**CONFIRMED MINUTES**

**OCTOBER 25, 2016**

**PITTSBURGH, PENNSYLVANIA, USA**

**These minutes are not final until confirmed by the Task Group in writing or by vote at a subsequent meeting. Information herein does not constitute a communication or recommendation from the Task Group and shall not be considered as such by any agency.**

**TUESDAY, 25-OCT-16**

# OPENING COMMENTS

## 

## Call to Order / Quorum Check

The Composites (COMP) Task Group (TG) was called to order at 8:00 a.m., 25-Oct-2016.

A quorum was established with the following representatives in attendance:

***Subscriber Members/Participants Present (\* Indicates Voting Member)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | NAME |  | COMPANY NAME |  |
|  |  |  |  |  |
|  | Jason | Adams | Lockheed Martin |  |
|  | Pongpaiboon | Akapaiboon | Triumph Structures (Thailand) Ltd. |  |
| \* | Douglas | Armstrong | GE Aviation |  |
| \* | Randy | Armstrong | Raytheon Company |  |
|  | Marcus | Berry | Hill AFB |  |
| \* | Pam | Blevins | General Dynamics |  |
| \* | Tawny | Blumenshine | Cessna Aircraft Company |  |
| \* | Ping | Chen | COMAC |  |
| \* | James | Cobb | Honeywell Aerospace |  |
| \* | Adam | Dalesandro | Boeing |  |
|  | Bob | Dawson | Honeywell Aerospace |  |
|  | Joseph | DeVirgilio | Boeing |  |
|  | Kevin | Dowling | Spirit AeroSystems |  |
| \* | Patrick | Dunleavy | SAFRAN |  |
| \* | Javier | Garcia-Baeza | Airbus |  |
|  | Veronica | Guerrero | Boeing |  |
| \* | Brett | Hemingway | BAE SYSTEMS, MAI |  |
|  | John | Hrycushko | Bell Helicopter |  |
|  | John | Key | Bell Helicopter | Secretary |
|  | Slade | Knightly | US Air Force |  |
| \* | Ronald | Kramer | Gulfstream Aerospace Corporation |  |
| \* | Lance | Loeks | The Boeing Company |  |
| \* | Andreas | Mastorakis | GE Aviation |  |
| \* | Angelina | Mendoza | UTC Aerospace (Goodrich) |  |
| \* | Larry | Olsen | Northrop Grumman |  |
|  | Ashley | O'Shea | The Boeing Company |  |
|  | Scott | Palmer | Rolls-Royce Corporation |  |
| \* | Richard | Perrett | GKN Aerospace Filton | Vice Chairperson |
|  | Pat | Phelan | UTC Aerospace (Goodrich) |  |
| \* | Minh | Quan | Triumph |  |
| \* | Jefferson | Silva | Embraer |  |
| \* | Mario | Simard | Bombardier |  |
|  | Ross | Smelser | General Dynamics |  |
|  | Richard | Sovich | UTC Aerospace (Goodrich) |  |
| \* | Sally | Spindor | Triumph Group |  |
| \* | Konstantina | Stefanidou | Honeywell Aerospace |  |

