

Non-Destructive Testing Newsletter

June 2013

Issue Highlights

From the Chair	1
Nadcap Meeting Schedule	2
The New PRI Website	2
NDT Newsletter – Want to be on the Circulation?	2
Supplier Cycle Time	2
What is Supplier Cycle Time and What Does it Mean?	3
Supplier Update	3
CSR Perspective	4
Penetrant System Performance	4
Failure: Should not be your option	6
In Step with Dave Marcyjanik	7
Cycle Time in the Balance	8
Help Wanted	9
Subscriber Voting Member Representatives of the NDT Task Group	10
Supplier Voting Member Representatives of the NDT Task Group	12
PRI Staff Contact Details	12

From the Chair.....

Welcome to my first message as NDT Task Group Chair. It is a pleasure and privilege to follow in a great line of Chairs to open this newsletter – well, actually just one – Phil Keown! My main focus will be to support the continuance of the tremendous progress Phil and this Task Group achieved during his 16 year tenure.

Prior to writing this article, I decided to peruse some of the previous NDT Newsletters (all available on the PRI Website (under “About PRI” – “Key Documents”) starting with the inaugural edition in May 2001 to the last published edition in October 2012. There are a number of consistent themes down through the years which we must continue to address today, such as:

- Improve communication – one of the main reasons for having this newsletter;
- Improve performance of NDT Suppliers worldwide (note the articles in this issue on reduction of cycle times);
- Provide information to the wider NDT community of new NDT technologies; and
- Give Suppliers information that will help them to have a successful audit e.g., top ten issues, audit preparation, clarification database, etc.

Meanwhile the work of the NDT Task Group continues to grow. Once again we are scheduled to complete over 1,000 audits in 2013. We have introduced new method checklists for Eddy Current and Digital Detector Array Radiography, and work is continuing on others, e.g., UT of high energy rotating components and Computed Radiography.

The challenges will be great, but I believe we have a great team in NDT that will succeed. Already I can see we have an amazing group of Staff Engineers and CSRs, increasingly active Supplier involvement in the program, superb Subscriber representation and most importantly, a group of dedicated and professional Auditors.

As I visit my own company’s Suppliers, I can see the improvement that the Nadcap program has brought to them over recent years. However, whilst this is good progress, we cannot afford to stand still. We still have a large number of Suppliers that are eligible but cannot achieve merit. We need to further reduce the NCR count during audits, and if Suppliers are not willing to step up to the plate and improve, action must be taken. Effective and efficient NDT processing is essential to allow our businesses to thrive and succeed. I hope we can continue to use this newsletter to progress the aims and ideals that Phil Keown strived for over the years.

Please do not hesitate to contact me if you have any ideas or comments on the newsletter or the program in general. Your open and honest feedback is essential to improve this process.

I look forward to meeting and talking to you at an upcoming meeting. Have a safe and healthy summer!

Bobby Scott – NDT Task Group Chair



NDT Newsletter – Want to be on the Circulation?

The NDT newsletter is published periodically throughout the year. The newsletters are read by the subscribing Nadcap Subscribers, Suppliers, Auditors and anybody that happens to click on the latest NDT newsletter on the PRI website (www.pri-network.org). The aim of the newsletter is to communicate information relating to NDT within the Nadcap program to improve our process and to promote the sharing of best practices at all levels.

Have you stumbled across the NDT Newsletter by chance? Want to receive it on a regular basis? Keep up-to-date regarding the latest Nadcap NDT information by being added to the distribution list! To receive notification when a new edition has been published, please e-mail Rhonda Joseph at rjoseph@sae.org with your name, company and email address.

The PRI Website

As part of our international customer focus, PRI is pleased to share the news that our website www.pri-network.org is now available in nine languages. They are: English, French, German, Italian, Spanish, Chinese, Japanese, Russian and Brazilian Portuguese. In addition, the site has been reworked to make it more user-friendly and to ensure that the information provided adds value to our customers.

Of course, a website is always a work in progress and we welcome all feedback to make sure it continues to be a valuable tool for all Nadcap stakeholders. Please contact PRI at joanna.leigh@pri-europe.org.uk with any feedback.

The NDT newsletters can now be found <http://www.pri-network.org/about-pri/media-center/key-documents/>

Nadcap Meeting Schedule

2013	Location
June 3-7	Paris, France
October 21-25	Pittsburgh, Pennsylvania, USA
2014	Location
February 24-28	London, England
June 23-27	Dublin, Ireland
October 20-24	Pittsburgh, Pennsylvania, USA

Supplier Cycle Time

We are all aware that data is now more readily available due to the increased use of microprocessor based systems, the distribution of information via the internet, and storage of information. This information can be easily interpreted to provide us with facts and figures; quite often presented in a wonderfully graphical form. Nadcap has also benefited from this: gone are the days when Staff Engineers would receive reams of beautifully typed paper with a Supplier's response ready for the Staff Engineer to respond. With the introduction of eAuditNet all these responses are now transmitted and held in digital form. This digital form makes it is very easy to correlate data and find trends, patterns etc. The more the system has evolved, the more information becomes available that can be pulled from this digital data. This brings me onto the subject of this article "metrics" and cycle times; specifically, Supplier cycle time metrics.

These metrics are presented, by all commodities, to everyone who attends the Nadcap meetings and to the Board of Directors when they meet. Are you aware that these metrics are updated on a monthly basis and are available for review all year round? By going to eAuditNet and looking under Supplier Applications → Metrics you will have access to a host of data on all commodities, not just NDT. At the February 2013 meeting it was reported, by most commodities, that the Supplier cycle time was red (average cycle time > 110% of the goal and the goal is set at 25 days) for initial audits. Re-accreditation audits had some red and others yellow (average cycle time > goal and <= 110% of the goal and the goal is set at 25 days).

Staff Engineers and management have been aware of this trend for some time.

