

# QUALITY ASSURANCE MANUAL POLICY AND PROCEDURES

**REVISION 4.0** 

1/28/2020 DYESS AVIATION, INC. 2000 W. BEND DR. GEORGETOWN, TX 78626

Revision	Date	Changes
Initial Release	1/25/2018	
Revision 1	1/25/2018	Spelling Corrections
Revision 2	1/14/2019	Verification of applicable references to document, addition of EASA
Revision 3	7/31/2019	Replaced references with applicable commercial references
Revision 4	1/28/2020	Incorporated ISO9001:2015 as reference and revised Quality Management Section to include Quality Audits/ Plan-Do-Check-Act Process

# Revisions

# DYESS AVIATION - QUALITY ASSURANCE MANUAL POLICY AND PROCEDURES Quality Assurance Management – Introduction:

The scope of this manual shall provide the Quality Assurance Policy and Procedures to be adhered to in all activities undertaken by Dyess Aviation. This shall include but is not limited to the supply of aircraft parts, purchasing, outsourced repair, storage and resale activities.

The goal of the Dyess Aviation Quality Assurance policies and procedures it to:

- 1) Demonstrate the company ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and
- 2) Aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.
- 3) Demonstrate the ability that the Quality Assurance Policy and Procedures conform to the specified quality management system requirements.

Dyess Avionics does not perform Design and Manufacturing of components and parts and are outside of the scope of activity by Dyess Aviation and as such, shall be excluded from the Policy and Procedures Manual.

# **Quality Management - Applicable References**

The following references provide the guidance and outline of the Quality Assurance Policy and Procedures to be adhered to within the Dyess Aviation organization.

- 1) AC 00-56B Voluntary Industry Distributor Accreditation Program dated 5/27/15
- 2) AC 21-29D Detecting and Reporting Suspected Unapproved Parts
- 3) ANS/ISO/IEC 17025:2005, part 1 General requirements for the competence of testing and calibration laboratories
- 4) ANSI/NCSL Z540.3-2006, part 2. Requirements for the Calibration
- 5) ISO9001:2015 Quality Management Systems -- Requirements

#### Abbreviations

The following abbreviations are utilized within this document.

AC	Advisory Circular	
BER	Beyond Economical Repair	
EASA	European Aviation Safety Agency	
DFARS	Defense Federal Acquisition Regulation Supplement	
FAA	Federal Aviation Administration	

HAZMAT Hazardous Material

#### **Quality Management – Management Responsibility:**

- 1) The Dyess Aviation Quality Assurance Manual was developed with the leading industry disciplines as guidance and has incorporated elements of commercial standards best practices, ISO9001:15, AC 00-56B and the DFARS.
- 2) Management review of the quality assurance system policies and procedures shall take place annually and will include a complete review of all policies, procedures and implementations. This review shall include, but not be limited to changes of the approved vendor list, changes to the policy and procedures manual and review of any customer feedback. In addition, all corrective action requests which have been implemented shall be reviewed to ensure the corresponding action is effective. Any quality assurance policy and/or procedures which must be changed due to governmental or international regulatory changes will be reviewed and implemented as required to meet the intent of the change and documented.
- Management review with Quality Assurance personel to continually monitor all QA procedures to initiate any PDCA process.

#### **Quality Management – System Documentation**

The quality assurance system for Dyess Aviation shall consist of the following:

1) Dyess Aviation Quality Assurance Policy and Procedures Manual.

The Policy and Procedures Manual shall fully document the full Quality Assurance system compliance as detailed in this document.

The Quality Assurance System documentation shall consist of the Policy and Procedures described in this manual so that any customer may easily access and review all quality procedures of Dyess Aviation.

If specific quality assurance policies are required for individual, the specific policies shall be documented and implemented per the contract/purchase order.

