Nadcap Measurement & Inspection Newsletter

September 2015
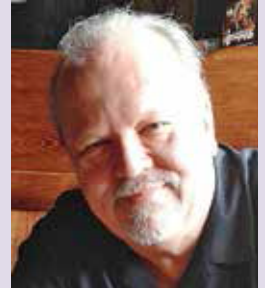
Issue Highlights

Editors

Jim Bennett

Simon Gough-Rundle

Norman Gross

Carol Martin

From the Vice Chair…

As Simon Gough Rundle, M&I Chair, was not in attendance at the Montreal meeting back in June, I offered to write the 'From the Chair' article (and called it 'From the Vice Chair') M&I newsletter article. For those of you that do not know me, I am Norm Gross from The Boeing Company and the M&I Task Group Vice Chair. My role at The Boeing Company is Enterprise Focal for Digital Product Definition (DPD) for Boeing Commercial Airplane (BCA). As DPD Focal for BCA, I write procedural requirements, provide training and guidance to other Boeing DPD Technical Representatives, as well as working with our supply base to assist them in becoming DPD approved. I'm also one of the team members within The Boeing Company working on the implementation of M&I accreditation in our DPD approved supply base.

Norm Gross

As you may or may not be aware, The Boeing Company, soon after the June meeting, issued a notification letter to their DPD approved Suppliers (approx. 850 tier one Suppliers) of Boeing's intention to require Nadcap M&I Accreditation in the near future. Without a doubt, this is a major accomplishment for the M&I Task Group, which had paused for a short period, waiting for a major mandate for Coordinate Measurement Systems (CMS). CMS applies to CMM, Laser Tracker and Articulating Arm inspections.

This number of accreditations for a new commodity group is unprecedented and a challenge for the Task Group who are responsible for checklist development / maintenance, granting / maintaining accreditations, hiring of Independent Contractors (Auditors), metrics, etc. To help support the accreditation process and maintain Boeing Companies DPD approval base, the mandate issued is being rolled out in four phases over a four year period. Notification to the phase 1 group (approx. 200 tier one Suppliers) will go out before this newsletter will go to print. Phase 2 will follow with approx. 300 suppliers, then phase 3 with approx. 250 suppliers and phase 4 with the remainder. Starting January 1st 2016, all Suppliers, newly approved to the Boeing DPD process, will be required to attain Nadcap M&I accreditation for their CMS equipment within 9 months of their DPD approval date. As more Subscribers mandate, this demand will increase, however, it is anticipated there will be some overlap with the Supplier base for other primes.

For companies not familiar with Nadcap, the thought of obtaining a new accreditation can be daunting. For this reason the Task Group has worked on ways to provide guidance. Initially, this began with the development of the Supplier Symposium that was held during the October 2014 meeting in Pittsburgh and has progressed with the M&I newsletter, containing articles that are relevant to new Suppliers to Nadcap and also existing ones. Please take the time to review such information. It is understood that there is a lot of material available, but appreciate

From the Chair... continued

that this has been put together for you. All information can be found on eAuditNet.

PRI Staff has also developed a welcome letter (for those contacting PRI directly), which I would like to share with you (later in the newsletter). This letter intends to notify where to obtain certain information (such as the checklists) and navigating accordingly on eAuditNet to the M&I folder. Please take some time to review.

If you have any questions regarding the Nadcap M&I program, please feel free to contact me, the Chair (Simon Gough Rundle), our PRI Staff Engineer (James Bennett) or our PRI

Committee Service Representative, Carol Martin. Contact details are towards the end of this newsletter.

One final note – you will see reference throughout all the media that is published for M&I, to PRI. PRI is the Performance Review Institute. PRI is responsible for administering the Nadcap Industry Managed Program. For more information about PRI, please take a look at their website at www.p-r-i.org

Norm Gross
M&I Vice Chair and The Boeing Company (Enterprise Focal for Digital Product Definition – Commercial Airplane)

M&I Newsletter – Want to be on the Circulation?

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

Have you stumbled across the M&I Newsletter by chance? Want to receive it on a regular basis? Keep up-to-date regarding the latest Nadcap M&I information by being added to the distribution list! To receive notification, when a new edition has been published, please contact PRI (contacts on the last page) with your name, company and email address.