NDT, Electronics and Aerospace Quality Systems were coaxed by our Senior Program Manager to look into why the cycle times were high and what could be done to help bring that time down. Staff has been reviewing the process by looking at work from the past several years and comparing the practice with others. Some of the areas that they looked into included those who have a more efficient method of audit review, and the communication with the Supplier in eAuditNet. The NDT Staff and other groups have quarterly consistency meetings; these meeting have helped Staff improve their cycle times. The group is now looking to help improve Supplier cycle time overall. Staff Engineers believe that this process can be improved by placing more information into their first response back to the Supplier. This will help to cut down on the number of rounds of response and cut down on questions being asked close to the end of the cycle. If a Subscriber has made a comment in the ballot, Staff will send that comment to the Supplier before the ballot closes to get the required information. If it is a new NCR that has been raised, Staff will let the Supplier know so they can get their responses together before the audit is returned to their review.

As part of my task in the group I was requested to look at the different approaches that other commodities use to reduce their cycle times and whether they are worthwhile incorporating into our practices. During the review of the metrics it was noted that Supplier cycle times for initial audits show that all commodities have approximately the same number of average days, which is fairly constant over a five year period. However, NDT's maximum cycle times vary dramatically! It also showed that some commodities,

Continued on next page

specifically, Chemical Processing, are now showing a downward trend on the maximum cycle times. Why? The only real difference in the response is that as soon as the audit is submitted into the system by the Auditor, the CSR attaches two documents; one document that covers resources and the other a presentation on root cause analysis, which shows exactly what is required to address a Chemical Process finding. NDT Staff Engineers are now looking at generating a similar set of documents,

which they will post into the first open NCR in the audit report.

At the February 2013 meeting, Staff discussed the high cycle time with the NDT Subscribers, Suppliers and the Supplier Support Representative. Gary White stated he would discuss this topic with SSC. The cycle time was also discussed during the Planning and Ops meeting to see what the Nadcap Management Council could do.

So my question to you is, do you have any ideas or thoughts on what Staff could do to improve communication with you during the audit responses? We would like to be able to help you gain a better understanding of what is being asked of you during your response.

Please send your comment to me at phil.ford@pri-europe.org.uk and I will forward them to the group for discussion. Thank you!

Phil Ford, NDT Senior Staff Engineer

What is Supplier Cycle Time and What Does it Mean?

Supplier Cycle Time

Supplier Cycle Time is the total days a Supplier uses in order to close out an audit.

What does cycle time mean and why is it important?

Cycle time begins when your audit report is posted on eAuditNet. It is at this point that you're "on the clock", so to speak, for any non-conformances that require a response. The Supplier has 21 calendar days to post an initial response. After the initial response, subsequent responses are due within 7 calendar days.

Cycle time is important for several reasons:

1. Supplier merit could be affected.
 - Merit may be affected if a Supplier exceeds 14 cumulative late days for 18 month accreditation or 7 cumulative late days for 24 month accreditation (NOP-008). This scenario will have a direct cost impact on the organization if merit is lost due to excessive cycle time.
2. Audit failure mode "E" may be invoked
 - Audit failure may be invoked if a Supplier is non-responsive after 30 days of cumulative delinquency (NOP-011, Failure Mode "E"). This would be the worst case scenario for a Supplier – loss of accreditation.
3. The NDT Task Group tracks Supplier Cycle Time as one of its metrics.
 - Target Cycle Time for the NDT Task Group is 25 days (initial and reaccreditation audits). This is one of many metrics the Task Group tracks in an effort to improve the overall Nadcap system.

The best way to reduce or minimize cycle time is to be prepared for the audit from the start. Perform a pre-audit using the appropriate checklist prior to your actual audit. Identify any issues during the pre-audit and apply the appropriate corrective actions. This should minimize the amount of NCR's during the actual audit which, in turn, should minimize the cycle time due to less time being spent answering NCR's. If a response is required, do so in a timely manner. Issues need to be addressed as soon as possible. It's not a good idea to wait until the 20th day to send in your initial response. This only adds to the cycle time. With that being said, the responses need to be adequate enough to be effective so that the response is accepted the first time. If the response is not accepted the first time, it must go through another round of responses. This causes extra work for the Supplier (and Staff). Cycle time is extended due to subsequent rounds of responses.

After all, your time is valuable, being well prepared for the audit will help minimize cycle time.

Gary White – Orbit Industries, Inc.
Supplier Voting Member – NDT Task Group

Supplier Update

In an effort to keep Suppliers informed and up-to-date on various activities within the Supplier Support Committee (SSC), the following is a quick overview of what happens at a typical SSC meeting.

Report-outs are normally presented from various sub-committees that are of interest to Suppliers. Some examples of the report outs are:

- Metrics – The SSC captures and analyzes several metrics such as Supplier attendance, SSC Leadership Team attendance and Supplier voting percentages.
- Nadcap Management Council (NMC) – This involves the various activities the NMC is engaged in.
- Flow-Down – The status of customer flow down requirements to Suppliers.
- Mentoring – Information on what the program is about and how to obtain that information.
- Supplier Survey – Current action items, resolution to any closed action items and new survey details.

At many SSC meetings there may be a special theme for the meeting. This theme is normally a result of Supplier suggestions brought to the SSC Leadership Team. As an example, there was a Supplier Panel Discussion in Dallas (February 2013). This panel discussion was supported by Alcoa, and centered on Alcoa's Nadcap experience between their many business units.

The following was taken from the meeting minutes (unconfirmed) in Dallas:

Lloyd Barker Director Corporate Quality for Alcoa provided an overview of Alcoa site accreditations. He then introduced the panel of Alcoa representatives to field questions from the Suppliers.

Continued on next page

The questions addressed by the panel:

- 1) What would the perfect checklist look like?
 - Identified the Heat Treat Task Group methodology, including customer specific questions.
- 2) Many on merit with HT only on merit at 85% of their facilities, why?
 - Turnover and training.
- 3) How does Alcoa address the potential for inconsistent audits?
 - Set communication processes to share best practices and identify issues.
 - Some inconsistency that is mitigated by upfront preparation.
- 4) What can be done to improve flow down? Would you support standardized specifications?
 - Get involved with Specification writing committees.
 - Suppliers need to get information to SSC LT to pass on to Nadcap Board of Directors.
- 5) What do you think are the greatest challenges in the Aerospace industry, and what can be done to meet them?
 - Standardized specifications across a commodity.
 - Need to build skills.
 - More forums to share ideas.
- 6) What has been your experience with Nadcap Auditors?
 - Alcoa has had issues occasionally and has taken action to remove them, and has seen great response from PRI to correct them.
 - Working to improve the Auditor conference and consistency.

