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.

WEDNESDAY, 11-SEP-2019 & FRIDAY, 13-SEP-2019

1.0 OPENING COMMENTS – OPEN/CLOSED

1.1 Call to Order/Verbal Quorum Check – OPEN/CLOSED

The Fluid Distribution System (FLU) Task Group was called to order at 9:00 a.m., 11-Sept-2019.

It was verified that only SUBSCRIBER MEMBERS and invited guests were in attendance during the closed portion of the meeting.

A quorum was established with the following representatives in attendance:

**Subscriber Participants Present (\* Indicates Voting Member, \** Indicates Alternate Voting Member)**

<table>
<thead>
<tr>
<th>NAME</th>
<th>COMPANY NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe</td>
<td>Bebey The Boeing Company</td>
</tr>
<tr>
<td>Logan</td>
<td>Doster GE Aviation</td>
</tr>
<tr>
<td>Ben</td>
<td>Hedges Bell Helicopter Textron</td>
</tr>
<tr>
<td>Eric</td>
<td>Herbay Airbus</td>
</tr>
<tr>
<td>Christopher</td>
<td>Melfi The Boeing Company</td>
</tr>
<tr>
<td>Ulrich</td>
<td>Mueller Airbus Commercial Aircraft</td>
</tr>
<tr>
<td>Ashley</td>
<td>Noyd Lockheed Martin Aero</td>
</tr>
<tr>
<td>Pedro</td>
<td>Perez GE Aviation</td>
</tr>
<tr>
<td>Denis</td>
<td>Sindewinge SAFRAN</td>
</tr>
<tr>
<td>Dan</td>
<td>Smith GE Aviation</td>
</tr>
<tr>
<td>Stacy</td>
<td>Warsett The Boeing Company</td>
</tr>
</tbody>
</table>

**Other Participants Present (\* Indicates Voting Member, \** Indicates Alternate Voting Member)**

<table>
<thead>
<tr>
<th>NAME</th>
<th>COMPANY NAME</th>
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<tbody>
<tr>
<td>Maria-Olivia</td>
<td>Adapon Incotec</td>
</tr>
<tr>
<td>Philip</td>
<td>Addgrley Fine Tubes Ltd</td>
</tr>
<tr>
<td>John</td>
<td>Bluford B&amp;E Mlg</td>
</tr>
<tr>
<td>Chuck</td>
<td>Brannon SAE</td>
</tr>
<tr>
<td>Clifton</td>
<td>Breay Eaton</td>
</tr>
<tr>
<td>John</td>
<td>Brittain Eaton Coporation</td>
</tr>
<tr>
<td>Owe</td>
<td>Carlsson Arconic</td>
</tr>
<tr>
<td>Nicholas</td>
<td>Carter Pacmet Aerospace</td>
</tr>
<tr>
<td>Mike</td>
<td>Clemente Smiths Tubular Systems - Laconia</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Berncan Airforce Research Lab WPAFB</td>
</tr>
<tr>
<td>Cynthia</td>
<td>Ewitz Boeing Distribution Services Inc</td>
</tr>
<tr>
<td>Jared</td>
<td>Hibbison NAVAIR</td>
</tr>
<tr>
<td>Steve</td>
<td>Hudlet Jetseal</td>
</tr>
<tr>
<td>Dave</td>
<td>Janes Pacmet Aerospace</td>
</tr>
<tr>
<td>Gary</td>
<td>Jenski Eaton</td>
</tr>
<tr>
<td>Julianne</td>
<td>Klug JPB Systems</td>
</tr>
</tbody>
</table>
1.2 Safety Information – OPEN/CLOSED

Fire exits were reviewed. It was noted to inform PRI Staff of any emergencies.

1.3 Review Code of Ethics (Ref: Attendees’ Guide) And Meeting Conduct – OPEN/CLOSED

The Nadcap code of ethics was reviewed.

1.4 Present the Antitrust Video (Only @ the First Open and First Closed Meeting of the Week for Each Task Group) – OPEN/CLOSED

The antitrust video was reviewed.

1.5 Review Agenda – OPEN/CLOSED

The agenda for the September 2019 meeting was reviewed and no additional topics were added.

1.6 Acceptance of Meeting Minutes – OPEN

Motion made by M. Paveglio and seconded by A. Mau to approve the March 2019 minutes as written. Motion Passed Unanimously.
2.0 AUDITS – CLOSED
Audits in Staff Engineer, Auditee, and Task Group Review were discussed.
A list of currently scheduled audits was also reviewed.
One problem audit was discussed, where the production line was shut down and the audit had to be rescheduled.

