

July 29, 2005

MEMORANDUM TO: R. William Borchardt, Deputy Director  
Office of Nuclear Reactor Regulation

FROM: Bruce A. Boger, Director */RA/*  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE ANNUAL NRC/INPO COORDINATION MEETING  
ON TRAINING-RELATED ISSUES

On June 17, 2005, a periodic public NRC/Institute of Nuclear Power Operations (INPO) coordination meeting on training-related issues was held at INPO Headquarters, Marietta, Georgia. Such meetings are conducted in accordance with the NRC/INPO Memorandum of Agreement dated December 24, 1996. The purpose of the meeting was to discuss items of mutual interest concerning INPO's training program accreditation process. Participants included representatives of the NRC's Division of Inspection Program Management, NRC's regional offices, and INPO's Training and Accreditation Division. The list of meeting attendees is provided as Attachment 1. The meeting agenda is provided as Attachment 2. A summary of the discussions related to key agenda topics covered during the meeting follows.

### **Introduction and Opening Remarks**

The meeting was called to order at 8:00 a.m.

Phil McCullough (INPO) reviewed the agenda and changes to the National Nuclear Accrediting Board and the INPO organization. Mr. McCullough noted that Fred Tollison is now the Chairman of the Board and Jim Ellis is the President and CEO. Mr. McCullough also discussed the INPO business plan for 2006.

Dave Trimble (NRC) mentioned improvements INPO has caused in industry training and the challenges from competition, downsizing, management changes, and the aging workforce. Mr. Trimble further stated that these challenges will drive the need for INPO and NRC to work towards identifying precursors to declining human performance.

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### **New Reactor Licensing and Accreditation**

The discussion focused on what is expected or needed for licensing a new reactor with regard to training. Although still early in the process, the industry, INPO, and NRC need to work together to develop a training timeline. INPO's current plan is to treat new reactor licensees as an initial accreditation, regardless of the location of the facility. Experience gained during the initial accreditation of the Koeberg Power Station (Duynefontein, South Africa) in 2003 will be used for initial accreditation of new domestic reactor licensees. INPO agreed to contact NEI regarding a training development timeline and to contact NRC (Rick Pelton) to discuss future meetings on this topic.

### **Licensed Operator Eligibility**

NRC expressed concern that some direct senior reactor operator candidates appear to have knowledge weaknesses. NRC is also seeing an increase in the number of waiver requests for the six month onsite experience requirement. NRC reaffirmed through their legal counsel the requirement that shift technical advisors (on shift engineering expertise) shall possess a bachelor's degree in engineering or equivalent.

### **Simulator Fidelity and Testing**

Completed and planned activities relative to simulator fidelity were discussed. The NRC noted in several instances that simulator performance had misled operators. Also, some plants have not been able to locate their initial simulator validation documentation in order to confirm simulator capabilities. A meeting with INPO, NEI, and NRC officials was scheduled for July 11 and 12 in Washington, D.C., to discuss simulator scenario-based testing in preparation for a demonstration of simulator scenario based testing at the August Mid-Atlantic Nuclear Training Group meeting at Millstone Point Station.

Meeting participants agreed that the industry, INPO, and NRC need to continue to work together to determine acceptable simulator testing methodologies and the simulator test records needed to be retained.

### **Licensed Operator Requalification, Training, and Examination Issues and Resolution**

The NRC reported that requalification examination development findings have increased over the past three years. The NRC continues to see examples of low level job performance measures, easy written questions, lenient re-grading, and excessive repeat questions. There were 4 findings in 2002, 9 in 2003, and 24 in 2004.

The INPO Operator Training Improvement Action Plan (Action Plan), started in 2004, is nearing completion. As part of the Action Plan, a common cause analysis of several plant specific root cause analyses was conducted. Common causes were identified as:

- a lack of understanding of the systems approach to training process
- a lacking in the application of the systems approach to training process
- a lack of understanding of personnel performance and knowledge requirements

- deficient management oversight of training programs
- lack of rigor in self-assessments and corrective action programs

Actions taken as a result of the Action Plan include additional training for accreditation team members and managers, staffing accreditation teams with individuals that possess more operator training experience, development of a self assessment guideline, communicating the issue to the industry, i.e., attributes of well implemented training programs published and listing the challenges to training, developing self-assessment and key attributes documents for industry use, and analyzing the training needs of operator training supervisors. INPO currently has no plans to enhance the licensed operator requalification examination guidance; however, they may visit this area in the future.

### **Accreditation Update**

An update of the INPO operator training improvement initiative was provided.

### **Insights from Plant Events, Inspections, and Examination Reports**

A generic letter addressing the 2003 grid blackout event will be issued by NRC. Included in the generic letter will be training implications as a result of the event. NRC will review the knowledge and abilities catalog to determine if the addition of tasks associated with grid operations is appropriate. INPO has sent to the industry an addendum to SOER 99-1 that contains recommendations for improving initial and continuing operator training with respect to grid operation.

