1. PURPOSE & SCOPE

This specification defines requirements for validating a manufacturing or assembly process which produces parts for a United Technologies Corporation (UTC) Member Company.

The purpose is to provide evidence that UTC member engineering design, record and specification requirements are properly understood and fulfilled.

The goal is to demonstrate the established manufacturing process has the potential to produce product that consistently meets all requirements at the intended production rate.

Note: UPPAP is modeled after AIAG’s PPAP (Production Part Approval Process) but differences exist given the distinctive requirements found in the Aerospace Industry. To simplify, the term UPPAP is used throughout the document to describe UTC’s version of this process.

2. APPLICATION

Supplier quality requirements are defined and agreed upon by the following business entities as members of the ASQR Common Specification Team herein referred to as “member”.

- Hamilton Sundstrand (HS)
- Pratt & Whitney (PW)
- Pratt & Whitney Canada (PWC)
- Sikorsky Aircraft (SAC)
2.1. UPPAP is required anytime new parts or change to existing parts or processes is being planned as invoked via purchase order (PO).

*Note:* Direct all questions that arise during accomplishment of UPPAP to the member purchasing representative, who will assist in identifying the appropriate Member Focal Point (MFP).

2.2. The supplier shall flow down this requirement to all levels of their supply chain to obtain records required and ensure all detail part characteristics are properly included in the UPPAP documentation file.

Any deviations from this general rule shall be agreed upon by the MFP and documented accordingly.

2.3. The supplier shall obtain approval (refer to [UPPAP Submission, paragraph 5.3](#)) from the MFP for:

a. A new part (e.g., a specific part/material not previously supplied to the member company).

b. Correction of a discrepancy on a previously submitted part.

c. A product modification resulting in a new part number.

d. Any process change or situation requiring an update or resubmission of all, or portions of the UPPAP file. (Refer to [UPPAP Change, paragraph 5.4](#)).

*Note 1:* With concurrence of the member Supplier Quality Manager, the MFP can formally waive specific UPPAP requirements.

*Note 2:* Waivers for applicable items shall be documented and approved by the MFP and included as part of the UPPAP file.

2.4. For the interpretation of requirements and guidance flowed in this document:

<table>
<thead>
<tr>
<th>When the word...</th>
<th>It signifies....</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Shall” appears</td>
<td>A mandatory requirement.</td>
</tr>
<tr>
<td>“Should” appears</td>
<td>A mandatory requirement with some flexibility allowed in the compliance methodology.</td>
</tr>
<tr>
<td>“Note” appears</td>
<td>Guidance in understanding/clarifying the associated requirement.</td>
</tr>
<tr>
<td>“Should” appears in a <em>Note</em></td>
<td>For guidance only.</td>
</tr>
</tbody>
</table>
3. NORMATIVE REFERENCES

It is the responsibility of the supplier to ensure they work to the latest version of specifications referenced within this document as well as PO requirements.

3.1. It is the responsibility of the supplier to obtain copies of non–UTC documents specified herein. These include, but may not be limited to the following:

<table>
<thead>
<tr>
<th>Document</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE AS9102</td>
<td>Aerospace First Article Inspection Requirements</td>
</tr>
<tr>
<td>SAE J1739</td>
<td>Potential Failure Mode and Effects Design (Design FMEA), Potential Failure Mode and Effects Analysis in Manufacturing and Assembly Processes (Process FMEA)</td>
</tr>
</tbody>
</table>

3.2. Member specifications needed, shall be requested from the applicable member's Procurement organization. Documents referenced in this specification include but may not be limited to:

<table>
<thead>
<tr>
<th>Document</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASQR-01</td>
<td>Aerospace Supplier Quality System Requirements</td>
</tr>
<tr>
<td>ASQR-09.1</td>
<td>Flight Safety Parts Program</td>
</tr>
<tr>
<td>ASQR-20.1</td>
<td>Supplier Sampling Requirements</td>
</tr>
<tr>
<td>UTCQR-09.1</td>
<td>Process Certification Requirements</td>
</tr>
</tbody>
</table>

3.3. Forms Referred to in this Specification include:

<table>
<thead>
<tr>
<th>Document</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASQR-09.2 Form 1</td>
<td>UPPAP Approval</td>
</tr>
<tr>
<td>ASQR-09.2 Form 2</td>
<td>UPPAP Change Notification</td>
</tr>
</tbody>
</table>
AEROSPACE SUPPLIER QUALITY REQUIREMENTS
Number: ASQR-09.2
Revision: Initial Issue
Effective Date: 1/31/2011
Page 4 of 19

4 DEFINITIONS

4.1 **AN, AS, MS:** Items procured to AN (Air Force–Navy Aeronautical Standard), AS (Aerospace Standard) and MS (Military Standard) drawings.

