# NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY CONTRACTOR QUALITY PROGRAM FOR DISTRIBUTION of DoD FLIGHT INFORMATION PUBLICATIONS BOOKS and CHARTS


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# TABLE OF CONTENTS

## CHAPTER ONE

## SYSTEM REQUIREMENTS

## CHAPTER TWO

## PACKAGING AND DISTRIBUTION OF FLIPS



Attachments No. 22 b are two (2) Inspection Checklists for Distribution.

# CHAPTER ONE

# SYSTEM REQUIREMENTS

## SECTION I

## INTRODUCTION AND EXPLANATION OF TERMS

1. **Accuracy.** Users of this manual are cautioned that accuracy of the information in Flight Information Publications (FLIPs) is of paramount importance. Errors in packaging and distribution of FLIPs could jeopardize the safety of not only the aircraft, but could also be the primary factor in loss of life. To achieve maximum accuracy in the distribution of FLIPs, the contractor's Quality Assurance Program shall be organized toward the objective of producing and distributing an error-free product.

2. **Concepts and Policy.** The guidance contained in this Contractor Quality Program for the Packaging and Distribution of FLIP (short title: Distribution Quality Control Manual) is based upon established Department of Defense concepts and policies which provide that:

   a. The producer is responsible for the control of product quality and for offering to the Government or acceptance only those products conforming to contractual requirements.

   b. The Government is responsible for determining that contractual requirements have been complied with prior to the acceptance of the product.

   c. Final product acceptance is the responsibility of the Government.

3. **Quality Standards.** The Governemnt, via the National Geospatial-Intelligence Agency (NGA) has provided quality standards for all distribution phases. They will enable the contractor to prevent defects from occurring by conducting Operator Quality Control (OQC) inspections, judging his/her own performance, and taking corrective action, when appropriate, before extensive correction or rework is required.

4. **Product Standards.** The product standards are contained within the National Geospatial-Intelligence Agency General and Technical Provisions for Distribution of DoD Flight Information Publications Books and Charts which reflect the user's requirements and define the end product. The product specification for FLIP packaging and distribution is within the general provision as pertaining to the mail manuals, which govern all shipping.

5. **Process Standards.** Standards and tolerances are qualitative values which shall be met, within certain limits, for various production processes. No matter how carefully a work function is performed, it can never be exactly duplicated. For this reason, variation shall be recognized and when it is, it shall be determined how much variation is acceptable and at what point rejection should occur. Workers shall know the tolerance range or how far he can deviate from the product standard and still produce an acceptable product.

a. Scope. Process standards cover all approved production methods and indicate the OQC results required in each phase of FLIP production in order to meet the final product standard. Since process standards are based upon the capability or limitations of the production process, they are subject to change as new techniques are developed or as new equipment and materials are introduced. Many of the standards are defined in numerical terms so that work can be measured by use of one or another of the many measuring devices. Other standards can be measured by comparison with examples.

b. Establishment of Tolerances and Standards. Tolerances and process standards are established by NGA to achieve the product quality required.

6. **Nonconformance.** Any imperfection, deficiency, flaw, lack of completeness, or other condition caused by the production/equipment process with the end product at variance with the specifications or standards as established in this manual. The Government is paying for a defect-free product or service. Reasonable tolerance ranges have been established for all production phases. When a departure from specified contract requirement exceeds the tolerance limits in either informational content or workmanship, the product or service is defective and the terms of the contract have been violated. Nonconformances have been classed into three groups and are identified as: (#1) minor, (#3) major, and (#6) critical. The class of nonconformance (#1, #3, or #6) assigned is based on the amount/extent of deviation from the established tolerances.

a. Critical Nonconformance. A serious departure from the quality standards that could reasonably cause the users injury, death, substantial economic loss, or mission failure; or a serious departure from specifications, established standards, or average process capability.

b. Major Nonconformance. A significant departure from quality standards that could materially reduce the usability of the unit of product for its intended purpose; or is a defect that is a significant deviation from specifications, established standards, or average process capability; or is a nonconformance that materially affects the appearance of the product.

c. Minor Nonconformance. One that does not materially reduce the usability of the unit of product for its intended purpose and is not a departure from established standards; or specifications having no significant bearing on the intended use or affects the appearance in only a minor degree.

d. Definitions:

(1) Average Process Capability: The quality of production or product expected in consideration of equipment limitations and material variables as established by the equipment manufacturer and the material characteristics.

(2) Serious Departure: A deviation that exceeds established tolerances or the expected process capability to such a degree that the work performed would be unacceptable by commercial quality standards.

(3) Significant Departure: Those nonconformances exceeding a minor classification but not to the extent that they would be classed as a critical nonconformance.

