The following slides are not contractual in nature and are for information purposes only as of June 2015.
Corrective Action Webinar
Agenda

- Effective CAR Writing
- Understanding the CAR
- Required detail when writing a CAR
- Examples
- Command Media
- Summary
- Q & A
CAR Writing

Have you read a CAR or nonconformance written by someone other than yourself?

Did you:
– Understand the explanation or what was written?
– Know where the requirement came from?
– Understand why it was classified the way it was?
– Think the Auditor made the requirement up based on their experience or opinion?
– Think that no one else would understand it unless they were present?
Understanding the CAR

A properly written CAR enables the Company to adequately address the six items that must be answered within an CAR response:

1) Immediate corrective action taken (containment actions)

2) Root cause of nonconformance

3) Impact of all identified causes

4) Action taken to prevent recurrence

5) Objective evidence (attached)

6) Effectivity date
Writing a CAR

• The CAR must clearly and concisely document the issue witnessed detailing exactly what and how the requirement was not being fulfilled

• The CAR must be technically correct

• The Supplier, SQE and all who review must fully understand the nonconformance.

• Anyone who reads the CAR must be able to understand it and trace it back to the specific failure(s)
What is a Nonconformance

“Failure to meet specified requirements”

• Sources of the requirements:
  – Program/Lockheed Specification
  – Industry Standard
  – Internal Procedures / Instructions
  – Contract
  – Drawing
  – Purchase Order
Now What?

• Once the nonconformance have been identified it is necessary to determine how to document the nonconformance.

• Goal is effective communication of the finding to the Supplier and any other parties involved. Make sure the supplier understands the noncompliance and the requirement.

• Typically, the SQE for that Supplier should issue the CAR or be involved in the release of any CARs that are written.
Required Detail When Writing a CAR

Statement of the Requirement

• Include the requirements document reference and literal restatement of the requirement
  – Specification, drawing, P.O.#, procedure, etc.

• Statement of the Finding with details
  – (i.e. the violation of the requirement)

• Include where the violation occurred, what activity/process was being witnessed and the scale of the issue [isolated or systemic].

• Provide evidence/examples supporting the nonconformance Dates, lot, part number, serial number, process, tool id, QARs, etc.
A tool to help remember the required CAR detail is the acronym “PLANES”

- **P** = Procedure reference
- **L** = Location where the deficiency was found
- **A** = Activity or process audited
- **N** = Nature of deficiency
- **E** = Evidence
- **S** = Scale of the problem
Even Typos??????

Depends on the situation

• If letters/numbers are incorrect and it clearly makes no difference to the ability to comply with requirements, then the witness may determine that it is not a nonconformance

• If letters/numbers are incorrect and it changes the meaning, then it is a finding and does need to be written up

• Note: This can also apply to:
  – Supplier typos that could result in a CAR (as shown above)
  – LM Aero typos written in a CAR causing confusion in the write-up
  – LM Aero typos in requirements causing a ‘failure’ at the supplier
Examples

• People know what to do if it says “Carbrze the Parts”

• SC and WC are two different kinds of carbide and make a difference when talking about the type of tool Material.
  • SC refers to Silicon Carbide
  • WC refers to Tungsten Carbide

• 4140 and 4340 are different types of steel and cannot be substituted, so an error on the tag could be a serious traceability issue.

• 750F max is not the same as 750F min.
CAR Example 1 (part 1)

Discrepancy Text: “Individual assessing component used an incorrect revision of the acceptance criteria.”

• What is missing from the description?
• **What is missing from the description?**
  – Specification
  – Revision used. What was the correct revision?
  – Isolated or Systemic? Any other specifications affected?
  – Part Number and internal Job Number
  – Job function/Individual (stamp / ID)

**Discrepancy Text:** “Individual assessing component used an incorrect revision of the acceptance criteria.”
CAR Example 1 (part 3)

Discrepancy Text: “Individual assessing component used an incorrect revision of the acceptance criteria.”

Acceptable Text:

Discrepancy Text: “Compliance job XXX Aero P/N XXXXXX (job #16487) was assessed using Quality Standard B69 rev A. Current revision level for this specification is rev C. Inspector (stamp #08) was using a specification taken from their drawer and not an official version (which was at the Correct revision). Other specifications were noted in the drawer (QS B60 rev d, QS B65 rev org & QS B67 rev A) and were also found to be at the wrong rev. Company to assess potential impact to hardware.”
CAR Example 2 (part 1)

Discrepancy Text: “Calibration purchase orders for some equipment were found not to meet the requirements of 2XXXXXX, par 2.3 and company procedure. Calibration certifications demonstrated compliance with the requirements. Further investigations indicate no impact to hardware is suspected.”

• What is missing from the description?
CAR Example 2 (part 2)

Discrepancy Text: “Calibration purchase orders for some equipment were found not to meet the requirements of 2XXXXX, par 2.3 and company procedure. Calibration certifications demonstrated compliance with the requirements. Further investigations indicate no impact to hardware is suspected.”

• What is missing from the description?
  – Clear statement of the requirement
  – Equipment details (description, serial number, etc.)
  – Company procedure reference
  – Purchase Order number(s)
“Calibration purchase orders for some equipment were found not to meet the requirements of 2XYP1234, par 2.3 and company procedure. Calibration certifications demonstrated compliance with the requirements. Further investigations indicate no impact to hardware is suspected.”