4.2 **Cpk:** Measure of the inherent short term variation of a process in a state of statistical control, relative to a given defined tolerance (e.g., blueprint dimension, performance, etc.).

4.3 **Design Responsible Party:** A supplier whose design has been established mutually, by the supplier and member.

The supplier’s contribution is large enough to permit limited proprietary rights over the item.

4.4 **Engineering Frozen Planning/Source Approval (EFP/ESA):** A methodology used by members to designate & control approved sources/control production processes to achieve consistent results by restricting or prohibiting changes to an agreed process plan without acquiring appropriate approvals first.

These controls are always invoked by member specifications via the engineering drawing, supplementary product and material data, or PO.

4.5 **Equipment Specification (ES):** Conveys technical and administrative information to a potential supplier for items generally source controlled, or to a supplier whose assistance is required to complete a design (i.e., coordinated control).

4.6 **First Article Inspection (FAI):** A complete, independent, and documented physical and functional inspection process to verify that prescribed production methods have produced an acceptable item as specified by engineering drawings, planning, PO, ES, and/or other applicable design documents.

4.7 **Key Characteristic (KC):** An attribute or feature of a material, process, part, assembly, or test, whose variation has a significant influence on product fit, performance, service/service life, manufacturability, or other expected deliverable.

- Member KCs may be identified differently (e.g., KPC1, KPC2, KPC-D, KPC-M, CC, etc.)
- Supplier defined KCs can be product or process related.
- Design and Process Failure Mode and Effects Analysis (FMEAs) are typically used to define these characteristics.
4.8 **Laboratory and Material Control at Source (LCS/MCS):** Approval status given to a specific supplier by a member.

4.9 **Member Focal Point (MFP):** Main technical interface between the supplier and member during the New Product Introduction or Resourcing Phase, responsible for supporting deployment of this procedure (e.g., clarify requirements; define submission level, support preparation and submission of the UPPAP file, etc.).

4.10 **National Aerospace & Defense Contractors Accreditation Program (NADCAP):** An organization whose mission is to provide international, unbiased, independent manufacturing process and product assessments and certification services.

4.11 **NUCAP:** NADCAP Users Compliance and Audit Program.

4.12 **Purchase Order (PO):** A formal legal request to a supplier to supply products or services according to specific details (i.e., part numbers, descriptions, delivery dates, corresponding prices, terms, conditions and, if applicable, a reference to an existing contract).

For the purposes of this document, PO references also include Schedule Agreements.

4.13 **Source Qualification List (SQL)/Approved Special Process Listing (ASL):** A directory of sources for materials and processes that meet specific member criteria/requirements.

4.14 **Supplementary Information (SI):** A controlled document describing specific requirements for highly complex assemblies and their link to other applicable documents.

4.15 **Supplementary Product and Material Data (SPD/SMD):** Controlled documents containing additional product/raw material requirements which complement those shown in a specific drawing.

A PO will typically call out these documents. Members have various names for this data; SPD/SMD is the generic term used in this document to describe the various ancillary data references on engineering drawings.
5. REQUIREMENTS

5.1. UPPAP General Requirements

5.1.1 The approved file shall:
   a. Be part number specific or if agreed to by the MFP, can be created for a family of
different part numbers when form, fit, and function are identical.
   b. Be retained by the supplier at the manufacturing location.
   c. Be available for submission or review by member representatives.
   d. Be retained and maintained with all applicable items up to date and represent the
current production process regardless of whether a member requests a formal
submission.
   e. Contain copies of all approvals and waivers granted by the MFP and other
approvers.
   f. Be classified as quality records and retained per ASQR-01 requirements.

5.1.2 A supplier of standard parts (e.g., MS, AN, AS, etc) does not need to comply with
UPPAP requirements unless formally required to, by the member.