Attending the Supplier Support Committee meeting will help enhance the Nadcap experience in a positive way. Ideas, comments and questions are discussed among the Suppliers from all commodities to help make the Nadcap program beneficial to all.

Gary White – Orbit Industries, Inc.
Supplier Voting Member – NDT Task Group

CSR Perspective

An important part of the CSR role is to keep an eye on cycle time/response times between Supplier and Staff engineer, including Supplier cumulative delinquency. Upon audit submittal into eAuditNet, the Supplier has 21 days to make their first response. If subsequent rounds of responses are required, the Supplier will have 7 days to respond. It is important to understand that no extensions shall be granted for response due dates. Instead, eAuditNet tracks the number of cumulative late days when the Supplier is past due. The cumulative late days are available to cover holidays, sickness or any unforeseen circumstances in which the Supplier may be late in responding. Suppliers are allowed up to 30 cumulative late days over the course of the audit process. On the 31st late day, the audit will be balloted for failure. Of course, no one wants to see this happen.

As a result, the CSR's make weekly attempts, at a minimum, to contact Suppliers whose responses are past due. This is just a reminder call/e-mail for the Supplier and is also for any Suppliers that need help submitting their response. We do this as a courtesy to help those who may not fully understand the process

Penetrant System Performance

Carried out every day at every Penetrant Testing facility, you would think, by now, that this would be a routine check. However it is a perennial discussion topic at Task Group meetings and at Supplier and Primes facilities. So let's take a few moments to look at the expectation and the reasoning behind that expectation.

The intent of the check is to demonstrate the stability of the entire penetrant process. That is, to detect any change in performance that could affect everyday activity. So a baseline is set by processing the known defect standard - commonly a chromed panel with starburst cracks in the chrome. All new materials need to be used and processing should be carefully carried out in accordance with the everyday criteria. That is the penetrant application; dwell, removal and development need to be as the

or for those who may need additional assistance or simply a friendly reminder.

Although the cumulative late days are there for your use when required, it is important to remember that using an excessive number of late days can negatively impact Supplier merit, as described in NOP-008. For Suppliers attempting to achieve 18-month merit, no more than 14 cumulative late days can be used. Additionally, Suppliers who wish to achieve 24-month merit, no more than 7 cumulative late days can be used. This is why it is so important to respond in a timely manner and why CSR's try so hard to ensure Suppliers as well as our Staff engineers keep as close to the due dates as possible.

In addition, Suppliers are always welcome to be proactive. If there is a question on how to enter your response, how to complete the feedback questionnaire or questions on the delinquency process in general, please feel free to contact the NDT CSR's for assistance. rjoseph@sae.org

NDT CSR's

procedure dictates. The results of the test are then captured by photography.

To demonstrate continuing stable performance, the same known defect standard is processed each day and the results are compared with the photographic representation of the initial results. That is all there is to it!

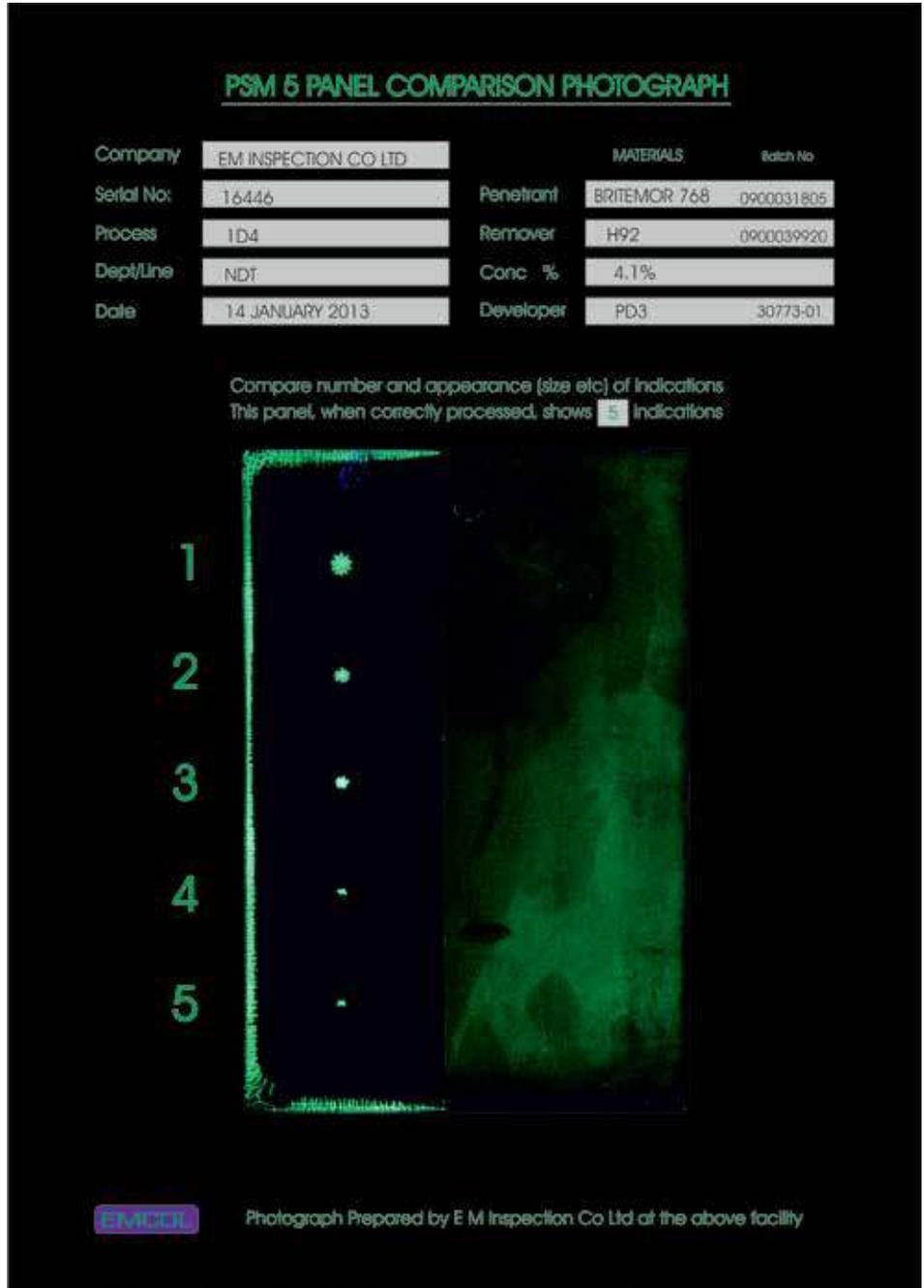
Why then does this check give so many problems? One example is applying extra restrictions on processing the known defect standard. There are those who believe that an exact penetrant contact time, remover time and development time must be specified rather than using the everyday parameters. If you wish to do that, and the parameters fall within the technique allowance that is acceptable but it is NOT a requirement. Just think logically for a moment. If you believe that it is necessary to be so precise in defining parameters for this work piece what are you telling us about