Nadcap Meeting Schedule

Nadcap meetings take place three times a year in locations around the world and are open to all Nadcap stakeholders and interested parties. The table identifies the meeting dates and locations through 2016.

2015	
Oct 19 - 23	Pittsburgh, Pennsylvania, USA
2016	
Feb 22 - 26	Madrid, Spain
Jun 20 - 24	London, UK
Oct 24 - 28	Pittsburgh, Pennsylvania, USA

The October meeting is held annually in Pittsburgh, Pennsylvania, USA. The Saturday and Sunday prior to the Task Group meeting is comprised of an annual conference where all the Nadcap Auditors are updated on the program, policies, expectations and commodity (e.g. M&I) related issues.

The Task Group meetings are comprised of open and closed meetings. Open meetings are for all Nadcap stakeholders and interested parties when items of a confidential nature are not discussed. Some examples are checklist discussions, procedural requirements, technical clarifications not associated with an audit, metrics, general M&I information, etc. A closed meeting

is held for Nadcap Subscribers where confidential information is discussed, for example: mandate discussion / status, auditor issues, process escapes, supplier advisories, audit report packages, etc.

There are many advantages to participating in a Nadcap meeting, such as:

- Learning about and participating in Task Group activities, such as checklist development
- Attending Nadcap Management Council (NMC) and Supplier Support Committee (SSC) meetings to learn about current activities in the Nadcap community and sub team initiatives
- Networking with other delegates including Aerospace Prime Contractors, Suppliers and PRI Staff
- Benefiting from free eQuaLearn training such as Root Cause Corrective Action, How to Prepare for a Nadcap Audit, and Introduction to Pyrometry

If you are interested in attending the Nadcap Task Group meeting, please register at http://www.p-r-i.org/nadcap

And note also that there are no fees to attend the meetings.

James E. Bennett – Senior Staff Engineer M&I / NDT

Checklist Status, Flow and Applicability

To date, there are five checklists approved and released by the M&I Task Group:

AC7130 - Audit Criteria for the Measurement and Inspection Accreditation Program

AC7130/1 - Audit Criteria for Coordinate Measurement Machines (CMM)

AC7130/2 - Audit Criteria for Laser Trackers

AC7130/3 - Audit Criteria for Articulating Arms

AC7130/5 - Audit Criteria for Mass Airflow Measurement of Turbine Engine Parts

There is another checklist currently in the ballot process:

AC7130/0 - Audit Criteria for General Inspection

The Audit Criteria for General Inspection has been developed to verify a company's process of determining the correct inspection device to measure a feature. This checklist is expected to grow over time. While the checklist contains general information / questions about M&I, as customer requirements change to embrace new standards released, the checklist will likely include such requirements, over time.
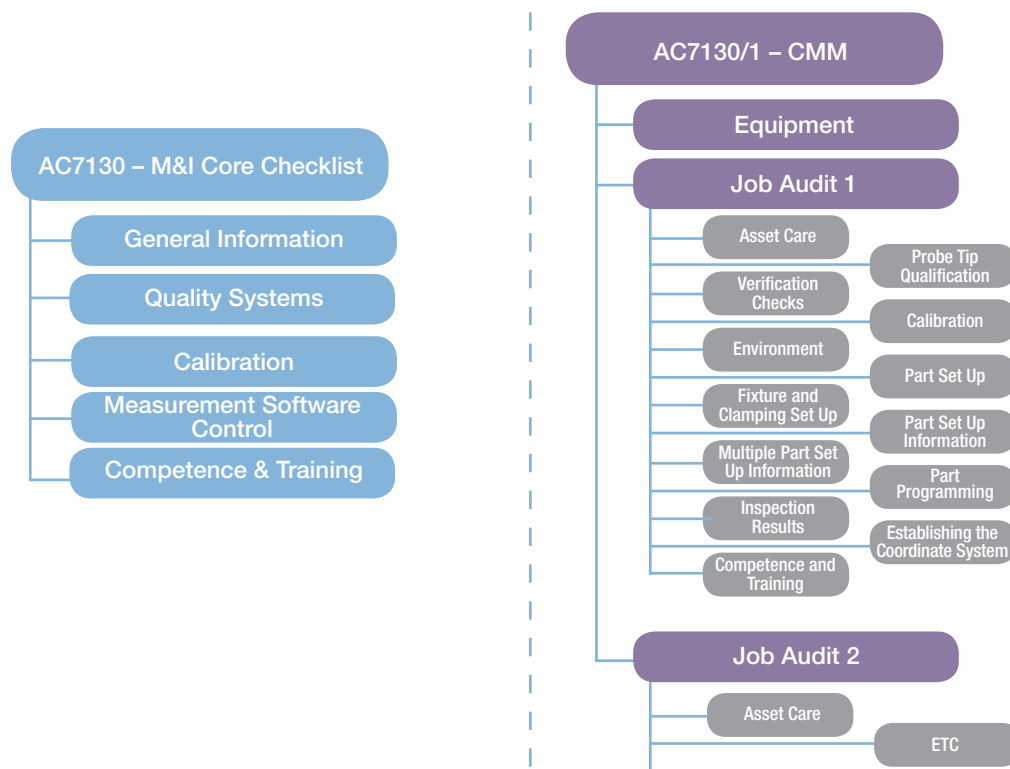
The checklist flow is shown below.