5.1.3 Significant Production Run

Product for UPPAP final submittal shall be selected from significant and continuous
production runs.
   a. The specific production quantity should total a minimum of 25 consecutive parts,
unless otherwise specified by the MFP.
   b. The run shall be manufactured at the production site using the tooling, gaging,
process, materials, and operators from the intended production environment
representing the quoted or committed production rate.
   c. Parts from each unique production process shall be represented in the run so the
overall variability is assessed.

Note: Examples of unique production processes include duplicate assembly line/work
cell, each position of a multiple cavity die, mold, tool or pattern. The makeup of
the 25 consecutive parts with multiple variations will be agreed to with the MFP.
5.1.4 UPPAP Process

The supplier shall:

a. Create a UPPAP file addressing all applicable UPPAP elements, as early as possible in the part and manufacturing process development phases. Refer to Plan Elements Defined, paragraph 5.2.

  Note: Identify all non-applicable elements within the file.

b. Collect supporting data for each UPPAP element as it is produced.

c. Analyze data and provide feedback to personnel affected/responsible for a given element.

d. Make necessary adjustments if data does not support initial process capability.

e. Submit UPPAP to the MFP for formal disposition. Refer to Levels, paragraph 5.3.1.

f. Obtain either an interim class disposition or approval from the MFP before production parts are shipped. Refer to Interim Class, paragraph 5.3.4.

g. If necessary, prepare and execute a plan agreed to by the MFP to obtain final UPPAP approval.

h. Receive a formal full approval disposition from the MFP. Refer to Disposition, paragraph 5.3.3.

5.1.5 UPPAP Submission Requirements

The supplier shall meet all specified requirements. Refer to UPPAP Submission, paragraph 5.3.

a. When all requirements have not been met, contact the MFP to determine the course of action prior to submission.

b. The supplier shall not ship parts to the member without formal disposition of the UPPAP file.

c. The supplier can ship nonconforming product, provided the:

   - Member has approved existing deviations through the applicable nonconforming material reporting system, and
   - MFP has provided appropriate interim approval of the UPPAP file.
d. For all submission levels, and each part/part family, the supplier shall have all of the following applicable items and records in, or referenced within, a UPPAP file and readily available for member review. Refer to Plan Elements Defined, paragraph 5.2 for additional information.

(1) Released Production Drawings
(2) SPD/SMD and SI sheets
(3) Production PO and Demand Fulfillment
(4) Design Failure Mode and Effects Analysis (DFMEA)
(5) Process Flow
(6) Process Failure Mode and Effects Analysis (PFMEA)
(7) Process Control Plan
(8) Process Readiness Study (PRS)
(9) Initial Process Studies
(10) Measurement System Analysis Studies
(11) Engineering Frozen Planning/Source Approval (EFP/ESA)
(12) Dimensional Report
(13) Production Verification Testing (PVT)
(14) Special Process Approval and Nondestructive Test (NDT)
(15) Material Certification Documentation
(16) Raw Material Approval
(17) Part Marking Approval
(18) Packaging, Preservation & Labeling Approval
(19) Review and Sign-Off

5.2. Plan Elements Defined

(1) Released Production Drawings

A copy of the product’s drawings shall be included in the UPPAP file.

Design Responsible Party suppliers shall include in the UPPAP file the "Note Form Drawings" and its member approved DESIGN RESPONSIBLE PRODUCER drawings. Applicable internal and external specifications shall be readily available.

Note: Additional documents may be required for Flight Safety Parts, refer to ASQR-09.1.
(2) SPD/SMD and SI sheets
The UPPAP file shall contain copies of all applicable production SPD/SMD and SI sheets, consistent with the part revision level and reflected on the release production drawing.

(3) Production PO and Demand Fulfillment
A copy of the production product PO shall be included in the UPPAP file, along with the maximum expected volume as communicated by the member.

Note: Additional documents may be required for Flight Safety Parts, refer to ASQR-09.1.

(4) Design Failure Mode and Effects Analysis (DFMEA)
Design Responsible Party Suppliers shall develop a design FMEA per SAE J1739 or as defined by member specification.

(5) Process Flow
The UPPAP file shall contain a copy of the process flow diagram that clearly describes the production process steps and sequences from receiving to shipment.

- Standard flowchart symbols shall be used.
- Alternate process paths/formal rework loops should be documented as part of the main flow diagram.
- Subsequent process changes shall be documented in the flow diagram.