Continued on next page

production hardware? The indication size/detectability will vary according to which end of the allowable criteria are used? Similarly there are those who believe that if the known defect standard was initially processed on its own then it cannot be run with the first basket of everyday work. Not so! The same logic as before applies. Provided hardware is being processed in an acceptable way, the result should be the same whether the known defect standard is processed alone or with a batch of items.

Then there is the comparison process to consider. The expectation is that the photograph is as near "life size" as possible although it does not have to be exactly 1:1 and the quality of the photograph should be adequate for a proper comparison to be made. There is no need to go into the science of photography or to consider if image enhancement has been used since none of these issues matter. All that is important is that the photographic image looks like the real thing. It is of the utmost importance to ensure this by direct comparison at the time the baseline is set since otherwise the photograph will not be a true baseline! Once this has been established the everyday comparison should be a simple matter but do not forget it is not just the number of indications but the size and nature too that need comparing too. Don't worry if the photograph is not exactly the same color, sometimes the bright parts overexpose causing a more blue or white color. This is not a problem. Some photographs can be viewed under UV and if you wish to do this it is acceptable but it is not a requirement and in most cases the photograph is viewed under visible light and the panel under inspection conditions. It may be beneficial to carry out this process using a local white light source so that the comparison can be almost "side by side".

A good quality baseline photo, like the one shown, helps with the process. If you produce your own remember the size must be around 1:1, the quality must be suitable to make the required comparisons and also there is a requirement that the background does not interfere with the comparison process. So if there is a distracting white border around the working part of the photograph you may wish to cut it off or frame the photo to mask the border. However you produce the photo, take



a few moments and ask yourself "Does this photo really look like the results?" Is there anything interfering with the comparison? Is it easy to look and say "Good to go?"

There was never any intention to make this a complicated check - it should be able to simply demonstrate "business as usual"!

Andy Bakewell (SVM)
E M Inspection Co Ltd

Failure: Should not be your option

Periodically there is a set of circumstances that crop up which leave the NDT Task Group a little bit bewildered. Recently we have seen a significant number of Suppliers drifting towards audit failure. Nobody likes the idea of failure, especially the NDT Task Group, and we work hard to avoid Supplier failure. But there are times when we are left with no option but to ballot a Supplier for failure.

As a timely reminder, we would just like to take a few minutes of your time to explain, in simple terms, the failure mechanisms that are employed by PRI, and maybe try to help keep you from getting into a situation where you are faced with failure.

The types of, and mechanisms for, failure are found in NOP-011. This procedure can be located on www.eauditnet.com.

4.1 Audit Failure Mode “A” – Supplier Stops Audit or The Accreditation Process: Audit Failure in this case takes place when the Supplier, either by choice or by failure to meet the terms of an agreement, cancels an audit that is in progress that has just been completed or is in the accreditation process. An audit may be failed for any number of reasons including but not limited to; severity of Non-conformances (NCRs), number of NCRs, any violation of Supplier agreement, failure to pay the prescribed accreditation fee, etc.

We really hope you are not faced with this situation, because to be quite candid, we really cannot be of much help in many of these situations.

4.2 Audit Failure Mode “B” – Excessive Number of NCRs (Non-conformance Report): Audit Failure may take place when the Supplier has more major or total NCRs per audit day than the Task Group allows. (Trainees are not counted as Auditors in this calculation). Each Task Group shall determine the number of NCRs allowed per Auditor day (NAD). The allowance should be established based on a limit where 95% to 98% of Task Group audits have a NAD number below this limit. A Task Group may also define an upper limit (CAP) of NCRs regardless of the number of Auditor days. Appendix A contains the limits defined by each Task Group.

If you want to try to avoid mode ‘B’, we would suggest you perform a thorough, and we mean a really thorough, pre-audit

review. Don’t just grab a checklist and assume that you do what the question is asking; go and find the objective evidence. Make a note of it. For example; note the procedure or specification number where items are called out; make a note of the purchase order number; record where that requirement is found. Try to perform the pre-audit review like you had never seen your procedures or facility before.

4.3 Audit Failure Mode “C” – Severity of NCRs: Audit Failure in this case may take place when the Supplier has issues severe enough to warrant failure. Issues that could be considered for Mode C are:

- Potential or Actual Product Impact
- Gross Systems Breakdown
- Lack of Management Control
- Falsification of Documents

If you have performed your pre-audit properly, there should be no reason why you will fail by Mode “C”. During your pre-audit, not only will you ensure your paperwork system meets requirements, but you will have witnessed the technicians who are performing the compliance jobs working. No Auditor will expect Superman to be performing the inspection duties, but they will expect them to work to your procedures correctly.