“Calibration purchase orders (156, 235, 498) for the following equipment were found not to meet the requirements of 2XXXXX, par 2.3 and company procedure CBC 1014 rev B, para 2.4. Items missing were tolerances, calibration range and number of points.

Water Temp Gage (#027)
Process Timer (#10)

Calibration certifications demonstrated compliance with the requirements. Further investigations indicate no impact to hardware is suspected.”

• What is wrong with this discrepancy text?
CAR Example 3 (part 2)

Discrepancy Text: "SUPPLIER PROCEDURES DO NOT ADEQUATELY DEFINE THE START AND FINISH OF 'QUENCH DELAY' FROM THE PIT FURNACES. REQUIREMENT: 2XXXXX REV E 9.9.1; ARE THE QUENCH MECHANISMS OPERATIONAL AND CAPABLE OF MEETING MAXIMUM DELAYS PROVISIONS OF THE SPECIFICATIONS VIOLATION. WHILST THE QUENCH MACHNAISMS ARE OPERATIONAL, TYE SUPPLIER PROCEDURES DO NOT DEFINE HOW THE ‘QUENCE DELAY’ FROM THE HARDENING PIT FURNACES SHOULD BE TIMED; E.G FROM LID OPENING / START OF CHARGE REMOVAL / START OF GRAVITY FEED OF OIL QUENCHANT/COMPLETE IMMERSION ETC???")

- What is wrong with this discrepancy text?
  - Typing errors, misspelling, poor grammar and use of all caps
  - CAR’s need to reflect professionalism and attention to detail
  - Do not use all capital letters when writing an CAR

Re-read the CAR before publishing!!
CAR Example 4 (part 1)

Discrepancy Text: “Identified Non-conformance: Inadequate internal audit documentation. Supplier procedure for internal audits QSP-19, paragraph 8.1 gives a list of documentation items including an audit summary and findings. Review of internal audits indicates they are conducted as planned, but the documentation is sometimes incomplete. The most recent internal audit in preparation for this audit does not have a summary letter. This appears to be a time management issue resulting in incomplete documentation.

• What is wrong with this discrepancy text?
Discrepancy Text: “Identified Non-conformance: Inadequate internal audit documentation. Supplier procedure for internal audits QSP-19, paragraph 8.1 gives a list of documentation items including an audit summary and findings. Review of internal audits indicates they are conducted as planned, but the documentation is sometimes incomplete. The most recent internal audit in preparation for this audit does not have a summary letter. This appears to be a time management issue resulting in incomplete documentation.

• What is wrong with this discrepancy text?
  – The last sentence “This appears to be a time management issue resulting in incomplete documentation” is an opinion of a suspected reason the nonconformance occurred.
  – CAR’s should not have any “hints” of the root cause of the nonconformance
  – CAR’s should not express an opinion of the possible root cause
CAR Example 5 (part 1)

Requirement Text: “2XXXXX Rev D paragraph 5.3.3 specifies that the hardware shall be maintained wet, from final cleaning and activation through the process to the final rinse, without interruption.

Discrepancy Text: ”Supplier hard anodizing process specifies measuring sample parts after final cleaning. The interruption time for measurement of six (6) parts during the process was observed five (5) minutes. The auditor noticed almost dry hardware after measurement was completed.

• What is wrong with this discrepancy text?
CAR Example 5 (part 2)

Requirement Text: “2XXXXX Rev D paragraph 5.3.3 specifies that the hardware shall be maintained wet, from final cleaning and activation through the process to the final rinse, without interruption.

Discrepancy Text: ”Supplier hard anodizing process specifies measuring sample parts after final cleaning. The interruption time for measurement of six (6) parts during the process was observed five (5) minutes. The auditor noticed almost dry hardware after measurement was completed.

• What is wrong with this discrepancy text?
  – “Almost dry” is an imprecise statement by the Auditor
    • CARs must clearly state the facts of the violation
  – Actual disposition of this example:
    • After discussion with the Supplier regarding the interpretation of “almost dry”, the Supplier provided photographs showing that the parts are in fact still wet at the end of the measurement process. Thus this finding was voided as the requirements were being met.
A Picture is worth a Thousand words!

• Each person’s description of a finding will vary. There is no set wording for descriptions. We must convey to others what we have found as best we can.

Example:

• During my review of the freezer in Building number 10 the freezer was in disarray when inspected. Material was not properly stored as required in 2XXXXX paragraph 7.5.2, e).

What would you picture????????

*Note: Before taking any pictures at a supplier, request permission and ask if they would take the picture and supply you copies for your report.
A Picture is worth a Thousand words!
Command Media

- AS9100C, Section 8.5.2, Corrective Action

- QX Appendices
  - LM Aero Quality Requirements Levied on Suppliers
  - Designed to Ensure Effective Corrective and Preventive Action
Summary

Requirement Text
• Include the required document reference (specification, drawing, P.O.# etc.) at the lowest level – be specific!!
• Include the paragraph callout and literal restatement of the requirement

Discrepancy Text
• Specific details on when/where the violation occurred and the scale of the issue.
• Provide evidence/examples supporting the finding – be specific!!
• Use attachments to your advantage.
  – Documents, records, evidence, photos, etc.
• Ensure someone that is unfamiliar with the supplier would be able to read the CAR and understand the requirement and the specific nonconformance(s).

» P = Procedure reference
» L = Location where the deficiency was found
» A = Activity or process audited
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» S = Scale of the problem