## Quality Management – Application Program:

Dyess Aviation shall maintain a procurement and inventory system with the Pentagon 2000 system. The applications provide the resources for the following:

- 1) Inventory Control & Location Control
- 2) Physical location by bins and lots
- 3) Part/Component Control by serial number, Lot & Serial Number, Condition, Manufacturer, Location, Ownership, Type, Category

- 4) Part/Component revision control and traceability
- 5) Warranty
- 6) Terms and Conditions
- 7) Shelf Live Tracking
- 8) Customer/Vendor profile and performance tracking
- 9) Part/Component Certification of Conformance
- 10) Tracking and audited to ensure compliance with all customer specifications and requirements
- 11) Rejections and unapproved parts/components tracking and status

## **Quality Assurance Management – Facilities**

Dyess Aviation shall maintain appropriate facilities to ensure that storage does not damage inventory. Storage areas shall be adequate in space and appropriate racks and shelves. Parts shall be stored in a manner to preclude damage and maintain safety for employs.

The facility shall establish and maintain an environmental system to assure that serviceable parts/components are adequately protected against the environment.

## **Quality Assurance Management – Contract/Purchases Review:**

All Contracts and Purchases shall utilize the applicable applications of the Pentagon 2000 system.

The following procedures shall be utilized to ensure that all requirements of a customer contract/purchase order have been reviewed and documented prior to acceptance.

- 1) The salesperson shall ensure any difference or alteration between the initial quotation and the purchase order have been identified, noted and resolved prior to acceptance.
- 2) The salesperson shall ensure Dyess Aviation has the capability to meet all purchase order requirements.
- 3) The salesperson shall ensure all quality requirements required by the customer are properly notated and documented on the sales order.

#### **Quality Assurance Management – Part/Component Review Process:**

All received RFQ's from customers are received by phone, email or fax. The assigned sales person shall ensure that the quotation contains the following information:

- 1) Part Number (Any Alternate offered must be notated)
- 2) Description
- 3) Quantity
- 4) Certification / Specification requirements
- 5) Traceability requirements
- 6) Condition
- 7) Price
- 8) Delivery

- 9) Warranty
- 10) Export documentation if required

#### **Quality Assurance Management – Review Process:**

The sales person shall check the inventory system for availability and any history of the part(s) having been ordered previously. Market research shall be conducted to ascertain market value and availability if none is entered in the inventory system. The quote shall be prepared and sent to the customer via phone, email or fax. The quote shall then be entered into the Pentagon 2000 inventory system for historical tracking and marketing purposes. In the event Dyess Aviation is not able to procure or supply the part, a no quote shall be sent to the customer and subsequently entered into the Pentagon 2000 inventory system.

Upon receipt of a purchase order, the salesperson shall complete an initial review of the requirements to ensure that all requirements can be met or exceed the customer's requirements. The purchase order shall then be entered into the Pentagon 2000 inventory system and a copy of the order shall be included with the sales for future reference. If a part or component must be purchased or repair a part for completion of the customer's order, the sales person shall communicate the requirements of the order or repair to the customer, to meet or exceed the requirements as set forth by the customer's contract/purchase order.

#### **Quality Assurance Management – Amendment to a Purchase Order:**

Any change to a customer's purchase order shall be required in writing to prevent any disputes or returns. Verbal communication shall not be considered written approval for the amendment or change of a customer's contract/purchase order. If the customer requests a change to the purchase order in writing, the sales person shall note the changes to the sales order and communicate any changes to the vendor supplying or repairing the part that is to be supplied.

For large scale contracts / purchase agreements, Dyess Aviation shall ensure that all quality requirements that exceed the scope of normal policies and procedures shall be identified, noted and reviewed accordingly by the quality assurance manager. The sales person shall ensure that the customer's requirements are properly noted and communicated always to ensure Dyess Aviation meets or exceeds all quality requirements as set forth in the contract/purchase order prior to shipment.

