





## **Non-Destructive Testing Newsletter**

January 2003

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#### **Editors**

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## From the Chair...

# HAPPY HOLIDAYS!

As we near the close of another hectic year I would like to take this time to offer my sincerest thanks to the PRI Staff, the NDE Staff Engineers and Technical Assistants, and my fellow Task Group members for their diligence and hard work during this year. As we begin the expansion of the program into Europe and set our sights on Asia, as we incorporate the airframers into a major expansion of the NADCAP program, a lot of people have expended long hours and untold energy to make the program work. I want to acknowledge their efforts and let them know that they are appreciated.

## *eAuditNet*

For the last five years we have been gearing up for the advent of electronic auditing. And, for all the trials and tribulations of past efforts, eAuditNet has arrived. As of November 4, 2002, the NADCAP audits have gone "on-line". This is a dynamic program that will be improving as we go along and require all of us, staff, Task Groups, auditors and suppliers to learn and become comfortable with this new format.

To this end, it is imperative that suppliers provide as much of their responses as possible in an electronic format. Answers submitted in hard copy require scanning to make them available to the Task Group for electronic review. This requires a great deal of storage space, and makes for a very difficult review process. So, to make this new format as productive as we can, and to help realize some of the time saving benefits, we ask suppliers to utilize the electronic format when responding to NCR's, providing clarifications or supplying additional information. The Supplier Guide, accessible via the PRI WebPages offers valuable guidelines. For additional information please contact Mark Aubele maubele@sae.org, Keith Purnell kpurnell@sae.org, or Phil Ford pford@sae.org, the NDE Staff Engineers.

## "Global" NCR's

This is a topic that has found it's way into many previous issues, but recent evidence shows that it needs to be repeated.

In order to bring about changes that improve the way we do business, it is important that we implement corrective actions that encompass "global" improvements, not merely addressing lineitems. And, to further this cause, auditors need to be conscious of the need to identify systemic issues. For example, during the review of an FPI procedure, the auditor finds two or three occurrences where Prime requirements are not being correctly incorporated. The traditional process has the auditor writing an NCR for each of these examples and the supplier correcting each of these examples. In this scenario the supplier feels no need to go any further because the examples

cited by the auditor have been corrected. This puts the onus on the auditor to find and identify everything. The supplier feels no obligation to address anything except those specifics identified during the audit. In reality, the supplier is responsible for identifying the depth of the nonconformance and the scope of the corrective action. The NCR should be for a procedure that does not meet customer requirements. The supplier is then obliged to review all procedures to ensure that all customer requirements are implemented. By breaking the "Audit 101" paradigm and employing true Root Cause analysis and implementing systemic corrective actions we will begin to improve the quality of our business. This course of action will also go a long way toward rectifying a disturbing trend of suppliers undergoing their 3rd or 4th reaccreditation audit and having 10 or 12 NCR's.

## From The Task Group...

#### **Calibration Purchase Orders**

The NDT Task Group recommends that the following items, as a minimum, need to be included in the body of the purchase order (P.O.) which is to be issued to a calibration source:

- The required applicable calibration specification; e.g., ANSI/NCSL Z540-1
- The required calibration frequency
- The allowable tolerance for the item under calibration
- State the range of use for the item under calibration
- Statement requiring a calibration certificate be issued which states all of the above

#### **Calibration**

The NDT Task Group's position regarding the required number of calibration points used during metrological confirmation is based on a review of ISO 10012-1 and ANSI/NCSL Z540-1. Neither standard is specific as to a definitive number of points required, but rather require that the calibration procedures address the required range and tolerance or uncertainty of each item or unit

parameter being calibrated or verified. ANSI/NCSL Z540-1, Para. 10.2.a, requires that the procedures shall be consistent with the accuracy required, and with any standard specifications relevant to the calibration/verification concerned. The guidance given in association with ISO 10012-1, Para. 4.3, states that when dealing with commercial devices, it is usual to take the manufacturer's claimed performance as the criterion of satisfactory performance and accuracy. The guidance of the NDT Task Group is to consult with the applicable unit's manufacturer's instructions to ascertain specific recommended calibration instructions. This guidance shall be in addition to and not weaken or detract from customer contract requirements.