Note 1: Process flow diagrams for “families” of similar parts are acceptable if new parts have been reviewed for identical processing.

Note 2: The supplier should consider the maximum expected volume as communicated by the member to define the proposed Process Flow.

Note 3: Adding characteristics produced at each step of the process flow greatly facilitates the development of the PFMEA and control plan.

(6) Process Failure Mode and Effects Analysis (PFMEA)
The supplier shall develop a Process FMEA per SAE J1739.

Note: A single Process FMEA may be developed for a family of similar parts or materials provided a formal review of risk priority numbers is performed to ensure consistency with the process being developed.
(7) Process Control Plan

The supplier shall develop a stand-alone Process Control Plan for the process being submitted, per UTCQR-09.1, and also include a comprehensive reaction plan.

The producer may define different control plans for development, pre-production and full production phases in order to adjust for increasing process maturity.

If sampling is employed for quality acceptance of characteristics, the frequencies established in the control plan shall align with ASQR-20.1 requirements.

Reaction Plans shall define actions for nonconforming conditions/out of control situations (e.g., containment, customer notification, stop the process, contact the manufacturing engineer, etc.).

**Note 1:** Control Plans for part families are acceptable if additional parts were reviewed for manufacturing process commonality.

**Note 2:** Additional documents may be required for Flight Safety Parts, refer to ASQR-09.1.

(8) Process Readiness Study (PRS)

The UPPAP file shall contain a copy of the PRS performed on the production process and consider as a minimum, the production readiness level of:

a. Manufacturing process steady state tools, fixtures, manufacturing equipment and gages.

b. Operation work instructions.

c. Process control methods.

d. Gage suitability (i.e., discrimination, applicability).

e. Total Productive Maintenance (TPM) program.

f. All levels of their supply chain.

g. Prevention, detection and removal of foreign objects.

A PRS may be performed with a member representative or as a self evaluation based on member guidelines. However, a PRS self evaluation must be reviewed by the MFP.

(9) Initial Process Studies

The UPPAP file shall include documented evidence that initial process studies have been conducted on twenty-five (25) parts for all product & process KCs.

**Note:** Provided the same tooling and equipment intended for production is used, data collected from development or pre-production parts can be considered.
Acceptance Criteria

The supplier shall use the following as acceptance criteria for evaluating initial process study results.

<table>
<thead>
<tr>
<th>Results</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cpk ≥ 1.33</td>
<td>The process currently meets requirements. After approval, begin volume production and follow Control Plan.</td>
</tr>
<tr>
<td>1.00 ≤ Cpk &lt; 1.33</td>
<td>The process is currently acceptable, but may require some improvement. Contact the MFP and review results of the study. This shall require changes to the Control Plan, if not improved prior to start of volume production.</td>
</tr>
<tr>
<td>Cpk &lt; 1.00</td>
<td>The process does not currently meet the acceptance criteria. Contact the appropriate member representative for a review of the study’s results.</td>
</tr>
</tbody>
</table>

Process capability indices shall only be calculated after the process is determined to be stable.

**Note:** A normality test should be used when standard formulas for Cp/Cpk calculations are used.

Variable data shall be used wherever feasible. If using attribute data, DPPM calculations can be used (refer to UTCQR-09.1) to achieve identified results.

(10) Measurement System Analysis (MSA) Studies

a. The UPPAP shall contain copies of the gage Repeatability & Reproducibility (R&R) studies conducted on all instruments used for measuring KCs.
b. Gage R&R studies shall have a Precision to Tolerance (P/T) ratio ≤ 20%. When not achieved, a corrective action plan shall be agreed to, with the MFP.
c. The UPPAP file shall contain copies of the gage inspection and try-out reports for all special gaging (e.g., supplier designed, etc.).

**Note:** When deficiencies are identified in bias, stability, linearity, repeatability, or discrimination they should be addressed.

(11) Engineering Frozen Planning/Source Approval (EFP/ESA) Requirements

When EFP/ESA is invoked by a member EFP/ESA specification, the UPPAP file shall include the appropriate evidence showing conformance to the EFP/ESA condition(s) specified in the SPD/SMD as follows:

a. For Process Sheet Approval Required or Summary of Operations Required, include a copy of the applicable approval form with objective evidence of that approval.
b. For Process Sheet Approval Not Required, include a copy of the initially approved SPD/SMD.