#### Quality Assurance Management – Document and Data Control:

Dyess Aviation management shall document any change, revision or update to the policies and procedures manual. This also includes any external reference documents, approved vendor list, corrective action reports, work instructions and training records.

Any employee may draft a proposal for the revision of the Quality Assurance policies and procedures manual. The proposed revision(s) shall be reviewed and agreed upon by management for implementation into the Quality Assurance Management System.

Any revision or update to Quality Assurance Manual forms shall be notated in the appropriate revision level number and date revised. The format for the revision level number shall be 1.0, 1.1, 1.2, etc. All documents and forms shall have the revision level number notated at the bottom of the document.

The quality assurance policies and procedures manual shall be available in hard copy, via the company website and via electronic copy for distribution. All company employees shall keep an electronic copy of the policies and procedures manual, as distributed by the Quality Assurance Manager in their possession for review and compliance. In addition, a copy shall be available on the Dyess Aviation website for review and distribution to customers.

#### **Quality Management – Inventory Control**

The Pentagon 2000 shall be utilized for all inventory control of parts/components. All parts/components received, whether for repair, warranty or consignment sale are identified by a unique inventory code that allows up to minute tracking, identification and segregation from regular inventory.

When a unit is received for repair or warranty, a purchase order shall be created in the inventory system that is used to receive the item into the inventory system. Additionally, a special category shall be assigned to the item to denote that the item is not Dyess Aviation property. The unit is then inspected and photographed for incoming damage and sent to the repair station for evaluation. Any special requests or warranty information shall be notated in the purchase order and inventory system to ensure follow through at the repair station. Finally, a repair order shall be issued that is unique in the inventory system to ensure to ensure the customer supplied part is not mistaken for Dyess inventory.

#### **Quality Assurance Management – Reference Library:**

All hard copy paperwork and electronic documents, such as Technical Orders and Illustrated Parts Breakdowns shall be marked "For Reference Use Only" and shall not be used to perform inspections or to determine a parts airworthiness. In addition, prior to dissemination to any foreign party, the Export Compliance Manager shall ensure that all rules and regulations as set forth by the EAR and ITAR are in compliance.

#### **Quality Assurance Management – Purchasing:**

Dyess Aviation will maintain an approved list of vendors from whom parts and supplies are purchased. In addition, Dyess Aviation will also maintain a list of approved repair facilities that repair, overhaul and recertify aircraft parts to flight airworthiness per the FAA. Vendors shall provide a copy of the companies' quality management policies and procedures, ISO Certificate or like quality management system certifications. In addition, all vendors shall provide update to date credit references and contact information. Repair facilities shall provide a copy or an online hyperlink of the 145 Repair Agency Certificate, current Operations Specifications, FAA Drug Plan Approval Letter and EASA Approval certificate if applicable. The approval of any supplier and repair station shall be valid for two years, DYESS AVIATION - QUALITY ASSURANCE MANUAL POLICY AND PROCEDURES unless otherwise removed for cause. Once a supplier or repair station is approved, their record shall be

notated on the master list, as well as in the inventory system. Approved vendors and repair facilities shall be subject to physical audits at the discretion of the Quality Assurance manager.

During the receiving process, rejected parts shall be identified as non-conforming and the reason for non-conformance shall be noted. The vendor non-conformance report shall identify vendor performance in the areas of part quality, documentation (in accordance with Appendix A) and packing/shipping issues. A review shall be conducted to determine if the supplier should be removed from the approved vendors list, corrective action reports requested, physical audit of facilities and quality assurance program or placed on a case by case approval basis. A quality history will be maintained of vendors.