3.0 AUDITORS – CLOSED
Auditor performance and consistency data, including the standard data set, were reviewed. No auditors stood out as requiring additional action.
OP 1117 Auditor Consistency requirements were reviewed. Two new FLU Auditors require observation. Two audits were identified where Task Group members were available to observe the identified Auditors. K. Purnell will see if the audits can be reassigned to the new auditors.
No Auditor Conference Confidential Topics were discussed.

**ACTION ITEM: K. Purnell to reschedule auditors on two audits for observation purposes if possible. (Due Date: 4-Oct-2019)**

4.0 STAFF ENGINEER DELEGATION – CLOSED
Task Group oversight of Audit Report Reviewers was reviewed. Delegated reviewer K. Purnell met the requirements of having at least 10% of NCRs reviewed by the Task Group Subscriber Voting Members with over 90% concurrence; he reviewed more than 10 audits over the last three review periods. Delegation is maintained.
Non-delegated reviewer J. Lewis is having 100% of his NCRs reviewed by the FLU TG Subscriber Voting Members. No audits were reviewed during this period.
Non-Delegated reviewer Al Baer is having 100% of his NCRs reviewed by the FLU TG Subscriber Voting Members. Al Baer has reviewed more than 15 audits and has maintained 100% concurrence which exceeds the FLU TG requirements for being a delegated Audit Report Reviewer.
Motion made by S. Warsett and seconded by D. Smith to delegate Al Baer as a Fluid Distribution Systems Audit Report Reviewer. Motion Passed Unanimously.

**ACTION ITEM: K. Purnell to complete a t-frm-99 to document Al Baer’s Audit Report Reviewer Delegation. (Due Date: 30-Oct-2019)**

5.0 SUPPLIER CHANGE NOTIFICATION – CLOSED
Change notifications since the last meeting were reviewed and no additional discussion was required.

6.0 CLOSED MEETING ISSUES – CLOSED
The s-frm-14 Fluid Distribution Systems Preliminary Questionnaire was discussed. Currently, the s-frm-14 does not include all the Aerospace Standards that require Nadcap Accreditation. The FLU TG discussed what the best strategy would be to ensure the s-frm-14 is updated when standards are revised to require Nadcap Accreditation.

It was suggested that for procurement standards a note be added to the s-frm-14 indicating to see the PRI QPL for actual sizes and materials qualified.

This topic will be discussed further in the open meeting.
7.0 MEETING CLOSE OUT – CLOSED

All action items were reviewed, and due dates established. For specific details, please see the current FLU Rolling Action Item List posted at www.eAuditNet.com, under Public Documents.

8.0 REVIEW MEMBERSHIP STATUS – 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

New Voting Members:

<table>
<thead>
<tr>
<th>First Name</th>
<th>Surname</th>
<th>Company</th>
<th>Position: (new / updated role)</th>
<th>Meetings Attended (Month/Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luis</td>
<td>Lozano</td>
<td>Hydraflow</td>
<td>SVM (new)</td>
<td>Mar-2019, Sept-2019</td>
</tr>
<tr>
<td>Chris</td>
<td>Schofield</td>
<td>Hydraflow</td>
<td>ALT SVM (updated from SVM)</td>
<td>Sep-2018, Mar-2019</td>
</tr>
<tr>
<td>Mike</td>
<td>Paveglio</td>
<td>Titeflex Aerospace</td>
<td>ALT SVM (new)</td>
<td>Mar-2018, Sept-2018</td>
</tr>
</tbody>
</table>

All additions and changes are pending completion of all required steps on the Nadcap Membership Form (m-fm-01).

The compliance to voting requirements per PD 1100 was reviewed. The following members were non-compliant with voting requirements. The voting requirement was waived for these members by the Chairperson and they are approved to remain voting members.

<table>
<thead>
<tr>
<th>First Name</th>
<th>Surname</th>
<th>Company</th>
<th>Balloting or Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>Paul</td>
<td>Rolls-Royce</td>
<td>Missed 4 consecutive ballots</td>
</tr>
<tr>
<td>Xin</td>
<td>Jin</td>
<td>COMAC</td>
<td>Missed 4 consecutive ballots</td>
</tr>
</tbody>
</table>

ACTION ITEM: PRI Staff to send e-mail to M. Paul reminding him of the obligations for voting. (Due Date: 30-Oct-2019).