***Other Members/Participants Present (\* Indicates Voting Member)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | NAME |  | COMPANY NAME |  |
|  |  |  |  |  |
|  | Scott | Bartell | Lee Aerospace |  |
| \* | Kevin | Brennan | Swift Engineering Inc. |  |
| \* | Gordon | Cameron | LMI Aerospace Everett - Merrill Creek |  |
|  | Hugh | Casper | MTS Systems |  |
|  | Charles | Clinton | Meggitt, San Diego Inc. |  |
|  | Dale | Collins | Hexcel Kent |  |
|  | Craig | Dugan | Burnham Composite Structures, Inc. |  |
|  | Patrick | Durkin | TE Wire & Cable |  |
|  | Bruce | Fuhrmann | Meggitt Polymers & Composites - Kentucky | |
| \* | Mike | Guthmiller | Applied Aerospace Structures Corp. |  |
|  | Debra | Hagar | NORDAM Interiors and Structures |  |
|  | Lisa | Hill | Stelia North America |  |
|  | Tommy | Howland | Lee Aerospace, Inc. |  |
|  | Kaleb | Huskey | Danner Corporation |  |
|  | Douglas | Jacques | Renegade Materials Corporation |  |
| \* | Hubert | Kern | FACC |  |
|  | Ken | Kim | Park Electrochemical |  |
|  | Cory | Klohe | Cytec Solvay Group |  |
|  | James | Krone | Park Aerospace Technologies Corp. |  |
| \* | Tommie | Lakes | GKN Aerospace |  |
| \* | Sue | Lauer | GKN Aerospace |  |
| \* | Breton | Lutz | DuPont de Nemours and Company |  |
|  | Dave | Mason | ASC Process Systems |  |
|  | Rupam | Modi | Honeycomb company of America, Inc. |  |
|  | Rozalia | Papp | Air Liquide US LP |  |
|  | Martyn | Perks | Tods Aerospace (Trading as AGC Aerocomposites) | |
|  | Rick | Price | Composites Horizons Inc. |  |
|  | Perin | Price | UTC, UTAS Goodrich |  |
| \* | Karen | Quinn | Orbital ATK |  |
|  | Scott | Ruffner | Danner Corporation |  |
|  | Bruce | Sauer | Exova |  |
| \* | Tammi | Schubert | Helicomb Intl. Inc. |  |
| \* | Vitorio | Stana | Avcorp |  |
| \* | Rhonda | Sutter | Composiflex |  |
|  | Kevin | Vaughan | DuPont |  |
|  | Jeff | Viney | Cincinnati Testing Laboratories |  |
|  | Dawn | Wade | Lee Aerospace, Inc. |  |
| \* | Jim | Weishampel | DuPont de Nemours and Company |  |
|  | Daniel | Wienecke | Nordam Repair Division |  |
|  | Tim | Willyard | NORDAM Repair Division |  |

***PRI Staff Present***

|  |  |
| --- | --- |
| John | Tibma |

## Review Safety Information

## Review Code of Ethics and Meeting Conduct

## Present Antitrust Video

## Acceptance of Meeting Minutes

Motion made by Randy Armstrong (GE Aviation) and seconded by Angelina Mendoza (UTAS Goodrich) to approve the open & closed meeting minutes from the June 2016 Nadcap Meeting. Motion passed.

## Review Membership Status

Companies Missing 3 Consecutive Meetings

* Israel Aerospace Industries, Herman Leibovich.

Acting Chairperson Richard Perrett gave his concurrence to keep Herman Leibovich on the active roster for the COMP Task Group

Companies Missing 2 Consecutive Votes on a Letter Ballot

* Airbus, Javier Garcia-Baeza
* Embraer, Jefferson Silva
* Russell Plastics Technology, Dorota Stankiewicz

Acting Chairperson Richard Perrett gave his concurrence to keep the three individuals noted above on the active roster for the COMP Task Group

## Review Agenda

# comp staff report – OPEN



John Tibma is currently supporting 100% of COMP audit review in a Delegated Mode.

Harry Coffee Consultant Reviewer has resigned his position

Rick Sovich resigned as a Nadcap Trainee Auditor.

Keith Panuska has completed his training audits and is now a full auditor for COMP and AC 7122-P.

Jeff Bue has completed a T1 Training audit and will complete his training soon.

John Tibma presented our COMP Auditor Status listing all the current auditors approved to perform audits for Nadcap

John Tibma presented the top ten nonconformance (NCRs) for 2015 and the trend from 2014 that were noted in all COMP Nadcap audits.