**Note:** Additional documents may be required for Flight Safety Parts, refer to ASQR-09.1.
### (12) Dimensional Report

The supplier shall create dimensional reports for all drawing characteristics with tolerances. The UPPAP file shall contain the following:

- a. A First Article Inspection Report (FAIR) for one (1) part, per AS9102.
- b. A supplementary dimensional report with data from four (4) additional randomly selected parts.
- c. All unique process streams must be represented in the sample (e.g., cells or production lines and all cavities, molds, patterns or die, etc.).

*Note:* Data collected during development or pre-production can be considered if conditions in *Significant Production Run, paragraph 5.1.3.b* are met.

### (13) Production Verification Testing (PVT)

For Design Responsible Party parts, the file shall contain test results for quantities required in the referenced specification.

If quantity is not specified, then a minimum of five (5) parts shall be tested, or a greater number as specified by the MFP.

For UPPAP approval purposes nonconformances are not permitted.

### (14) Special Process Approval and Nondestructive Test (NDT)

The UPPAP file shall contain evidence of the following:

<table>
<thead>
<tr>
<th>If a Special Process is required on ...</th>
<th>Then ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>A member drawing (including drawing related documents)</td>
<td>Only member approved Special Process suppliers can be used. An excerpt of the member companies SQL/ASL referencing the special process supplier name and vendor code (with date processed), is sufficient evidence.</td>
</tr>
<tr>
<td>A Design Responsible Party drawings</td>
<td>A copy/excerpt of the Design Responsible Party supplier source qualification list, referencing the special process supplier name, is sufficient evidence.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If an NDT Process is required on...</th>
<th>Then ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>A member drawing (including drawing related documents)</td>
<td>UTC approved NDT suppliers shall be used.</td>
</tr>
<tr>
<td>A Design Responsible Party drawing</td>
<td>A copy/excerpt of the Design Responsible Party supplier NDT qualification list, referencing the NDT supplier name is sufficient evidence.</td>
</tr>
</tbody>
</table>

*Note 1:* Reflect special processes requiring lab qualification and NDT approvals on the Certificate of Conformity (CofC).

*Note 2:* Additional documents may be required for Flight Safety Parts, refer to [ASQR-09.1](#).
(15) Material Certification Documentation
The UPPAP file shall contain:

a. Documented evidence that material was purchased from a member approved source, when required.
b. For supplier designed parts, evidence that supplier approved sources for raw material is declared on the CofC. If material is from a non-approved source, provide copies of the material test reports and results obtained through an approved member test facility.

(16) Raw Material Approval
For member drawing defined raw material (e.g., castings, forgings, or other raw material defined by member drawing, etc.), the file shall contain a member specified approved layout report with no nonconformances.
For UPPAP approval purposes, nonconformances are not permitted.

(17) Part Marking Approval
The UPPAP file shall contain:

a. Documented evidence of member approval of part marking per the invoked part marking specification.
b. A digital photo of part marking on a part or other evidence that demonstrates the part has been marked per the drawing.

<table>
<thead>
<tr>
<th>When ...</th>
<th>Then ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serialization or unique identification is required by contractual documents, on items other than Specification Controlled or Source Control items.</td>
<td>Additional member company requirements may apply.</td>
</tr>
<tr>
<td>2D Matrix is required by contractual documents.</td>
<td>The UPPAP file shall have a: 1. Copy of the members explicit approval of the 2D marking in question and 2. Scanned print out of marking, displaying the human readable product of the scan.</td>
</tr>
</tbody>
</table>

Note: Additional documents may be required for Flight Safety Parts, refer to ASQR-09.1.

(18) Packaging, Preservation and Labeling Approval
The UPPAP file shall contain documented evidence of member approval of packaging per the invoked packaging specification.
(19) Review and Sign-Off

The supplier shall:

a. Verify all measurement and test results show conformance with member requirements.
b. Ensure all required documentation is available within the UPPAP file.
c. Review all applicable data for content, accuracy, and process repeatability before submitting for approval.
d. Upon a satisfactory internal review, complete a UPPAP Approval, ASQR-09.2 Form 1, (refer to Appendix 1), and submit to the MFP for approval.
e. Complete a separate ASQR-09.2 Form 1, for each part number unless otherwise agreed to by the MFP.