This layout is a result of the feedback from various training and test audits. That is not to say additional changes will be made in the future, however, they should not be as significant as the rev A changes.

A common question received from PRI is 'what checklists apply to me'. The answer is simple, but may require additional investigations with your customer. From a Nadcap perspective, no matter which 'slash' sheet or technology (AC7130/1/2/3/ etc) is assessed, AC7130 will ALWAYS apply. AC7130 is the core checklist and will be included in every audit. So which 'slash' sheet or technology applies? This is simply dependent on the mandate from the customer. PRI can provide an idea, however, the accreditation will depend on the mandate, so if you are at all unsure, contact your customer.

James E. Bennett – Senior Staff Engineer M&I / NDT

M&I - Accreditation Checklist Structure

Mandate Status – What's Happening?

As you have read from Norm's message earlier, The Boeing Company has notified their Supplier base of an upcoming mandate. During the meeting in Montreal, Canada, back in June, there was some indication that another Nadcap Subscriber may also issue a mandate. As of writing this article, there is no new information.

It is expected that, based on the Boeing mandate, there will be a number of audits required in 2016. As with any program, there is a tendency to hold off until the last possible moment to request and schedule an audit. This approach will create delays in scheduling your audit and quite possibly missing the deadline, therefore it is imperative to begin the process now and understand the expectations, how much it will cost, number of days auditing, preparation work, etc. Do not leave it too late.

As additional news becomes available, we will publish this information in the Newsletter.

James E. Bennett – Senior Staff Engineer M&I / NDT

Supplier Merit

A common question (actually two) asked by a newly accredited Supplier is "how long is the accreditation valid and when do I have to be audited next?" Once accredited, it is important not to forget it. Compliance to the checklist is required all the time and not just prior to and during the Nadcap audit. Accreditations should be treated like customer approvals. As I have mentioned before in previous Newsletters, it is imperative that the Nadcap checklist is embraced in the same manner as customer specifications in the document control system. Operators need to understand the requirements. The company needs to be vested in the Nadcap accreditation.

So with the above in mind, I will answer the 'two' questions:

Initial Accreditation is for 12 months and connected to an accreditation quarter. The accreditation quarters are broken down as follows:

Audits performed Dec, Jan, Feb - April Quarter

Audits performed Mar, Apr, May - July Quarter

Audits performed Jun, Jul, Aug - Oct Quarter

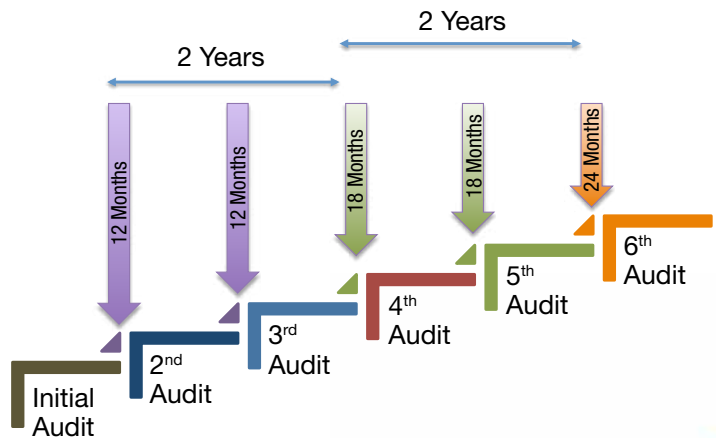Audits performed Sep, Oct, Nov - January Quarter

If your audit is performed in Mar 2016, your accreditation will expire the following year on Jul 31st, 2017.