ACTION ITEM: PRI Staff to send e-mail to Xin Jin reminding her of the obligations for voting and asking if she intends to remain a member of the Fluid Task Group and resume meeting attendance. (Due Date: 16-Nov-2019)
9.0 STAFF REPORT – OPEN

K. Purnell presented the PRI Staff Report that included Auditor Status, FLU TG Metrics, Most Common NCRs, Latest Changes, Future Nadcap Meeting Dates and Locations, and Staff Delegation Metrics. The Nadcap Management Council (NMC) is developing a checklist that will contain requirements applicable to all task groups. Auditees were reminded to upload their self-audits into eAuditNet at least 30 days prior to the audit. Auditees are also required to include procedure and paragraph numbers for compliance with each self-audit question. The importance of verifying the audit scope was discussed. The current potential FLU TG audit scopes are contained in s-frm-14. Auditees and Auditors verify the audit scope at the beginning of each audit. Auditees need to ensure Aerospace Standards intended to work to in the near future are included in their audit scopes.

The FLU TG currently has seven (7) approved auditors and two (2) auditor trainees.

The FLU TG metrics of Average Audit Cycle Time, Most Common NCRs, Average Number of Major and Minor NCRs, and Number of Lapsed Accreditations were reviewed. Most Task Group metrics are green since the last meeting except for Supplier Cycle Time which is red due to two audits, one three cycles, one four cycles, with poor responses.

The most common NCRs covering the period of February 2016 to February 2018 were reviewed:

1. Calibration Issues, labels, outside calibration services, out of tolerance conditions, equipment not in calibration system
2. Sampling and Periodic Test Requirements, not submitting required data or maintaining part counts
3. Not uploading Self Audit 30 days prior to the audit or indicating means of compliance for each checklist question (procedure, paragraph, Work Instruction), Job Audits
4. Preventative Maintenance program not up to date
5. Corrective actions from the previous audit not effective.

The latest changes in eAuditNet were reviewed. These changes are posted in eAuditNet under Resources, Documents, Public Documents, eAuditNet, Rolling Release Notes.

The future Nadcap meeting schedule is as follows: 21-24 October 2019, Pittsburgh, PA; 24-27 February 2020, Beijing, China; and 15-18 June 2020, London, UK.

K. Purnell suggested meeting with the other Nadcap Task Groups at the Nadcap Meeting. This would provide access to important Nadcap Committee Meetings including the SSC Meetings and NMC Meetings as well as allowing other Subscribers to participate in FLU TG Meetings. The October meeting that is held in Pittsburgh, PA would probably be the easiest to coordinate.

The next FLU TG Nadcap Meeting will be 3 & 5 March 2020 in Denver, Colorado, USA.

Delegated reviewer K. Purnell met the requirements of having at least 10% of NCRs reviewed by the Task Group Subscriber Voting Members with over 90% concurrence; he also reviewed the required 10 audits over the last three review periods. Delegation is maintained.

Non-delegated reviewers J. Lewis and A. Baer are having 100% of their NCRs reviewed by the Task Group Subscriber Voting Members. Al Baer was delegated as a Nadcap FLU TG Audit Report Reviewer during this meeting.
10.0 REVIEW OF PROCEDURE CHANGES – OPEN

10.1 Review any changes to General Operating Procedures since the Last Meeting


10.2 Review changes to OP 1114 and OP 1116 Appendices since the Last Meeting

Changes to OP 1114 Appendix FLU since the March 2019 meeting included an update to change Supplier Advisory to Auditee Advisory.

There were no changes to the OP 1116 Appendix FLU since the March 2019 meeting.

11.0 TASK GROUP INITIATIVES – OPEN

Keith Purnell reviewed and updated the Fluid Distribution Systems Task Group Initiatives.

Fluid Distribution Systems Task Group created the following list of activities and rated them as High (H), Medium (M), or Low (L) priority and if they are (A) Active, (N) Not Active, or (C) Closed. The list was created so the Fluids Distribution Systems TG maintains focus on its high priority tasks.

(H-A) Finalize AC7112/7 Audit Criteria for Tube Fabricated Assemblies (balloted twice to Task Group)
(H-A) Update s-frm-14 Fluid Distribution Systems Nadcap Preliminary Questionnaire
(H-A) Revise AC7112/6 for titanium tube manufacture to include Audit Handbook clarifications and create an AC7112/6 Supplemental Checklist containing Subscriber unique requirements. Sub-Team members are Dave Hanes, Tim Soran, Ulrich Mueller, Isaac Garcia, Phil Adderley, Emmanuel Lenarduzzi, and Keith Purnell.
(H-A) Develop a checklist for the manufacture of Aluminum and Corrosion Resistant Steel (CRES) tubes similar to AC7112/6. Sub-Team members are Dave Hanes, Ulrich Mueller, Isaac Garcia, Emmanuel Lenarduzzi, and Phil Adderley.
(H-A) Develop Wording for Nadcap QML and PRI QPL for the SAE Style Guide.
(H-A) 2019 Auditor Training Agenda
(H-N) Revision of AC7112/3 or AC7112/2 to address High Conformance Seal requirement and include AS1895 and slash sheets in the s-frm-14.