Red Metric Review

John Tibma presented the statistics of our Task Group in a report out to the Nadcap Management Committee (NMC). The Task Group is YELLOW on one statistic, which is the percentage of suppliers that are on merit. Our Task Group currently only has 78% of our supply base on some type of merit, but one of the explanations for this issue is the number of Supplier Advisories that the Task Group issues, which is the most of all Nadcap Task Groups. Our Task Group is 100% in issuing On-time Certification. Our Task Group Cycle Time is Green and the certificates are issued on an average of 39 days. The COMP Task Group is not required to provide any corrective action since there are no red metrics.

Audit Statistical Summary

We are projecting 214 COMP audits this year (102 – Americas, 68 – Europe, 44 – Asia)

We are currently at 224 COMP audits this year (97 – Americas, 77 – Europe, 50 – Asia)

We are currently running at 105% of plan.

2016 Auditors Conference Report Out

The following topics were covered during the Auditor Conference that was present during the weekend before the October 2016 Nadcap Meeting.

* Audit Best Practices
* Voided NCR Review
* Job Audit Selection/Order of Precedence
* TC Dampening (new Handbook Clarification)
* Audit Effectiveness
* Automated Cure Inspection Software Validation
* Auditor Face to Face Feedback

Future Meetings Information

Feb 2017 – New Orleans, Louisiana (20 – 23 February)

Jun 2017 – Berlin, Germany (05 – 08 June)

Oct 2017 – Pittsburgh, Pennsylvania (23 – 27 October)

# comp supplier support committee (ssc) report – OPEN

# 

Vitorio Stana of Avcorp Industries, Supplier Support Committee Task Group Representative, gave an overview of the non-technical answers and support that is available to the suppliers in aiding them with the Nadcap process and the role of the Supplier Support Committee.

# autoclave control systems & automated inspection – OPEN



Dave Mason gave a presentation concerning the Autoclave and Oven Software that is Composite Process Control (CPC).

Mr. Mason then reviewed questions that were submitted by the Task Group prior to this meeting. Subjects included erratic thermocouples, revision controls, software lock-out, editing privileges, Software Manufacturer updates and revisions, other parameter validation (Autoclave zoning and TC/probe location, etc.

# kitting only scope of accreditation – OPEN



Lance Loeks (Boeing) presented the kit cutting limited scope information and recommendations.

Targeted suppliers for this new scope (Kitting Service Provider, KSP) would be:

- Cut raw material into plies

- Assimilate plies into kits

The proposal is to add new SCOPES to AC/AH7118 of KSP which will mean Kitting Service Provider. The Audit checklist would be leveraged since the auditors are fully trained and would only increase the number of job audits.

Section 4, 5, 6 and 8 would apply to KSP providers.

We would have job audits that would be the common requirements (11), Receiving (12a and b), Manual Pattern Cutting and Kitting (14a and c) and Automated Pattern Cutting and Kitting (14b and d)

Lance presented the additional questions for KSP within 14a,b,c,d.3 which applies to KSP.

We will need to modify PAR Scope for those who receive the kits from a KSP which would be new job audits 12i – Receiving Kites and 12j – Receiving Layup. Lance showed the questions that would be placed within the new job audits.

Change to allow the section NA for 14a if you are receiving all kits from a KSP.

The subteam added question to 12i concerning preservation of samples of the material being kitted.

Proposed two new Questions:

Are tested samples provided from KSP s stored in accordance with the raw material requirements until ready for test panel/specimen preparation?

Are test samples labeled and traceable (such as to raw material purchase order, raw material supplier, batch, lot and

The subteam added questions to Section 16 to address Kit Cutting Replacement material when the material is only available at the KSP or a plan for replacing material at the source of use. To get this information, we should reference Question 16e.3.3 or 16f.2.25 as examples of applicable verbiage.

Proposed two new Questions:

16a/d.x If the prepreg or adhesive material is identified to contain defects such as resin rich/resin starved areas, cuts and wrinkles – is rework or replacement materials been completed as per customer requirements (such as splicing in new material)?