The sales person shall be responsible for ensuring that any purchase order is entered the Pentagon 2000 and contains all information required for QA acceptance upon receipt. This includes, but is not limited to the following information:

- 1) Part Number
- 2) Description
- 3) Condition
- 4) Quantity
- 5) Price
- 6) Company Name
- 7) Date
- 8) Date Required
- 9) Authorized By
- 10) Purchase Order Number
- 11) Shipping Information
- 12) Terms and Conditions (certification required).
- Parts/Components which are identified as overhauled, repaired or modified have the appropriate signed and dated documentation to substantiate the condition of the part/component
- 14) Parts/Components which have Airworthiness Directives which have been accomplished shall be identified by specific Airworthiness Directive Number, amendment number, date and method of compliance.
- 15) The identification and notation of parts which are commercial or military and which have been subjected to the following conditions:

- a. Extreme Stress
- b. Sudden Stoppage
- c. Head
- d. Major failure of accident involvement

## **Quality Assurance Management – Traceability**

All transactions within the inventory system are linked to a purchase order, sales order or repair order by the Pentagon 2000 system Upon receipt of material, all paperwork, customer specifications and incoming inspection shall be copied and saved for future reference and audits. In addition, an item shall be linked to a stock location once received that can be tracked and audited to ensure any part can be identified by condition and source.

Records shall maintain documentation of traceability for at least 7 years from the date of sale to the customer. Documents shall demonstrate serial number, or lot & batch traceability, when applicable. The Pentagon 2000 shall maintain a filing system such that the data is readily available and identifiable for each customer as noted above.

The Certification of Conformance or Material Certification that is used when a part is shipped shall contain the following information:

- 1) Part Number
- 2) Serial Number
- 3) Condition
- 4) Traceability or Source Data
- 5) Tag Information

#### Calibration

All suppliers who perform test, inspection, troubleshooting, or repair of components which require test equipment are required to comply with a calibration system described by ANS/ISO/IEC 17025:2005 for part 1 and ANSI/NCSL Z540.3-2006 for part 2.

#### **Quality Assurance Management – Receiving**

#### Inspection

A receiving inspection shall be conducted upon receipt of all parts/components and materials. The inspection shall include:

- 1) A check for any obvious physical damage
- 2) Verifying all appropriate plugs, caps or protective coverings are present
- 3) Verifying parts number, including dash numbers and letters, model numbers, substitute part numbers, serial numbers and lot and/or batch numbers match the accompanying

documentation

- 4) Verifying quantity, condition and documentation match the request on the purchase order or repair order.
- 5) Verifying that all documentation is present, properly completed and signed.
- 6) Receiving inspection for aircraft fasteners shall include a visual inspection for general workmanship and presence of certifications from the manufacturer or approved FAA source.
- Unapproved parts should be reported in accordance with FAA Advisory Circular AC 21-29D. Any items reported will be filed with the QA Manager and placed in secured bonded storage with a material rejection tag.
- 8) Any discrepancies will be noted on the purchase / repair order receiver and shall cause the material to be rejected.
- 9) Upon resolution of the discrepancy, the material will either be accepted or rejected with noted reasoning and justification noted. All scrap, BER and non-conforming items not returned to the vendor will be placed in a secure BER Cage.
- 10) Digital pictures of all incoming parts shall be taken and shall show the data plate and all angles of the part.

#### **Quality Assurance Management – Shipping Inspection**

All parts/components and material shall be visually inspected prior to shipment to ensure that they meet the requirements as set forth by the customer's purchase order / contract and appropriate certification of conformance or material conformance. All appropriate documentation shall accompany the part/component and be properly completed and signed. For life limited parts, the parts shall be inspected to ensure that the shelf life has not been exceeded. The Shipping Inspection checklist will be completed for each shipment and retained on file with the shipping records. The inspector shall:

- 1) Review the physical condition of the part for cracks, dents, corrosion or other damage.
- 2) Verify that all appropriate plugs and caps are installed.
- 3) Verify that tape has not been used to cover electrical connections or fluid fittings/openings.

4) Verify that part numbers, including dash numbers and letters, model numbers and serial numbers match the accompany documentation.

5) Verify that packing slips contain all required information required by the customer.

6) Verify that the shipping container and packing are appropriate for the part/component being shipped.