12.0 QPG STATUS REPORT – OPEN

W. Grubbs presented an update from the G-3 Qualified Product Group (QPG) meeting. The presentation included an overview of active, on hold, and closed projects. The QPG consists of 7 OEM members that perform the submitted reviews. Three approvals from three different OEM’s are required for approval. Additional topics included change notification process, specifications with QPL requirements and no QPL listings, use of the t-frm-11 for notification of change, future changes to PD2101, and the need for additional QPG members. eAuditNet part search functionality is on hold due to resource constraints.

13.0 SUPPLIER MEETING REPORT – OPEN

M. Scatoloni presented an update on the G-3 Supplier Group meeting. Suggested improvements to the PRI-QPL (Aerospace) process and the Supplier and Original Component Manufacturer (OCM) change notification process to PRI-QPL (Aerospace) products were discussed. G-3 Committees have been developing a list of critical attributes for each product type to aid in determining when PRI needs to be notified of production changes.
14.0 2019 AUDITOR CONFERENCE – OPEN

The agenda for the FLU TG October 2019 Auditor Conference was reviewed. The conference will be held on Friday, 19-Oct-2019 and will include the following topics:

- Most Common NCRs and Auditor Consistency
- Industry Standard Update and Periodic Testing
- Dry Film Lube AC7108/1
- Self-Audit Expectation
- Subscriber / Supplier Alignment
- eAuditNet
- Opening and Closing Meeting
- AC7000 Checklist
- Review Checklists and Suggestions for Auditor Handbook Clarifications for AC7112, AC7112/1, AC7112/2, AC7112/3, AC7112/4, AC7112/6, and AC7123
- Future Checklist Changes
- Question / Answer / Discussion Session

15.0 BALLOT COMMENT RESOLUTION – OPEN

Ballot comments on the draft AC7112/7 Tube Fabricated Assemblies checklist were discussed and resolved. K. Purnell is to update the checklist and re-ballot to the FLU TG.

**ACTION ITEM:** K. Purnell to update the Draft AC7112/7 checklist with the agreed upon changes and re-ballot to the FLU TG. (Due Date: 15-Oct-2019)

The s-frm-14 Fluid Distribution Systems Preliminary Questionnaire was discussed. This is a difficult document to keep up to date as the SAE standards which contain the Nadcap Accreditation (QML) and PRI Qualified Product List (QPL) requirements are reviewed and updated on a regular basis. K. Purnell was asked to send the s-frm-14 to the FLU TG membership for feedback on which Aerospace Standards should be in the audit scope. It was suggested that the procurement standards listed on the preliminary questionnaire have a note or “*” that states “See PRI QPL on www.eAuditNet.com for sizes and materials qualified”. It was also suggested the accreditation scope for AC7112/4 and AC7123 be the same.

It was requested the following question be added to the AC7112/2 checklist. “Are qualification results on file for AS fittings standards in Auditee’s scope that have only QML requirements.”

**ACTION ITEM:** K. Purnell to email a copy of the s-frm-14 to the FLU TG membership asking for feedback on which Aerospace Standards should be referenced in the audit scope. (Due Date: 15-Nov-2019)

**ACTION ITEM:** K. Purnell to discuss with PRI Management if the note “See PRI QPL on www.eAuditNet.com for sizes and materials qualified” is acceptable to add to the s-frm-14. (Due Date: 15-Nov-2019)

**ACTION ITEM:** K. Purnell to align the accreditation scope of AC7112/4 and AC7123 on the s-frm-14. (Due Date: 31-Dec-2019)

16.0 MEETING CLOSE OUT – OPEN

All action items were reviewed and due dates established. For specific details, please see the current FLU Rolling Action Item List posted at www.eAuditNet.com, under Public Documents.

Agenda Topics for Next Meeting will be the same as this meeting.

ADJOURNMENT – 13-Sept-2019 – Meeting was adjourned at 9:30 a.m.

Minutes Prepared by: Keith Purnell, kpurnell@p-r-i.org
Are procedural/form changes required based on changes/actions approved during this meeting? (select one)

| YES* ☒ | NO ☐ |

*If yes, the following information is required:

<table>
<thead>
<tr>
<th>Documents requiring revision</th>
<th>Who is responsible</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>s-frm-14</td>
<td>K. Purnell</td>
<td>31-Dec-2019</td>
</tr>
</tbody>
</table>