16a/d.y If replacement materials is added to the existing kit, is the traceability included with the part’s documentation and has the part’s outtime/cure-by date been adjusted (as required)?

ACTION ITEM: PRI will implement the KSP scope as proposed in presentation 5.0 in AC7118 Rev E (31-Jan-2016)

# aerospace quality systems (AQs) representative report out – OPEN

Delayed until Thursday during the NMMM/NMMT meeting, after the AQS meeting

# Environmentally Monitored Areas (ema) cleaning auditors handbook guidance – OPEN



This is the presentation that addresses Action Item 196.

This is split into two presentation to divide the two issues.

Kevin Dowling presented the Handbook Separation for the CCA. To do this, Question 6.2.1 and 6.3.1 is proposed to be revised to remove the EMA statements within these questions. See attached file for the changes.

Table 1 was not revised since it has requirements for both CCA and EMA.

Proposed adding a question:

AH 7118 D Para. 6.2.11 - Are processes or operations which produce contaminants prohibited in the CCA? (i.e., aerosols, dust, oil fumes, polluting type vehicles, hand creams, release agents, silicones, eating or drinking, and smoking).

Kevin Dowling then presented the Handbook Separation for the EMA. To do this, Question 6.3.1 would be revised as follows and revised with sections removed from 6.2.1. See attached file for changes:

Revise all CCA information from 6.3.1. The Subteam removed items in the checklist that cross-referenced between EMA and CCA.

Part 2 of this Action Item was for the Cleaning Requirements within the EMA and the CCA to be split and defined better. Guidance was from Item 9.1 from the last meeting and revise paragraph 6.2.13 handbook clarification.

The Subteam added the two points within the current Handbook Clarification for this question. See the presentation above. They removed the reference for sweeping in the Handbook, and added reference back to the correct paragraph. Paragraph 6.3.4 was revised to include new guidelines for the EMA areas. (FOD and clearly dirty areas)

ACTION ITEM: PRI to implement the proposed AH7118 Rev D handbook as proposed in presentations 7.0 & 7.1 (Due Date: 31-Dec-2016)

# potential new ac7118 questions – OPEN



Action Item 228

Subteam to investigate new areas for audit questions per presentation 17.0

Lance presented the history of this request to created “deep dive” questions within the AC7118 Checklist. The priority was listed as: Equipment Verification and Calibration, Change Management and Operator Self Verification. Boundaries were to not increase the costs of the audit to the suppliers, and utilize memorandum of Understanding with other Nadcap Task Groups if there is any overlap or new items within these other Task Groups.

The approach used by the subteam was to evaluate if non-value job audits exist and replace them with new job audits, flexible job audits, or a combination of the two options. The auditors were consulted for their input and the following were brought forward: Which sections could be eliminated or have the focus reduced and not affect the quality of the audit (fewer receiving job audits or rotate through the material classes), which questions could be eliminated (not enough to make up the time to allow additional job audits, and other ideas (consider adding a day to the audit if we wanted to add more job audits since most audits are 3 days with a few at 4 and few would move into a second week.

A comment was raised concerning the use of the job tracker, and Mr. Tibma proceeded to explain and show how the job tracker will work.

What time line to we want to follow and which approach do we want to take? The Task Group discussed this issue at length to determine that we want to take the Flexible Audit approach and review audit criteria for Automated Ply Cutters and Laser Projection Ply Machines

In February 2017, the subteam will create an implementation strategy overview and then review audit criteria for Automated Fiber Placement/Automated Tape Laying.

In June 2017, the subteam will review audit criteria for Digital Product Definition and First Article Inspection.

In October 2017, the subteam will review audit criteria for Operator Self-Verification and then begin the document revisions for general instructions, glossary of terms, Job Audit matrix and job audit forms.