7) Verify that all appropriate required documentation (maintenance release, material certification, traceability documents, etc.) is properly completed, signed and included with the shipment.

Dyess Aviation shall provide a document from an FAA approved repair station or air carrier for each serviceable part indicating that the part is serviceable or overhauled. The document shall contain a maintenance release statement for return to service signed by an authorized individual of the repair station. The maintenance release shall be the original signed document, as inspection stamps or symbols are not acceptable. A copy of the teardown report that describes the condition found at overhaul and list of significant parts replaced shall also be included. For non-civil aircraft parts, a Certificate of Conformance and any other documentation deemed appropriate and as required by customer requirements shall be included. At any time, customers can conduct onsite visits and inspection of material prior to shipment. Any shipment requiring source inspection shall be segregated in the receiving area to facilitate the inspection process.

#### Quality Assurance Management – Control of Non-Conforming Product / Returned Product

The Pentagon 2000 shall provide an application that segregates and identifies serviceable inventory from unserviceable material. Any part/component received and found to be non-confirming or rejected shall be placed in a secured Bond Cage and held until the discrepancy is resolved or the unit is returned to the vendor for credit. The part/component shall be tagged and identified as rejected /non-conforming. Part/Component and material rejections shall be notated on the Purchase Order / Repair Order report that is to accompany the unit until such time the unit is returned to the vendor or disposed.

If any item is deemed to be B.E.R., that material will be help in a secured Bonded Cage until such time the item may be mutilated and scrapped so that the unit cannot ever be used again.

#### **Quality Assurance Management – Scrapping of Parts**

When Dyess Aviation receives an item and it requires repair and/or recertification it shall be forward to an authorized overhaul center. If the overhaul center declares the part to be BER it shall be scrapped in place at overhaul shop or returned to the customer. The customer who provided the part/component for repair shall be notified of its condition and shall authorize its scrapping in place or be returned to them. If scrapping occurs the following shall be reported to Dyess Aviation.

- 1) Model Number of part/component
- 2) Part Number of part/component
- 3) Serial Number of part/component
- 4) Work Order Number
- 5) Method of Destruction
- 6) Witness
- 7) Name plate of part/component shall be returned to Dyess Aviation

The part/component shall be mutilated to the extent necessary to preclude the possibility of it being

DYESS AVIATION - QUALITY ASSURANCE MANUAL POLICY AND PROCEDURES restored and returned to service.

Dyess Aviation shall retain the records of the scrapped part/component for seven years.

#### **Quality Management – Corrective Action Report**

A corrective action report can be issued by anyone when non-conformance occurs. The following procedures shall be followed:

- 1) The root cause shall be identified the cause of the discrepancy.
- 2) The corrective action required to correct the discrepancy shall be described.
- 3) The corrective action required shall include procedures designed to ensure the corrective action is appropriate.
- 4) If appropriate, a containment method shall be selected.
- 5) If they exist, similar discrepancies shall be identified, and the corrective procedure/process shall be implemented to correct the discrepancy.
- 6) The discrepancy and the corrective action shall be monitored, reviewed and given final approval by the QA Manager.
- 7) Monitoring shall be performed to identify the effectiveness of the corrective action.

Refer to Appendix A for the Correct Action Report at the end of this manual for the form.

#### **Quality Assurance Management – Material Control and Packaging**

All parts/components and material shall be handled in appropriate manner and shall be protected from any damage. Special packaging shall be maintained and stored as necessary. Any material that is deemed to be electrostatic sensitive shall be packaged, handled and protected with all due necessary precaution in accordance with ESD Best Practice standards - ANSI/ESD S20.20-2007.

All packaging shall conform to ATA Specification 300 packaging or equivalent. For government contracts, packaging requirements shall be used unless otherwise approved and notated by the contracting officer. Hazmat and hazardous substances shall be properly marked, classed, packaged and marked in compliance with applicable rules and regulations.