#### D. Scott Sullivan

NDT General Systems Method Chair NADCAP NDT Task Group

If you have any questions, contact david.s.sullivan@Rolls-Royce.com

## NADCAP QUARTERLY MEETINGS: WHY SHOULD MY COMPANY ATTEND?

#### A SUPPLIER'S PERSPECTIVE

By Steve Garner, Eaton Corporation, Aeroquip Fluid Conveyance

NADCAP accreditation is fast becoming a global requirement for all aerospace special processes. NADCAP/PRI conduct quarterly meetings to discuss business plans, technical issues, metrics, audit reports, etc. The NADCAP quarterly meeting provides an opportunity for primes, suppliers and PRI staff to collaborate to discuss issues relevant to the respective task group. The meetings are held at various locations around the United States and abroad, in an effort to accommodate everyone involved.

Typically the meetings are attended by a large majority of the primes, i.e., Boeing, GEAE, Pratt Whitney, Lockheed Martin, Hamilton Sundstrand, MTU, Raytheon, Vought, Sikorsky, Northrup Grumman, Honeywell, Cessna, Rolls Royce, etc. Unfortunately, the supplier attendance has

been negligible. Of the 26 attendees at the NDT Task Group October meeting, only 6 were supplier representatives. Of the 12 attendees at the Weld Task Group meeting only 2 were supplier representatives.

There are many advantages for supplier attendance at the NADCAP quarterly meetings, some of which are listed below:

- Provides an opportunity to meet face to face with your customers and PRI staff to build rapport and discuss issues specific to your process.
- Excellent forum to ask questions and get answers. Many of the industry experts are among the attendees.
- Show your commitment to the program and be a part of the solution.
- If you attend on a regular basis, you can become a supplier voting member, which gives your company a voice in all matters that come to a vote.
- Supplier committee meetings are held to provide a forum for suppliers to come together to discuss ways of improving the NADCAP/PRI audit and the quarterly meetings.
- The more suppliers in attendance, the more voices there are to be heard. Issues that suppliers are united on can more effectively be presented and qualified.
- Some of the more recent problems are presented and addressed. Items ingrained in confusion are clarified.
- There is a profusion of information that can be gathered during the meeting that will help you prepare for your next NADCAP audit. Any PRI finding avoided represents time, money and effort savings, not to mention an improved process.
- Checklists are revised at these meetings and suppliers have an opportunity to have input as to what goes into the checklist. You become intimately involved with the process outside of your audit.
- Participation in auditor interviews, in some task groups.

There are many compelling reasons for suppliers to attend the NADCAP quarterly meetings. Do your

company a favor and send a representative. The next meeting will be held at the Arlington Hilton, in Arlington, Texas in April 2003. Check the web site for further information (<a href="http://www.pri.sae.org">http://www.pri.sae.org</a>). Hope to see you there.

## <u>ATTENTION</u>

## NADCAP NDT SUPPLIER /NDT LABORATORY - ADVISORY

Effective Immediately - The NADCAP NDT Task Group has mandated the following process enhancement as it relates to the NADCAP NDT Audit scope.

When attempting to address the requirement to have the NADCAP NDT auditor witness the NDT Supplier/NDT Laboratory personnel processing parts for the applicable NDT method (Penetrant, Magnetic Particle, Radiographic & Ultrasonic Testing) only processing of aerospace parts will be acceptable. Preferably these parts will be parts from one or more of the aerospace primes subscribing to the NADCAP NDT Accreditation Program. It will be the NDT Supplier's/NDT Laboratory's responsibility to have these parts available during the NADCAP NDT audit. Also, if the NDT Supplier/NDT Laboratory does work for more than one of the aerospace primes subscribing to the NADCAP NDT Accreditation Program, a part from each aerospace prime will be made available. If a situation arises where there are no aerospace parts available during the audit, it will be the NDT Supplier's/NDT Laboratory's responsibility to schedule a follow-up audit with PRI at their expense to ensure compliance with this mandate.

## **Next Meeting**

The next NADCAP meeting is scheduled for **Arlington, Texas, April 14-16, 2003**. Please plan to join us in our endeavor to make this program as successful as it can be. This is your program, too!

For more information please reference the NADCAP homepage at

http://www.pri.sae.org/NADCAP