If your audit is performed in Aug 2016, your accreditation will expire the following year on Oct 31st, 2017

If your audit is performed in Oct 2016, your accreditation will expire not the following year, but the year after that on Jan 31st, 2018 etc.

In theory, if your audit was performed Mar 1st – 3rd and there were no findings during the audit, then accreditation could be granted Mar 17th. That would mean accreditation would be a little longer than 12 months because the accreditation would expire July 31st. However, in order to maintain the accreditation, it is necessary to have a reaccreditation audit. As with an initial audit, whatever the accreditation quarter is will determine when the next audit needs to take place. If accreditation expires Jul 31st, 2017, then a reaccreditation must be performed during Mar, Apr or May. In essence, the accreditation time frame balances itself out.

Now that we have established the first re-accreditation audit time frame, what about the others? Do I need to be audited every 12 months? The answer is No. The Nadcap program recognizes that Suppliers mature as part of the continuous improvements made and a 'clean bill of health' should be rewarded. To that end, Nadcap has a process called the Supplier Merit program. Supplier Merit is controlled via the Nadcap Operating Procedure (OP) 1111. The merit program allows accreditations to go from 12 months to 18 months, then 18 months to 24 months. This is over a period of time and providing the criteria for merit has been met. Below is a diagram to help explain how the accreditation frequency works over a four year period.

Supplier Merit Criteria

	18 Months	24 Months
Number of audits	2nd Reaccred Audit	2 consecutive 18 month accreditations
No Non-Sustaining CA	Current and 1 previous audit	
No VCA Audits	Current and 1 previous audit	
No Product Escapes or Type P or C Supplier Advisories	Current and 1 previous audit	
Cumulative Supplier Delinquency	No more than 14 Days	No more than 7 Days
Number of Findings	No more than 50% of major NCRs and 60% of total NCRs per failure threshold	No Major Finding
Other	Any justifiable reason identified by Task Gro	

The vertical arrows identify the accreditation frequency granted once the audit has been closed out. On your third audit (which would take two years after initial accreditation), it is possible to achieve 18 month accreditation. On your fifth audit, it is possible to achieve 24 months accreditation.

In order to obtain the extended accreditation frequencies, there are criteria that must be satisfied. Obviously, from the diagram, time accredited is a factor. Other factors included in the criteria are the number of nonconformances, how many days it takes to close an audit, severity of nonconfromances, process escapes, etc. To help explain above is a table that shows the criteria.

Some of the terminologies maybe new from a Nadcap perspective, so below is a brief explanation:

Non-Sustaining CA or Non-Sustaining Corrective Action – This occurs if a nonconformance during the latest audit, is a repeat nonconformance to one that was issued during the last audit.

VCA Audits – Verification of Corrective Action (VCA) audits are performed if the Task Group requires an onsite verifi-

cation of the corrective actions taken in order to grant the accreditation.

Type P or C Supplier Advisories – Potential for Impact (P) or Confirmed Impact (C) Supplier Advisories issued. (Note: Supplier Advisories will be addressed in the next edition of the Newsletter).

Cumulative Late Days – This was discussed in the last edition of the M&I Newsletter (Audit Report / Accreditation Timelines).

Failure Threshold – Failure is not one of those words we use lightly in the program. As the M&I Task Group is new, we currently do not have a failure threshold number. It is planned to explain the failure process in the next edition of the Newsletter.

As with any of these articles, if you require further clarification, please contact me.

James E. Bennett – Senior Staff Engineer M&I / NDT

Welcome Letter

For those of you that have already contacted PRI about a Nadcap M&I Accreditation, you will have seen the text below. The text is taken from a standard letter that is sent out when we receive an email requesting additional information from the Measurement and Inspection Email Box (technical and not scheduling related). Please take a moment to review the text as it may prove beneficial for those that have additional questions or wish to know a little more. Our aim is to provide as much information as possible. While it can appear overwhelming, our goal is to communicate, communicate, and communicate! It is all about preparation, preparation and preparation!