4.4 Audit Failure Mode “D” – Too Many Review Cycles to Complete: Audit Failure in this case may take place when the Supplier exceeds four (4) review cycles. The Staff Engineer and Task Group Chairman must concur regarding responsibility for excessive cycles and that audit failure is warranted.

This is completely avoidable as there is plenty of training available to Suppliers who want to avoid this scenario - much of it is free. PRI provides guidance in Root Cause Corrective Action (RCCA) via eAuditNet – In the ‘Post Response’ of an NCR section you will find the following:

How to respond to an NCR. Additionally, a Root Cause Corrective Action tutorial is available at <http://www.pri-network.org/wp-content/uploads/2012/09/RCCANadcapStyle.pdf>.

The NDT group has in the past also

provided training for RCCA during the Supplier symposiums. We appreciate it is not always viable for Supplier representatives to attend the Nadcap meetings, so all our presentations are posted in the Public Documents section of eAuditNet. eQualLearn provides free training at all Nadcap meetings as well.

4.5 Audit Failure Mode “E” – Non-Responsiveness by Supplier: Audit Failure in this case may take place when the Supplier is non-responsive as identified below:

- After 30 days of Supplier Cumulative Delinquency (see NOP-001).
- The audit reaches 120 days elapsed time.
- The Supplier fails to provide a complete and thorough response within the defined deadline more than two (2) times during the audit review cycle.

Non-responsiveness is not a reason that any Supplier should ever be failed for. Even though this issue is unique to you, the Supplier, Staff spends an inordinate amount of time attempting to assure that no one fails for non-responsiveness. Emails are sent, calls are made and repeated attempts to contact you are recorded in the audit. The only bit of advice we can give here is; ensure that your contact details are correct and beyond that, answer your phone when we call.

NDT is fortunate in the fact that we do not have a lot of failures – we don’t like to see failure, why would we? As always, communication is vital. Remember, if you have any issue or need clarification for items, contact PRI Staff – we are here to help you through the process.

Andy Statham, NDT Senior Staff Engineer

In Step with Dave Marcyjanik

Hi my name is Dave Marcyjanik and I am the newest member of the NDT Staff Engineer Team.

I am a native of and currently reside in the North Hills of Pittsburgh. I began my career in NDT in 1977 at AW Beattie Technical Institute in Allison Park, PA. I attended a 2 year Nuclear Metallurgical Technology program where I studied NDT technologies MT, PT, UT, RT, ET, nuclear science, metallurgy, and metals machining and fabrication.

Immediately following training, I worked for Babcock and Wilcox Nuclear Equipment Division in Barberton, Ohio in their Trident nuclear submarine fabrication facility as a Level 2 for UT and Helium Leak inspection. Concurrently, I continued my education in NDT after enlisting in the Pennsylvania Air National Guard, and attending NDT training at Chanute AFB, IL. Following that training I served as an NDI inspector with the 112th Tactical Fighter Group. My duties involved the inspection of in-service aircraft components and major structural assemblies of A7 fighter aircraft in the following methods, MT, PT, UT, RT, ET and VT. Additionally, I managed the tri-state Joint Oil Analysis Program at the 112th, responsible for analysing aircraft engine oil to detect premature oil wetted system failure. During the same time frame, I also worked for National Inspection and Consultants in Coraopolis, PA, in their Nuclear In-Service-Inspection program as a Level 2 in UT, MT, and PT.

In 1984, I began a new career as a Federal employee with the 171st Air Refuelling Wing, also in Pittsburgh, and in 1993, became the NDI Lab Manager. My responsibilities included managing and training fulltime Federal technicians and Air National Guardsmen; all the while being responsible for the inspection workload of the KC-135 refuelling aircraft assigned to Pittsburgh, which was one of only three Air National Guard Super-Tanker units in the Air Force. I



recently hung up my hat and retired in December 2012 with over 32 years as an Air National Guardsman. Outside of my work, I enjoy spending time with my four children, astronomy, hunting and wine-making.

I look forward to meeting some of you at an upcoming meeting and being of service to you as a Nadcap NDT Staff Engineer.

Dave Marcyjanik, NDT Staff Engineer



Cycle Time in the Balance

The overall theme of this newsletter is cycle time and I am sure that there is a good chance that you either don't care much or are not sure of the dynamics of cycle time. We'll spend a few minutes on each of those.

First, why wouldn't you care? Cycle time from the Supplier's end has a dramatic effect on your audit accreditation and merit, i.e., the amount of time you get to keep us away until we darken your door again. In regards to accreditation, if you take too much time or are unresponsive your audit can literally be failed. Both Modes "D" and "E" are directly a function of time; that is, cycle time.

Mode "D" can occur if the audit takes too many cycles to close; "Audit Failure in this case may take place when the Supplier exceeds four (4) review cycles. The Staff Engineer and Task Group Chairman must concur regarding responsibility for excessive cycles and that audit failure is warranted." So simply put if we don't work together and get adequate responses posted your audit could be failed for "cycle time".

The other "cycle time" we mentioned was Mode "E". Mode "E" can occur if the audit takes too much time to close; "Audit Failure in this case may take place when the Supplier is non-responsive as identified below:

- After 30 days of Supplier Cumulative Delinquency (see NOP-001).
- The audit reaches 120 days elapsed time."

In other words, if you don't respond in a timely manner your audit could be failed for "cycle time".

Let us not forget that other dimension; merit. It is not only audit failure that we have to caution about. Merit could also be affected if too much time has transpired since your audit. Simply put, the number of delinquent days accumulate when you do not respond within guidelines; as these days accumulate you risk losing merit. 15 delinquent days and you can't be granted 18 months accreditation, 8 days and you will lose the opportunity to get 24 months merit.

Recently my group has spent considerable time looking at these issues with the intent of developing meaningful and common sense ways to reduce all aspects of cycle time. Reducing time is

fine but in keeping it all in balance, the key and most important issue that has to always be in the forefront is the technical adequacy of the audit and the review of the audit. We can never even appear to have compromised the technical adequacy of the Nadcap audit. Having said that, certainly there are ways we can work together to reduce this beast we call "cycle time". I will sum it all up; every way we can help and Suppliers can help with one word; communication.