5.3  UPPAP Submission

5.3.1 Levels

Submission levels define the quality records included in the UPPAP file. The default submission is Level 3 unless otherwise specified by the MFP.

All submissions are made to the MFP.

The four (4) submission levels described below define required documentation:

Level 1  The UPPAP Approval (ASQR-09.2 Form 1) only.

Level 2  The UPPAP Approval (ASQR-09.2 Form 1) with limited supporting data.

Level 3  The UPPAP Approval (ASQR-09.2 Form 1) with complete supporting data.

Level 4  The UPPAP Approval (ASQR-09.2 Form 1) with complete supporting data, reviewed at the suppliers manufacturing location.

Regardless of the level, all UPPAP requirements shall be satisfied and completed by the supplier.
5.3.2 Submission

Before the first production part is shipped, the supplier shall submit the UPPAP Approval ASQR-09.2 Form 1; supported by the appropriate documentation and allow sufficient time, as agreed upon by the MFP, to permit timely disposition.

5.3.3 Disposition

The MFP shall return a signed copy of the UPPAP Approval form with appropriate disposition. The UPPAP disposition status can be:

- Approved
- Interim Class
- Not Approved

All interim class dispositions require a recovery plan to achieve closure of the item(s). The recovery plan should include commitment of resources to achieve the plan as well as actions and target dates.

Upon completion, a revised UPPAP Approval Form shall be resubmitted along with appropriate supporting data.

The following table describes the UPPAP dispositions and authorization to ship product.

<table>
<thead>
<tr>
<th>If UPPAP disposition status is...</th>
<th>Then the Supplier is...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved -OR- Interim Class A, B, or C</td>
<td>Allowed to ship parts.</td>
</tr>
<tr>
<td>Interim Class D</td>
<td>Allowed to ship parts with member approved nonconformance documentation.</td>
</tr>
</tbody>
</table>
| Interim Class E | Only permitted to ship with:  
  - Specific instructions from the MFP and 
  - Member approved nonconformance documentation. |
| Not Approved | • Not permitted to ship parts to UTC. 
  • Obtain specific instructions from the MFP. |
### 5.3.4 Interim Class

Interim class indicates the gap between UPPAP requirements and those fulfilled in the submitted file. In all cases, a recovery plan is necessary.

The following table describes possible interim classes:

<table>
<thead>
<tr>
<th>Interim Class</th>
<th>Part or Deviation Description</th>
<th>Examples</th>
</tr>
</thead>
</table>
| A             | Parts are produced using 100% production tooling and meet all drawing and specifications requirements. However not all production approval requirements have been met. | 1. The preliminary capability study is incomplete but MFP has determined, satisfactory stability and capability has been achieved or foreseen.  
3. The UPPAP file lacks formal disposition. Parts and data have been reviewed by the MFP and there is no indication of non-conformances. |
| B             | Parts are produced using 100% production tooling but require reprocess or rework to meet all drawing and specifications requirements. | 1. Parts have been produced not following the documented production process on the Process Flow Diagram. Temporary operations are duly documented.  
2. Added inspection alone should not be considered, reprocess and document in the Process Control Plan. |
| C             | Parts are produced using non-production tooling and/or process but meet all drawing and specification requirements. | 1. Parts have been produced using additional, substitute or temporary tooling.  
2. Parts have not been manufactured completely at the documented production site or environment. |
| D             | Parts do not meet all drawing and specifications requirements. However, parts can be considered salable. | 1. Dimensional, material validation/functional testing or appearance characteristics do not meet design requirements and will not impact assembly or customer satisfaction.  
2. Parts and drawing do not match and a part change is not desired or anticipated. Nonconformance documentation shall be issued until necessary revisions are made on applicable drawing and specifications requirements. |
| E             | Parts do not meet all drawing and specifications requirements and cannot be considered salable. | 1. Dimensional, material validation/functional testing or appearance characteristics do not meet design requirements and may impact assembly or customer satisfaction.  
2. Incomplete testing with a high probability of failure/failed performance or functional material testing. |
5.4 UPPAP Change
The supplier shall notify the member using UPPAP Change Notification, ASQR-09.2 Form 2, (refer to Appendix 2), when any situation described below occurs.

a. A change in design.
b. A change in manufacturing source(s), process(s), inspection method(s), locations of manufacture, tooling or materials.
c. A change in numerical control program or translation to another media.
d. A natural or man-made event, which may adversely affect a manufacturing process.
e. A lapse in production for two years or as specified by the customer.

