technical licensing bases, to assess operating experience, to compete for skilled employees in a highly competitive job marketplace, and to train our NRC staff. A single integrated facility dedicated in whole or in part to all of these NRC needs would have been a highly effective and synergetic approach.

However, without funding partners and given the current NRC budgetary environment, I recognize that other alternatives are necessary, and I believe that Option 1 is the next best alternative. Regarding human capital concerns in this technical arena, I am exceedingly pleased with the staff's recent successes in hiring highly experienced new employees and with establishing a new NRC training course. It now remains for us to ensure that we develop a good track record in retaining such employees and providing a solid training pipeline in this technical area. I fully agree with the staff's comment that a lack of knowledgeable personnel in this area could delay realization of the full benefit of these technologies in the U.S. I further agree with workshop participants that the NRC can play a leadership role in workforce development activities within our regulatory purview. **Therefore, I believe that staff should ensure careful consideration is given to DI&C and HMI educational activities within our current Congressional mandate to dispense the funds provided to us for such purposes for as long as Congress sees fit to provide such funds.**

I am also pleased that another result from the workshops was the identification of the need to consider sustainability and obsolescence management of DI&C/HMI systems within our associated NRC Research Plan. **Staff should continue its outreach to stakeholders such as those invited to these workshops in its updates to the DI&C/HMI Research Plan.**

Finally, although Option 1 does not address the NRC's possible internal needs for a training facility, I understand from our recent Commission meeting that staff is actively engaged in formulating a plan, and I look forward to its results.

  
Peter B. Lyons      4/10/08  
Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER SVINICKI  
SUBJECT: SECY-08-0033 – APPROACHES FOR AN  
INTEGRATED DIGITAL INSTRUMENTATION AND  
CONTROL AND HUMAN-MACHINE INTERFACE  
TEST FACILITY IN THE UNITED STATES

Approved xx Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: Below \_\_\_ Attached xx None \_\_\_

  
\_\_\_\_\_  
SIGNATURE

5-8-08  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

**Commissioner Svinicki's Comments on SECY-08-0033**

I approve the staff's recommendation for option 1, the NRC-operated "hub and spoke" model.

As described in the paper, the current NRC approach to digital instrumentation and control (I&C) research is "to contract with a variety of national laboratories, universities, and international research facilities on a case-by-case basis." This is characterized as a piece-meal approach which has caused the NRC's regulatory framework to lag behind the state-of-the-art. The NRC-operated hub and spoke model (option 1) is described as something that will address the disadvantages of the current approach while providing some of the benefits of a single integrated facility.

Candidly, I don't find enough definition of this option in the paper to say definitively that this will be true. There are general statements about option 1 providing the ability to conduct multiple research projects under a common area of expertise instead of the current relationship between the NRC and specific research projects. There is also the promise of "increased logistics support from Headquarters." Advantages are described as better coordination and communication of activities but with minimal need for additional NRC staff resources and no change to existing NRC intra-office relationships. There is an air of the old management adage to "work smarter, not harder" about these statements which leaves me uneasy. I look forward to being corrected in this impression and learning how we will go about harvesting these benefits, over time. I also share staff's view regarding the drawbacks of options 2 and 3. Option 1 – for all its modesty – should at least provide some increment of progress over the current approach.

I join with Commissioner Lyons in urging that strong consideration be given to digital I&C and human-machine interface topics when dispensing current Congressional funds provided for education-related activities. Targeted investment of NRC educational funds in this area (both in fellowships and curriculum development) has the potential to yield substantial returns and should be a high priority. I also thank Commissioner Lyons for his significant investment of time and energy in the area of digital I&C. We are, collectively, the beneficiaries of his solid, good work here.

  
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Kristine L. Svinicki                      5/6/08  
Date