In February 2018, the Audit Checklist and Handbooks would be revised and the document revisions for:

OP 1114 Appendix COMP/NMMM/NMMT

Composites Survey Preliminary Questionnaire (s-frm-15)

Nadcap Audit Grading Criteria Guidelines (s-frm-16)

Questionnaire for Potential Composite Auditors (a-frm-04 COMP)

In June 2018, the subteam will review the resolution of comments and balloting of the AC 7118.

In October 2018, the subteam will do the final resolution of comments and auditor awareness/training and distribute final AC7118 ballot.

In February 2019, AC 7118 revision would be released with the applicable Nadcap forms and OP 1114 appendix. A WebEx communication and begin an implementation period.

In October 2019, this issue would be added to the Auditor Conference Training and a Supplier Symposium would be given.

In fourth Quarter of 2019, the new AC 7118 would become effective and the new audits would begin.

ACTION ITEM: John Tibma to present to SE SWAT the concept of flexible job audits based on merit status (Due Date: 31-Dec-2016)

Lance Loeks presented some proposed questions for some General questions for Laser Ply Projection Machine and Automated Ply Cutters. Then he presented the list of questions for each of these processes specifically. The Task Group made comments and modified some of the wording, but the base of the proposal was agreeable.

ACTION ITEM: PRI (John Tibma) to send spreadsheet for Item 8.1 to all Voting Members for comment, and place comment resolution on the conference schedule for the February 2017 Nadcap Meeting in New Orleans, Louisiana. (Due Date: 31-Dec-2016)

# open discussion – OPEN



**Topic 1: Inspection Software Quality Assurance**

**Is question 4.3.1 – Are document procedures established to control and maintain the software (including firmware) used in the automated design, inspection, tests or manufacture of products? - specific enough after review the ASC presentation?**

**In light of the ASC presentation, do we need to provide handbook guidance in regards to expectations for SQA in regards to automated cure cycle inspection, FOD detection, ply location, etc…?**

The Task Group discussed this issue, and determined that we need more specific questions and better handbook clarification to support the validation of the software.

We don’t want to drive our auditors to try and validate spread sheets and control cards, but at least we have acceptance and security features with the Quality Card software process. Should it address the release and maintenance of the software?? The Task Group concurs in principal.

ACTION ITEM: Subteam to develop Handbook Clarification for AC7118 question 4.3.1 for validation of Autoclave inspection software, inspection spread sheets, and other product acceptance equipment, and determine if additional questions are necessary. Report out in New Orleans, Louisiana February 2017 Nadcap Meeting. Team to consist of: Lance Loeks (Lead) – Boeing, Kevin Dowling – Spirit Aerosystems, Angelina Mendoza – UTC Aerospace, Konstantina Stefanidou – Honeywell Aerospace, Gordon Cameron – LMI Aerospace, Doug Armstrong – GE Aviation, Dave Mason – ASC Process Systems. (Due Date: 31-Dec-2017)

**Topic 2:**

**Currently there are no questions in AC7118 Section 9 (Trimming and Drilling), or Section 22 (Machining, Trimming, Drilling) concerning the use of the proper cutter type or grit size of dressing medium.**

**Currently, auditors write this up as work instructions are lacking sufficient detail. Do we need a specific question in Section 22a, 22b or Section 9?**

After Task Group discussion, expectations are that it should be documented within the work plan and a question should be created.

ACTION ITEM: PRI (John Tibma) and Brett Hemingway (BAE Systems) will develop additional AC 7118 Checklist question or AH7118 Handbook clarification to address media grit, cutting tool type or edge dressing processes in Section 9 and Section 22 respectively and present at February 2017 Nadcap Meeting. (Due Date: 31-Jan-2017)

**Topic 3:**

**AC7118-P paragraph 16.1 states – Is invalidation of test results authorized by the material specification, or other contractual document?**

During the Auditor Conference the topic came up that this question is unclear, and either needs revision or a handbook clarification, specifically, when does a re-test require authorization? Examples include dropped specimens lead to damage or if an assignable cause is identified.