We are striving in every communication (response) to you to be clearer, less ambiguous and more specific to what we are looking for. It should not be; "re-address root cause" rather it should be; "re-address root cause because you failed to address X-Y-Z". We should request an "approved copy of the procedure revision" so that we don't have to ask for the evidence of approval in another round.

You, the Supplier should be clearer in your responses to us. Don't be vague or avoid the real issue. Give it to us straight as that will almost always go over better. Don't restate the finding when addressing the root cause and don't tell us you have revised the procedure to address preventive action, these do not work and won't in the future.

What else can be done to achieve effective communication? Please ensure that your contact details in eAuditNet are accurate as we may be trying to contact you to clarify something or just remind you of a deadline, etc. Several audits over the years have come right down to the wire because we simply could not reach the Supplier and when we finally did, the contact details had changed some time before.

Although Staff is always available to help the occasional phone call from the supplier that says; "we would like to review all 9 NCR's in complete detail so you know what we plan to say on our first response". This does not work for us, it is time consuming and so many responses change from the phone call to print that it is almost funny. What we prefer is that you take that first stab and do your levelheaded best to put together a thorough response and we will work together from there. It should be made very clear that we love that phone call where we work out an issue, get it clarified and get a response posted that we then can accept with no further questions. So yes, Call, Call, Call, but only

after you have some idea of a direction and what the question actually is. How about the time that you have, 21 days on that first response? There seems to be a trend towards Suppliers not necessarily taking all 21 days. If you need it take it, it's your to utilize. But if you don't need 21 days, why waste the time? Taking all 21 doesn't add anything on the backend and doesn't give you more time for round two. Again, if you have a question on a specific issue that is holding you up, CALL.

So communication; in both directions, clear, concise and to the point helps us all reduce cycle time. This effort helps us all to provide an accreditation to deserving Suppliers in a timely manner. Thank you for reading this article, see you at the next meeting.

Mark Aubele

Senior Program Manager – NDT/M&I/
ETG/AQS

HELP WANTED

Ever dream of leading the exciting travel-filled life of a Nadcap NDT Auditor? Now is your opportunity to fulfill that dream. PRI is looking for Auditor candidates throughout the world, special emphasis in Northeast US, Europe, South-western US, North-western US, and Asia. See below for more details.

Overview:

Use your auditing and manufacturing/engineering skills by partnering with the Performance Review Institute, a not-for-profit trade organization that is committed to the continual improvement of quality in critical industries. The purpose of this independent contractor position is to conduct Nadcap Non Destructive Testing audits. With the audit results reported back to key global aerospace industry experts, who manage the Nadcap audit and accreditation process, this position plays an important role in risk mitigation, supply chain oversight and continual improvement within the aerospace industry. This varied and autonomous role would suit someone who has experience and/or qualifications in manufacturing/engineering and is looking for a new challenge.

Benefits:

As an independent contract Auditor, you will enjoy:

- Contributing to the continual improvement of non-destructive testing quality in the global aerospace industry
- Developing your own knowledge and skills by observing the many creative and innovative ways in which companies interpret and comply with customer requirements and industry specifications
- Staying on the cutting edge of technology by attending an annual Nadcap Auditor conference to hone your skills
- Managing your own schedule, choosing how often, when and where you conduct audits
- The opportunity to experience different cultures by auditing all over the world

- The security of having your schedule (and income) confirmed months in advance, while remaining independent, enabling you to organize other activities at your discretion
- Being associated with a respected, industry-managed organization with a history of commitment to quality excellence and an on-going dedication to the continual improvement of the aerospace supply chain

Responsibilities:

Being a Nadcap Auditor involves:

- Ensuring adequate pre-audit preparation including contacting the company ahead of time to arrange an audit timetable and reviewing documentation provided by the company
- Conducting the audit based on an industry-approved checklist including a review of the procedures, work instructions, training records and other documentation that evidences the competency of the company to meet customer requirements and observing real part processing through job audits to ensure that the documented requirements are properly flowed down to and implemented on the shop floor
- Holding regular meetings with the auditee during the audit for the purpose of transparency so that all parties understand the audit timetable and any findings identified
- Submitting an audit report to PRI Staff in which any audit findings are clearly and logically documented
- Representing PRI to our customers by acting professionally at all times
- Working collaboratively with PRI Staff and customers to organize audit schedules that meet the needs of all stakeholders
- Liaising with PRI's preferred travel agency to organize a cost-effective travel schedule

Qualifications:

To qualify to work as a Nadcap NDT Auditor, applicants must meet the following general requirements:

- Understanding of what it means to work as an independent contractor and willingness to engage with PRI in this capacity
- Commitment to preserving the integrity of the program, maintaining strict confidentiality, and to avoiding all conflicts of interest
- Expertise in one or more NDT technologies
- Willingness to travel and conduct audits
- Written and oral proficiency in the English language
- Strong interpersonal skills

The ideal candidate will possess most of the following criteria:

- Degree in Engineering, Science or a related field or equivalent experience
- Qualified to Level 3 (or equivalent) in at least 2 methods (UT, RT, PT, MT, ET, DDA, CR)
- Five (5) years technical experience in NDT
- An excellent understanding of the NDT industry standards, as they relate to Nadcap
- Strong Aerospace experience (including aerospace quality assurance systems)
- Auditing Experience (field or internal)

See why Nadcap has been attracting & retaining some of the best special process Auditor contractors in the industry! Apply on-line today, via our application website, www.eAuditStaff.com or contact Jennifer Eckels, Coordinator, Nadcap Auditor Staffing at "jeckels@sae.org" or +1-724-772-8579.