All serviceable material will be stored and protected against the environment and damage by being stored in accordance with material requirements. Any unit containing fluid shall have all fluid passages and lines capped or plugged to negate any leakage. Temperature sensitive items shall be stored in an air-conditioned environment (60-75 degrees Fahrenheit). Any Shelf Life Limited part shall be notated and marked as such and removed from inventory immediately upon reaching date of expiration. A tracking sheet shall keep track of all applicable cure dates and expiration dates.

Records shall be maintained for all material identified by batch number and quantities sold, to facilitate

DYESS AVIATION - QUALITY ASSURANCE MANUAL POLICY AND PROCEDURES a manufacturer's recall notification.

Part/component part numbering shall be labeled in such a manner as multiple mart numbers are not

utilized. The part/component part shall be identified with a single part number to ensure that no ambiguity exists. Part/component alternative part numbers may be maintained in files and records, but not on part/component identification tags which identify each part/component.

#### **Quality Assurance Management – Shipping or Receiving Hazmat:**

Dyess Aviation does not ship the following HAZMAT material in accordance with Code of Federal Regulations, Part 173:

- 1) Class 1 Explosives
- 2) Class 2 Gases
- 3) Class 4 Flammable Solid, Spontaneously Combustible, Dangerous When Wet Material
- 4) Class 5 Oxidizers, Organic Peroxides
- 5) Class 6 Poisonous Materials/Infectious Substances
- 6) Class 7 Radioactive Materials

Dyess Aviation will ship the following Part 173 HAZMAT material only under exceptional conditions with those conditions defined in the contract terms and conditions:

- 1) Class 3 Flammable/Combustible Liquids
- 2) Class 8 Corrosive Materials

The two classes shall be shipped in the following manner.

Continental United States – Material shall be shipped by truck freight. The material shall be identified with the proper shipping name and transportation requirements of a hazardous material, in accordance with Code of Federal Regulations, Part 172.

Outside Continental United States – Dyess Aviation shall contract with a HAZMAT specialist company which shall meet the requirements of Code of Federal Regulations, Part 171.12 Import and Export shipments and ICAO regulations.

#### Quality Assurance Management – Quality Audits/ Plan-Do-Check-Act Process

Dyess Aviation shall conduct internal audits as part of the process to ensure the highest standard of quality compliance and conformity. The audit shall be conducted to verify compliance of all internal components of the Dyess Aviation Quality Assurance Policy and Procedures Manual and complies with all applicable requirements of ISO9001:2015 and AC 00-56B standards.

## **Quality Assurance Management – Training**

All personnel involved in the Quality Assurance department as Inspectors shall be trained on the basics of quality control procedures and policies. The training shall be conducted by the Quality Assurance Manager and the employee shall be trained to perform inspection, handling and record keeping procedures. All training, including formal and on the job, shall be documented for all employees. Training requirements shall be determined by the QA Manager. All new employees shall be trained in the Quality Assurance Policy and Procedures within the first 28 calendar days after their first day of employment. All employees shall be re-certified in the Quality Assurance Policy and Procedures every six months based on their hire date. Effectiveness of training for all staff shall be assessed using various performance review and testing methods. Results shall be reviewed by management and if any further training or action is required, decided at that time. An electronic copy of the employee QA training sign off log will be kept in the QA folder.

