

Charter of the Nondestructive Examination (NDE) Expert Panel

1.0 BACKGROUND

The NRC imposed the performance demonstration requirements of ASME Code, Section XI, Appendix VIII, when an updated Codes and Standards rule, Title 10 of the Code of Federal Regulations Part 50.55a (10 CFR 50.55a), was issued in 1999. These performance demonstration requirements for ultrasonic testing (UT) qualifications were developed in response to the poor performance of UT under the prior prescriptive framework of ASME Code, Section XI, requirements. Qualification of procedures, equipment and personnel in accordance with Appendix VIII requirements is performed through the nuclear industry's Performance Demonstration Initiative (PDI), administered by the Electric Power Research Institute (EPRI). PDI utilizes blind testing on representative mockups to qualify procedures, equipment and personnel, a costly and extensive process that does not readily lend itself to revisions and changes.

Industry events in recent years associated with Appendix VIII-qualified techniques have called into question a number of aspects of UT that may impact its effectiveness and reliability, as implemented in the field.

Some of the recent events have common or recurring NDE issues. This observation led to the idea of forming an expert panel to discuss the potential effect these issues may be having on NDE reliability and to consider improvements to address these issues and raise the level of confidence in NDE results.

2.0 OBJECTIVES

The objectives of the NDE expert panel are to:

- Review and assess the White Paper on Improving the Effectiveness and Reliability of NDE.
 - Assess the Summaries of NDE-related events presented in Section 2 of the white paper.
 - Is the information in these summaries sufficiently complete and accurate?
 - Are there other events that should be added?
 - Based upon the event summaries, assess the issues raised in Section 3 of the white paper, the Discussion section of the White Paper.
 - Have the correct issues been raised?
 - Are the suggestions for NDE improvements valid?
 - Are the suggestions for NDE improvements appropriately supported?
 - Should additional recommendations be considered in this context/White Paper?
- Make recommendations for improving the White Paper and its conclusions.
- With respect to enhancing the reliability and effectiveness of NDE, assess the importance of the NDE issues in Section 3 of the White Paper.

- Assess the applicability of probability of detection (POD) results from the existing body of studies or exercises to expectations for POD in the field for the types of examinations discussed in the White Paper.

3.0 GROUP INTERACTIONS

- The expert panel is intended to function in an informal manner. It is intended that most, if not all, meetings will be teleconferences.
- The frequency of panel meetings will be nominally once a month, and adjusted as needed.
- A small number of face-to-face meetings could be held if the panel members see the need for and agree to travel to a meeting destination; however, this is not anticipated.
- For the effective use of panel members' time, meetings will follow an agenda and take place within the time frame issued prior to each meeting. The agendas will be prepared with a view toward addressing the objectives outlined above. A meeting summary will be provided to panel members, generally within one week of the conclusion of each meeting.
- Industry and NRC representatives, who are not panel members, may be invited to participate in meetings to present information on specific topics.
- Between panel meetings, it is anticipated that active communication will take place via email. Such communication is intended to be in response to issues raised in meetings and actions panel members have agreed to undertake.
- It is intended that this expert panel will function for a time frame of up to approximately six months. The duration of the panel may be extended beyond this limited time frame, as agreed upon by the panel for the purpose of completing some well-defined task(s).
- The final product for the expert panel has not been agreed upon, at this time. The final product may consist of a summary of supported recommendations provided by each panel member. It is anticipated that the topic of a final product will be discussed in meetings later in the process.

4.0 EXPERT PANEL

We are very fortunate that most of the individuals that have been contacted agreed to serve on the panel. Members for the expert panel were sought who are recognized in the NDE field for their expertise. The goal was to assemble a balance of individuals from the US nuclear industry, with both power generation and regulatory backgrounds, as well as those who could bring experiences from outside the nuclear industry and an international perspective. The current panel members provide an extremely knowledgeable core of experts. Given the importance of the issues associated with the events summarized in the White Paper, we believe the assessment should begin as soon as feasible.

EPRI and NRC may nominate individuals to attend meetings primarily as observers. These individuals are highly knowledgeable and will provide valuable contributions. However, it is viewed that the panel will be able to function in a more objective and impartial manner if these high visibility EPRI and NRC personnel function primarily as observers rather than as panelists.

Observers will not be requested to provide final report input or recommendations at the conclusion of the activity.

The current Panel Members and Observers are as follows.

- Edmund Sullivan, PNNL, Facilitator
- Michael Anderson, PNNL, Member
- Doug Hansen, Arizona Public Service Company, Member
- Mark Lozev, Ph.D., BP Products North America, Inc., Member
- Clarisse Poidevin, Commissariat à l'énergie atomique (CEA), Member
- Ward Rummel, D&W Enterprises, LTD, Member
- William Prosser, NASA, Member
- Greg Selby, EPRI, Member and Industry Liaison
- Wallace Norris, NRC, RES Liaison

The NDE Expert Panel Members shall:

- Prepare for all meetings by reading the material provided in advance, and providing questions on critical issues in advance of the meetings, if possible, and during meetings.
- Attend and participate in meetings to the maximum extent practical.
- Respond to requests for information or assignments, if needed, within the time frames agreed upon at the conclusion of the meetings.