The supplier shall obtain UPPAP resubmission instructions from the MFP. When required, a UPPAP file shall be updated and resubmitted with documentation prescribed by the MFP. UPPAP disposition must be obtained before production parts are shipped.

*Note:* Contact your MFP, if unsure whether an ASQR-09.2 Form 2 needs to be submitted.

6 RECORDS

Completed Quality records generated electronically or on paper shall be retained per the requirements of ASQR-01.

7 NATURE OF CHANGE

Initial Issue
# Appendix 1

## ASQR-09.2 Form 1

**Aerospace Supplier Quality Requirements**

- Number: ASQR-09.2
- Revision: Initial Issue
- Effective Date: 1/31/2011
- Page 18 of 19

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**UPPAP Approval**

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Description</th>
<th>Test No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ROC and Production Drawings</td>
<td>10</td>
<td>Measurement System Analysis</td>
</tr>
<tr>
<td>2</td>
<td>PPS/IPS and Identification</td>
<td>11</td>
<td>Engineering Nonconforming</td>
</tr>
<tr>
<td>3</td>
<td>Production Process Review</td>
<td>12</td>
<td>Design Assurance Agency</td>
</tr>
<tr>
<td>4</td>
<td>Core/Initial/End of Life</td>
<td>13</td>
<td>Production Coordination</td>
</tr>
<tr>
<td>5</td>
<td>Frac Test</td>
<td></td>
<td>Special Process Approval</td>
</tr>
<tr>
<td>6</td>
<td>Frac Test</td>
<td></td>
<td>Material Certification Module</td>
</tr>
<tr>
<td>7</td>
<td>Frac Test</td>
<td></td>
<td>Form O Approval</td>
</tr>
<tr>
<td>8</td>
<td>Frac Test</td>
<td></td>
<td>Packaging/Approval</td>
</tr>
<tr>
<td>9</td>
<td>Frac Test</td>
<td></td>
<td>Rejected</td>
</tr>
</tbody>
</table>

**Declaration**

Supplier Authorization: [Name and Signature]  Title: [Title]  Date: [Date]  Phone #: [Phone Number]

FOR STC USE ONLY

- Approved: [ ]
- Interim Approval: [ ]  Date: [Date]  Estimated date of full approval: [Date]  [ ] Not approved

Comments:

---

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APPENDIX 2

*Sample*

ASQR-09.2

Form 2

UPPAP CHANGE NOTIFICATION

<table>
<thead>
<tr>
<th>Product Number</th>
<th>OGS/OGS R.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SUPPLIER MANUFACTURING INFORMATION

<table>
<thead>
<tr>
<th>Supplier's Name</th>
<th>Supplier Code</th>
<th>Unique supplier number and revision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHANGE DESCRIPTION

Detail part numbers and affected by the changes, if applicable.

Describe the change and potential impact on process controllability.

Date of change incorporation:

POTENTIAL ELEMENTS EFFECTED BY CHANGE [Check all that apply]

- [ ] Reordered Production Drawings
- [ ] Production Verifications Testing (PVT)
- [ ] Certificates of Analysis (COA)
- [ ] Special Product Approvals including HDT
- [ ] Production Order
- [ ] Initial Production Test
- [ ] Material Certification Criteria
- [ ] Final Material Approvals
- [ ] Packaging, Process, and Labeling Approval
- [ ] Dimensional Reports, including Visual Approvals
- [ ] Acceptance Test Approval
- [ ] Fielding

FOR UTC USE ONLY

POTENTIAL ELEMENTS EFFECTED BY CHANGE [Check all that apply]

- [ ] Reordered Production Drawings
- [ ] Production Verifications Testing (PVT)
- [ ] Certificates of Analysis (COA)
- [ ] Special Product Approvals including HDT
- [ ] Production Order
- [ ] Initial Production Test
- [ ] Material Certification Criteria
- [ ] Final Material Approvals
- [ ] Packaging, Process, and Labeling Approval
- [ ] Dimensional Reports, including Visual Approvals
- [ ] Acceptance Test Approval
- [ ] Fielding

** End of Document **