Andreas Mastorakis stated that there is specimen replacement and specimen retest. Specimen replacement is when there is assignable cause to a bad specimen and does not need authorization. A specimen re-test is when you fail a specimen, and the authorization document allows to you test additional specimens from the same panels to revalidate the testing results.

The Task Group agrees we need handbook clarification for this issue.

ACTION ITEM: PRI (John Tibma) to add handbook clarification for invalidation of test results for AH7122-P, question 16.1 from AH7118, question10.1.13. (Due Date: 31-Jan-2017)

ACTION ITEM: PRI (John Tibma) to add definition in AH7118 glossary and AH7122 glossary for Replacement Testing and Retesting as supplied by Andreas Mastorakis (GE Aviation). (Due Date: 31-Jan-2017)

**Topic #4:**

**During the Auditors Conference, the topic of silicone contamination arose and was detrimental to the process. Should we add a question to AC7118 asking if the supplier is processing silicone?**

Andreas Mastorakis once to add this question, then if yes, add a series of other questions concerning the control and validation of the silicone captures.

Motion made by Andreas Mastorakis (GE Aviation) and seconded by John Key (Bell Helicopter) to add questions concerning companies that are processing silicones within the same facility as they are processing other composites materials. The motion was put to a vote: 20 Green (Yea), 1 Yellow (Waive), 0 Red (Nay) - Motion passed.

ACTION ITEM: Subteam to be created to develop checklist questions to address situations where silicones are processed in the same facility as composites are fabricated. Report out in the February 2017 Nadcap Meeting. The team consists of the following: Andreas Mastorakis – GE Aviation (Lead), Tammy Schubert – Helicomb International Inc., Scott Palmer – Rolls Royce, Bruce Fuhrmann – Meggitt Polymers and Composites, Doug Armstrong – GE Aviaiton, Konstantina Stephanidou – Honeywell Aerospace. (Due Date: 28-Feb-2017)

# meeting close out – OPEN

The following requests for additions or changes to voting membership were received and confirmed by the Task Group Chairperson pending verification of PD 1100 requirements:

* Subscriber Voting Member: UVM
* Supplier Voting Member: SVM
* Alternate: ALT
* Task Group Chairperson: CHR
* Vice Chairperson: VCH
* Secretary: SEC

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **First Name** | **Surname** | **Company** | **Position:**  **(new / updated role)** | **Meetings Attended (Month/Year)** | |
| Jason | Adams | Lockheed Martin | UVM | 06/2016 | 10/2016 |
| Marcus | Berry | Hill AFB | UVM | 10/2015 | 10/2016 |
| John | Hrycushko | Bell Helicopter | ALT UVM | 06/2016 | 10/2016 |
| Pat | Phelan | UTC Aerospace (Goodrich) | ALT UVM | 06/2016 | 10/2016 |
| Rick | Price | Composites Horizons | SVM | 10/2015 | 10/2016 |

**The Vice Chairperson of the Task Group approved the list of new voting members standing in for the Chairperson which was not available for the meeting.**

* + Review Action Items
  + Agenda Topics for the February 2017 Nadcap Meeting in New Orleans, Louisiana
* Mode B Failure Criteria Review
* Subscriber SAP Business Objects Training (Closed Meeting)
* Unfinished new business from October, Items 4 & 6
* Per RAIL
* Final Comments

Motion to Close

ADJOURNMENT – 25-Oct-2016 – Meeting was adjourned at 4:40 p.m.

Minutes Prepared by: John Key, jkey2@bh.com

|  |  |  |
| --- | --- | --- |
| \*\*\*\*\* For PRI Staff use only: \*\*\*\*\*\*  Are procedural/form changes required based on changes/actions approved during this meeting? (select one)  YES\*  NO  \*If yes, the following information is required: | | |
| Documents requiring revision: | Who is responsible: | Due date: |
| AC7118 Checklist and Auditor Handbook | John Tibma | 31-Jan-2017 |
|  |  |  |