Meeting participants discussed the potential impact on staffing levels due to the implementation of the draft "fatigue rule." One utility projected that an increase in the number of instructors would be necessary due to the additional operators needed to comply with the rule. Additional information on the fatigue rule is posted on the NRC web site. Further review of this concern by industry and NRC is warranted.

### **Other Items of Mutual Interest Related to Training**

Bruce Boger provided positive feedback on the 2005 INPO Training Manager Workshop, based on his attendance at the workshop.

John Munro provided positive feedback on his observation of an operations accreditation team preparing for and conducting a visit to the McGuire plant.

The following were also discussed during the meeting:

- as reported in the Annual Report on the Effectiveness of Training in the Nuclear Industry for Calendar Year 2003, there is currently no direct correlation between human performance and plant performance. However, NRC said there appears to be a correlation between plants with significant human performance problems and weak training performance. In addition, there appears to be a loose correlation between insufficient management oversight and poor training.

- operator training throughput issues and data analysis
- the Accreditation withdrawal process relative to INPO membership
- Robert Meyer, representing the Professional Reactor Operator Society (PROS), expressed concern that standards for instructor training vary from utility to utility, there is a significant turnover at some sites, and that instructor resources may not be adequate. INPO commented that they are not seeing a reduction in the overall quality of training in the industry.

The meeting adjourned at 2:00 p.m.

Attachments: As stated

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- the Accreditation withdrawal process relative to INPO membership
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**ACCESSION #: ML052060232**

OFFICE	IOHS/IROB/DIPM	IOHS/IROB/DIPM	IROB/DIPM/NRR	D/DIPM/NRR
NAME	R Pelton	D Trimble	P Hiland	B Boger
DATE	7/25/05	7/25/05	7/27/05	7/29/05

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## **ATTENDEES**

### **INPO-NRC Coordination Meeting, June 17, 2005**

#### **Institute of Nuclear Power Operations**

Phil McCullough, Vice President, Training and Accreditation  
Kent Hamlin, Manager, Accreditation  
James Lynch, Manager, Industry Leadership and Development  
George Mortensen, Industry and External Relations  
Rick LaRhette, Accreditation Team Manager  
Tom Reeder, Team Manager  
Michael Marler, Accreditation Team Manager

#### **Nuclear Regulatory Commission**

Bruce Boger, Director, Division of Inspection Program Management, NRR  
Dave Trimble, Chief, Operator Licensing and Human Performance Section, NRR  
Fred Guenther, Senior Reactor Engineer, NRR  
John Munro, Senior Reactor Engineer, NRR  
Larry Vick, Reactor Engineer, NRR  
George Usova, Training and Assessment Specialist, NRR  
Richard Pelton, Training and Assessment Specialist, NRR  
Richard Conte, Chief, Operational Safety Branch, RI  
Jim Moorman, Chief, Operator Licensing Branch, RII  
Hironori Peterson, Chief, Operations Branch, RIII  
Anthony Gody, Chief, Operations Branch, RIV

#### **Other**

Pat Wiley, Palo Verde Nuclear Generating Station  
Steve Sewell, Comanche Peak Steam Electric Station  
Phil Polefrone, Comanche Peak Steam Electric Station  
Tommy Albright, Browns Ferry Nuclear Plant  
Robert Meyer, Professional Reactor Operator Society\*

\* Connected via telephone bridge

**AGENDA**  
**INPO-NRC Coordination Meeting**  
**June 17, 2005**  
**Room 206 A & B**

<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
8:00 AM	Introductions and opening remarks INPO CEO New Accrediting Board Members	P. McCullough
8:15 AM	New Reactor Licensing and Accreditation Expectations for accreditation of new reactors? What is the expected time line for accreditation? What type of assessments would INPO perform? What if the new reactor is built at an already accredited site?	NRC – D. Trimble INPO – K. Hamlin
9:00 AM	Licensed Operator Eligibility Degree equivalency for STA and instant SRO applicants	NRC – D. Trimble
9:30 AM	Simulator Fidelity and Testing Scenario Based Testing, Core Performance Testing	NRC – D. Trimble INPO – K. Hamlin
10:00 AM	Licensed Operator Requalification, Training and Examination Issues and Resolution Requal issues and related improvements Effectiveness of actions to enhance training performance. Training Department Staffing KA Catalog Update Post examination reviews	NRC – D. Trimble INPO – K. Hamlin
11:00 PM	Accreditation Update: Operations training improvement initiative status Self-assessment guide Warning flags Examination analysis results 2004 Training Weaknesses Letter INPO question bank changes	INPO – K. Hamlin
11:30 AM	WORKING LUNCH	
12:30 PM	Insights from Plant Events, Inspections, and Examination Reports  Do INPO training warning flags address safety culture attributes/elements? INPO Response to Industry Events	NRC
1:00 PM	Other Items of mutual interest related to training  INPO Training Manager Workshop Feedback NRC Feedback on accreditation process (McGuire Operations ATV)	NRC
2:00 PM	Closing Remarks	P. McCullough