Jennifer Eckels, Nadcap Auditor Staffing Coordinator

Subscriber Voting Member Representatives of the NDT Task Group

Prime	Representative	Status	E-mail contact
309 th Maintenance Wing – Hill AFB	Timothy Doane	Subscriber Voting Member	timothy.doane@hill.af.mil
Airbus Chester, UK	Tony Warren	Secretary / Subscriber Voting Member	Tony.warren@airbus.com
Agustawestland	Luigi Merletti	Subscriber Voting Member	luigi.merletti@agustawestland.com
Avio	Massimo Colombo	Subscriber Voting Member	massimo.colombo@aviogroup.com
BAE Systems (Air Systems) Preston, UK	Chris Dootson	Subscriber Voting Member	chris.dootson@baesystems.com
Bell Helicopter Textron	Thomas Mike Guinn	Subscriber Voting Member	tguinn@bellhelicopter.textron.com
Bell Helicopter Textron Ft. Worth, Texas – USA	Ed Hohman	Subscriber Voting Member	ehohman@bellhelicopter.textron.com
The Boeing Company Mesa, Arizona – USA	Bob Reynolds	Subscriber Voting Member	bob.s.reynolds@boeing.com
The Boeing Company Seattle, Washington – USA	Peter Torelli	Subscriber Voting Member	peter.p.torelli@boeing.com
The Boeing Company Philadelphia, Pennsylvania – USA	Louis Truckley	Alternate Subscriber Voting Member	Louis.r.truckley@boeing.com
The Boeing Company Seattle, Washington – USA	Manuel Cabrera Jr.	Alternate Subscriber Voting Member	manuel.cabrera-jr@boeing.com
Bombardier Belfast, UK	Bobby Scott	Chairman / Subscriber Voting Member	bobby.scott@aero.bombardier.com
Cessna Aircraft Company Wichita, Kansas – USA	Greg Hall	Subscriber Voting Member	ghall2@cessna.textron.com
Cessna Aircraft Company Wichita, Kansas – USA	Michael Daehling	Alternate Subscriber Voting Member	medaehling@cessna.textron.com
COMAC	Jinqiu Zhou	Subscriber Voting Member	zhoujinqiu@comac.cc
GE Aviation Lynn, Massachusetts – USA	Phil Keown	Subscriber Voting Member	philip.keown@ae.ge.com
Eaton Aerospace	Steven Garner	Subscriber Voting Member	SteveWGarner@eaton.com
Eurocopter	Philippe Beck	Subscriber Voting Member	philippe.beck@eurocopter.com
General Dynamics Marion, Virginia – USA	Mitchell Birzer	Subscriber Voting Member	mbirzer@gdatp.com
GKN Aerospace Sweden AB	Terho Sulkupuro	Subscriber Voting Member	terho.sulkupuro@volvo.com
Goodrich Aerostructures Riverside, California – USA	Chuck Alvarez	Alternate Subscriber Voting Member	chuck.alvarez@goodrich.com
Goodrich Aerostructures Chula Vista, California – USA	Richard Costantino	Subscriber Voting Member	richard.costantino@goodrich.com
Goodrich Landing Gear Cleveland, Ohio – USA	Robert Rainone	Alternate Subscriber Voting Member	bob.rainone@goodrich.com
Hamilton Sundstrand Windsor Locks, Connecticut – USA	Michael Mitchell	Subscriber Voting Member	mike.mitchell@hs.utc.com
Hamilton Sundstrand Windsor Locks, Connecticut – USA	Scott Iby	Alternate Subscriber Voting Member	scott.iby@hs.utc.com
Hamilton Sundstrand Rockford, Illinois – USA	Roger Eckart	Alternate Subscriber Voting Member	roger.eckart@hs.utc.com
Hèroux Devtek, Inc. (Landing Gear Div) Longueuil, Quebec, Canada	Marc-Andre Lefebvre	Alternate Subscriber Voting Member	malefebvre@herouxdevtek.com
Hèroux Devtek, Inc. Kitchener, Ontario, Canada	Walter Tonizzo	Subscriber Voting Member	wtonizzo@herouxdevtek.com
Honeywell Aerospace Phoenix / Tempe, Arizona – USA	D. Scott Sullivan	Alternate Subscriber Voting Member	dscott.sullivan@honeywell.com

Continued from previous page

Prime	Representative	Status	E-mail contact
Honeywell Aerospace Phoenix, Arizona – USA	Robert Hogan	Subscriber Voting Member	robert.hogan@honeywell.com
Honeywell Aerospace Torrance, California – USA	Pat Thompson	Alternate Subscriber Voting Member	pat.thompson2@honeywell.com
Honeywell Aerospace China	Fangmei Chu	Alternate Subscriber Voting Member	fangmei.chu@honeywell.com
Honeywell Aerospace Phoenix, Arizona – USA	Steve McCool	Subscriber Voting Member	steve.mccool@honeywell.com
Israel Aerospace Industries	Uri Sol	Subscriber Voting Member	usol@iai.com.il
Israel Aerospace Industries	Victor Schonberger	Alternate Subscriber Voting Member	vschonberger@iai.co.il
Lockheed Martin Corporation	Luis Grijalva	Subscriber Voting Member	lou.grijalva@lmco.com
MTU Munich, Germany	Juergen Burchards	Subscriber Voting Member	juergen.burchards@mtu.de
MTU Munich, Germany	Dr. Hans-Hermann Kopp	Alternate Subscriber Voting Member	hans-hermann.kopp@mtu.de
Northrop Grumman Corporation Little Rock, California - USA	Stephen Bauer	Subscriber Voting Member	stephen.bauer@ngc.com
Parker Aerospace Fort Worth, Texas – USA	Dale Norwood	Subscriber Voting Member	dnorwood@parker.com
Parker Aerospace Moncks Corner, South Carolina – USA	Gary O’Neill	Alternate Subscriber Voting Member	goneill@parker.com
Pratt & Whitney UTC East Hartford, Connecticut – USA	David Royce	Vice Chairman / Subscriber Voting Member	david.royce@pw.utc.com
Pratt & Whitney UTC East Hartford, Connecticut – USA	Jim Fowler	Alternate Subscriber Voting Member	james.fowler@pw.utc.com
Raytheon Co Tucson, AZ – USA	Donald MacLean	Subscriber Voting Member	damaclean@raytheon.com
Rolls-Royce PLC Derby, UK	Chris Stevenson	Subscriber Voting Member	christopher.stevenson@rolls-royce.com
Rolls-Royce Corporation Indianapolis, Indiana – USA	Jim Graves	Alternate Subscriber Voting Member	james.e.graves@rolls-royce.com
SAFRAN Group France	Alain Bouchet	Subscriber Voting Member	alain.bouchet@snecma.fr
SAFRAN Group France	Dominique Tomasso	Alternate Subscriber Voting Member	dominique.tomasso@aircelle.com
Sikorsky Aircraft Stratford, Connecticut – USA	Mike Clark	Subscriber Voting Member	mdclark@sikorsky.com
Spirit AeroSystems Tulsa, Oklahoma, USA	Frank Whittaker	Alternate Subscriber Voting Member	frank.c.whittaker@spiraero.com
Spirit AeroSystems Wichita, Kansas – USA	David H. Vaughn	Subscriber Voting Member	david.h.vaughn@spiraero.com
Triumph Group, Inc., Inc. Dallas, Texas – USA	Sean Wood	Alternate Subscriber Voting Member	swood@triumphgroup.com