Dear Supplier,

Thank you for your interest in the Nadcap Measurement and Inspection (M&I) accreditation. I would like to take this opportunity to welcome you to the Nadcap program and provide you with some information which will be useful when investigating the stages necessary to become Nadcap accredited.
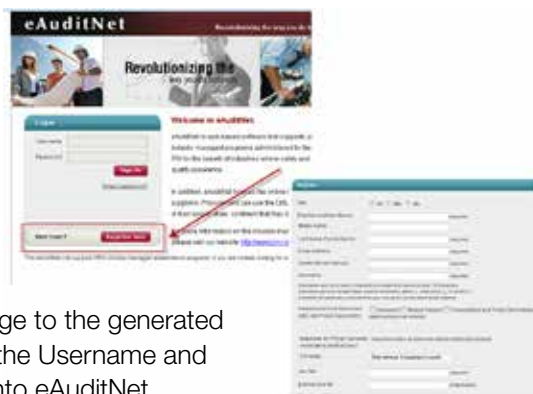
Firstly and most importantly it is necessary to visit www.eAuditNet.com and register. It's free to register and is the electronic system that houses all the information relating to the Nadcap program, specifically M&I. Follow the screen shots that identify the stages necessary to register.

After completing the registration process eAuditNet will send an e-mail providing a computer generated temporary password. The e-mail will instruct you to log back onto eAuditNet using the Username selected and the computer generated password. eAuditNet will prompt a change to the generated password to one of your own choosing. Please remember to write down the Username and password until memorized because you will need this every time to sign into eAuditNet.

Now log off of eAuditNet and sign back on using the User ID and password. On the top left side of the screen you will see a section titled: Resources. Under this heading please click on Documents then on Public Documents. Once this screen is opened please click on General Documents. Click on the document titled: Nadcap Supplier eAuditNet Reading List. Please print this document and when you have time read the items listed. Follow all onscreen instructions as applicable.

Once registered, you have access to the M&I folders that contain various presentations (Introductions, Symposia), newsletters, word documents of the checklists, audit handbook, top findings, etc. See below for screen shots.

The official 'pdf' checklists can be found in the checklist sections:

If you require additional information relating to the M&I Program, feel free to contact PRI Staff.

James E. Bennett – Senior Staff Engineer M&I / NDT

Scheduling Information

We are excited to announce the automation of the quotation process through www.eAuditNet.com.   While this process has become automated we are still available for guidance and to answer any of your questions. Please contact us at scheudling@p-r-i.org. Once your request for quotation has been requested and processed the information is saved to allow you easier completion of the audit creation process. Additional instructions can be found by logging on to eauditnet and going to resources / documents / public documents / general documents / how to request a Nadcap Quote New Supplier Registration.

Linda Novak – Manager, Auditor Planning & Scheduling

Previous Newsletter Articles

Periodically, a reference table is published that lists all the subject matters from the M&I Newsletters up to the latest issue. This can help provide useful articles from old Newsletters that still apply, but also a good way of letting new readers know whether a subject matter has been addressed already. If there is a topic that you don't see and would like to know more, please notify the author for consideration on future newsletters.

Below is a table of Articles that have been covered so far:

The newsletters can be found on the PRI website as follows: www.pri-network.org/ PRI / Media Center/ Key Documents

Title	Issue
Audit Preparation	March 2015
Audit Handbook	October 2014
Auditors	June 2014
Audit Report / Accreditation Timelines	May 2015
How to address Nadcap M&I Findings (nonconformances)	May 2015
Mandate Status	Most recent issue
Top Findings for M&I	October 2014
Voting Members	Most recent issue
What happens to the Audit Report from my recent Audit?	May 2015
What is M&I?	June 2014
Why M&I?	June 2014

M&I Task Group Leadership Contact Details

Name	Company	M&I Task Group Position	E-mail contact
Simon Gough-Rundle	Rolls-Royce	Chairperson	simon.gough-rundle@rolls-royce.com
Norm Gross	The Boeing Company	Vice Chairperson	norman.gross@boeing.com
Dave Michaud	Fountain Plating Co	Supplier Support Committee Member	davidm@fountain-plating.com

PRI Staff Contact Details

Name	Position	Location	E-mail contact	Telephone
Jim Bennett	Senior Staff Engineer	Warrendale, PA, USA	jbennett@p-r-i.org	+1 (724) 772 8651
Carol Martin	Commodity Service Representative	Warrendale, PA, USA	cmartin@p-r-i.org	+1 (724) 772 7527

P151255