## **Quality Management – Servicing**

Not Applicable

# APPENDIX A – CORRECTION ACTION REPORT FORM

Corrective Action Report				
Report Control ID	Preparer's Name	Date		
Description of the requirements, process, specification or component/part				
Location, affected material, affected area, etc., requiring corrective action				
Suggested Corrective Action				
Corrective Action Plan	Approval signature / date Corrective action completed signature / dat			
Preventive Action Plan	Preventive action completed Name / Date _			

# APPENDIX B - QUALITY AUDITS/ PLAN-DO-CHECK-ACT PROCESS

Quality Assurance shall conduct quality audits based on the following criteria:

- 1. Once every six months prior to employee re-cerification.
  - a. Employee re-certification shall be performed in which the QA Manual Policy and Procedures shall be reviewed.
  - b. All QA Manual Policy and Procedures references shall be reviewed when updated by the appropriate authority and noted changes which impact the QA Manual Policy and Procedures implemented as part of the certification training.
  - c. Prior to re-cerification training QA issues which have been addressed the previous six months and have been resolved will be used to update the re-certification training.
- 2. Once every four months a quality survey shall be performed to review customer satisfaction. The following shall be reviewed.
  - a. Contract issues
  - b. Part/Component quality
  - c. Shipping
  - d. Non-conforming product
  - e. Packaging
  - f. Customer comments
- 3. Adherence of Sub-contractor Quality Assurance shall be continuously monitored. In particular the following shall be monitored.
  - a. Contract issues
  - b. Part/Component quality
  - c. Shipping
  - d. Non-conforming product
  - e. Packaging
  - f. Adherence to part/component with specifications and cerification.
- 4. Periodic, random, checks shall be performed of the QA procedures within the company to insure that all QA procedures are adhered with.

If a quality assurance issue is noted which impacts more than one policy or procedure of the QA Manual Policy and Procedures, a Plan-Do-Check-Act Cycle in conformance to ISO9001:2015 will be performed. This process is described below.

Figure 1 below illustrates the process which shall be followed when a quality assurance issue is discovered for each input. Each input shall follow Plan-Do-Check-Act process.

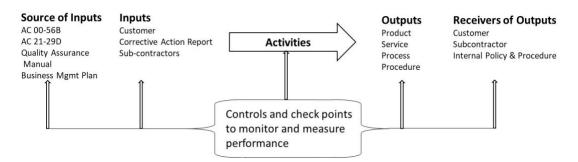


Figure 1 – Outline of Plan-Do-Check-Act (PDCA) Cycle

Plan: establish the objectives of the system and its processes/procedures and the resources needed to deliver results in accordance with customer/corrective action/sub-contractor input and identify risks and opportunities.

Do: Implement was was planned

Check: Monitor and measure processes and resulting products and services against the objectives, planned activities and requirements and report

Act: Take actions to improve performance, as necessary.

The PDCA cycle shall be used for the following.

- 1. Correcting an internal policy or procedure which impact quality assurance
- 2. Correcting a subcontractor issue which impact the quality assurance of subcontracted parts and components
- 3. Starting a new improvement project
- 4. Developing a new or improved service
- 5. Defining a repetitive work process
- 6. Planning data collection and analysis in order to verify and prioritize problems or root causes
- 7. Implementing a change
- 8. Opportunities may arise as a result of a situation favorable to achieving an intended result based on a set of circumstances that allow the company to attract customers develop new services

## PLAN

The first step is to PLAN. During this step the issue is analyzed by examining available data or investigating to gain the data. The data is broken down relative to the needs required to address the issue. There is no specified method to analyize the data since issued may cover wide areas. But the following steps provide a guideline:

- 1. Collect available data
- 2. Perform correlation analysis
- 3. Perform cause and effect analysis
- 4. Perform cost efficiency analysis
- 5. Develop and examine options
- 6. Determine if external resources are required
- 7. Validate result

#### DO

The second step involves "three" DO steps.

- 1. Determine if the result is impacted by standards which establish the Quality Assurance requirements.
- 2. Determine if new or revised instruction is needed in the certification/re-certification training.
- 3. Conduct the required training and re-examine results to determine if modifications to the training is required.

#### CHECK

During performance of audits perform assessments that the training is effective and desired results are achieved. If the assessment indicates that the desired results are not achieved the assessment data becomes input for re-performance of the PDCA cycle.

#### ACT

In this step results are "standardized". When the goals are met, the results are considered standardized.