Supplier Voting Member Representatives of the NDT Task Group

Suppliers	Representative	Status	E-mail contact
AAA Plating & Inspection Inc.	Robert Custer	Supplier Voting Member	bob@aaaplating.com
Alcoa Howmet	William McKessy	Supplier Voting Member	bill.mckessy@alcoa.com
Alloy Processing Inc.	Jeff Jones	Supplier Voting Member	jjones@alloyprocessing.com
Arrow Gear Co.	Mike Kocka	Supplier Voting Member	mdkocka@arrowgear.com
Aubert & Duval	Claude Chambon	Supplier Voting Member	claudc.chambon@aubertduval.fr
Bohler Edelstahl GmbH & Co KG	Josef Maier	Supplier Voting Member	josef.maier@bohler-edelstahl.at
BYTEST	Mario Bianchi	Supplier Voting Member	bianchi@bytest.it
BYTEST	Massimo Capriolo	Alternate / Supplier Voting Member	capriolo@bytest.it
Composite Inspection Solutions	David Mitchell	Supplier Voting Member	david4ndt@gmail.com
E. M. Inspection	Andy Bakewell	Supplier Voting Member	andy.bakewell@emcol.co.uk
Exova	Martyn Bills	Alternate / Supplier Voting Member	martyn.bills@exova.com
Exova	Jonathan Pugh	Supplier Voting Member	jonathan.pugh@exova.com
FACC	Helmuth Hoeller	Supplier Voting Member	h.hoeller@facc.at
Hexcel Kent Kent, WA	Mike Ashton	Supplier Voting Member	mike.ashton@hexcel.com
Hi-Tech Metal Finishing	Guy Saenz	Supplier Voting Member	guy@hi-techmetalfinishing.com
Imagineering	Rob Yocum	Supplier Voting Member	ryocom@iftworldwide.com
James Fisher IMS Ltd	Paul Evans	Supplier Voting Member	paul.evans@ndt-inspection.co.uk
Jorgensen Forge	Steve Radelich	Supplier Voting Member	sradelich@jorgensenforge.com
LISI Aerospace	Richard Gasset	Supplier Voting Member	richard.gasset@lisi-aerospace.us
Mitchell Labs	David Gray	Supplier Voting Member	david.gray@mitchell-labs.com
New Hampshire Ball Bearings, Inc.	Richard King	Supplier Voting Member	rking@nhbb.com
Nu-Pro Limited	Patrick O'Leary	Supplier Voting Member	po'leary@nu-pro.com
Orbit Industries Inc.	Gary White	Supplier Voting Member	gwhite@orbitndt.com
PCC Structural	Chris Andersen	Supplier Voting Member	crandersen@pccstructurals.com
PCC Structural	Blair James O'Connell	Supplier Voting Member	boconnell@pccstructurals.com
Rexnord Industries	Michael Steele	Supplier Voting Member	michael.steele@rexnord.com
RTI	Dwayne Cooper	Supplier Voting Member	dcooper@rtintl.com
TEAM Industrial Services TCM Division	Cindy Roth	Supplier Voting Member	croth@teamindustrialservices.com
TurboCombustor Technology Inc	John Massie	Supplier Voting Member	jmassie@tct-inc.com
West Penn Non-Destructive Testing Inc.	N. David Campbell	Supplier Voting Member	ndcampbell@westpenntesting.com
West Penn Non-Destructive Testing Inc.	Mark Pompe	Alternate Supplier Voting Member	mpompe@westpenntesting.com
Wyman	Shawn Ballou	Supplier Voting Member	shawnballou@wyman.com
X-R-I Testing	Robert Henchar	Supplier Voting Member	bobh@xrayindustries.com

PRI Staff Contact Details

Name	Position	Location	e-mail Contact	Telephone
Amanda Bonar	Committee Service Representative	London, UK	amanda.bonar@pri-europe.org.uk	+44 (0) 207-034-1249
Rhonda Joseph	Senior Committee Service Representative	Warrendale, PA, USA	rjoseph@sae.org	+1 (724) 772-8644
Stacey McKinley	Committee Service Representative	Warrendale, PA, USA	smckinley@sae.org	+1 (724) 772-8566
Mark Aubele	Senior Program Manager - NDT, M&I, AQS and ETG	Warrendale, PA, USA	maubele@sae.org	+1 (724) 772-8654
Jim Bennett	Senior Staff Engineer	Warrendale, PA, USA	jbennett@sae.org	+1 (724) 772-8651
Phil Ford	Senior Staff Engineer	Wales, UK	phil.ford@pri-europe.org.uk	+44 (0) 144 322 5545
Mike Gutridge	Senior Staff Engineer(Lead)	Granville, Ohio, USA	mikeg@sae.org	+1 (740) 587-9841
Dave Marcyjanik	Staff Engineer	Warrendale, PA, USA	dmarcyjanik@sae.org	+1 (724) 772-7113
Andy Statham	Senior Staff Engineer	Derby, UK	andy.statham@pri-europe.org.uk	+44 (0) 133 286 9276