(4) Minor Departure: Deviations that could go unnoticed in a quality review during OQC or that would only slightly exceed that considered normal for the process.

e. The definition of critical, major, and minor classifications for paper and the assigned demerits for each classification are shown in Chapter 2, Section 3 ).

7. **Nonconformance Evaluation Criteria.** The purpose of nonconformance evaluation criteria is to provide contractor and Government personnel with common standards for use in determining the significance of errors. Each criterion includes a list of possible nonconformances applicable to a major phase of FLIP production. The nonconformances have been classified as #1 (minor), #3 (major) or #6 (critical). They have also been coded for greater ease in referencing for records and reports, and for positive identification in conversation or correspondence. It is obviously not possible to predict and classify all defects that can occur during production.

   Deviations from specifications, standards and/or process capabilities which have not been classified in this manual shall be called to the attention of the Program Manager immediately upon their discovery. A classification will be assigned (based on the severity of the deviation) by the Government, and the Program Manager will notify the contractor as to its disposition.

8. **Acceptable Quality Level (AQL).** The maximum percent defective (or the maximum number of nonconformances per hundred units) that, for the purposes of sampling inspection, can be considered satisfactory as a process average.

9. **Unit of Product.** The item inspected in order to count the number of nonconformances or determine if it satisfies the quality standards; a single chart, book, raw material, process, phase, or operation, a component of a final product, or the final product itself.

10. **Inspections.** The physical examination of the product, data, service, or raw material by visual observation or tests and measurements to determine conformance to the quality standards.

    a. Operator Quality Control (OQC) Inspection. The observations and inspections made by the worker and his/her supervisor during the production of a unit of product to detect nonconformances at the earliest possible time, to check those quality characteristics which cannot be suitably checked during the Independent Quality Control (IQC) inspection and to prevent the release of defective unit of products to the next production operation, phase, or process.

    (1) Workers: Will conduct routine continuous OQC of their operation, phase, or process.

    (2) Inspection/Supervisory Personnel: Will conduct progressive inspections during the course of production. These inspections will be performed by someone other than the person who did the original work and documented on inspection checklists.

    b. Independent Qualily Control (IQC). A final inspection will be conducted by Quality Assurance personnel at the conclusion of each major work phase. This inspection is to ensure the integrity of the OQC and serve as certification of the unit of product against the quality standards.

c. Government Quality Control Surveillance Inspection and Government Verification. This is the continuing analysis and evaluation of the contractors methods, procedures and product verification to ensure the effectiveness of the contractor's quality control.

d. Government Right to Inspect OQC Production. The Government reserves the right to conduct OQC inspections at the contractor's facility during all phases of production. Inspections will not constitute Government acceptance nor will they replace the responsibility for inspections. The purpose of these inspections is to assist the Program Manager in determining conformance to contract requirements.

11. **Inspection Checklists.** Such lists are aids in determining the adequacy and accuracy of. particular items that shall be complete and correct. Inspection checklists will be used by the contractor for all OQC and IQC inspections. Inspection checklists should be modified whenever new problems are encountered in the production process. The contractor shall adopt the most convenient and thorough checklist design for the process involved.

12. **NGA's Inspection Checklists and Record Forms.** The inspection checklists(Attachment 22b) and record forms shown in succeeding chapters of this manual may be reproduced and used by the contractor, or he may design his own checklists and record forms. Contractor designed checklists and record forms shall include all items required by the Government as described herein.

13. **Contractor Quality Control System.** A system of inspections, including records of results,which will assure that all supplies and services submitted to the Government for acceptance conform to contract requirements whether manufactured or processed by the contractor, or procured from subcontractors or vendors.

14. **Contractor Quality Assurance System.** A complete system for assuring that supplies and services are produced in accordance with contract requirements. Such a system has as its purpose the production of acceptable material. The contractor's quality assurance system is a preventative tool, as contrasted with the contractor's quality control system, which may be an after-the-fact corrective tool. Quality assurance includes, but is not limited to, analysis of the Quality Control System of inspection results and recommendations of improvement of the process that generates the unit of product.

15. **Interpretation or Clarification of Quality Control Documents**. The contractor shall contact the Program Manager in the event he requires clarification or interpretation of any quality control document furnished by the Government for use on this contract.

16. **Deviations From Provisions of this Manua**l. Deviations from the quality control provisions of this manual will be permitted only when approved by the Program Manager.

## CHAPTER ONE (cont.)

## SYSTEM REQUIREMENTS

## SECTION 2

## QUALITY ASSURANCE REQUIREMENT

1. **Scope:**

a. Intent. This Quality Control Manual establishes requirements for the contractor's quality assurance program. These requirements pertain to the inspections and tests necessary to insure adequate control of quality throughout all areas of contract performance including, as applicable, the entire process of packaging and shipping. These requirements are in addition to those inspections and tests set forth in subsequent parts of this manual and other contractual documents.

b. Relation to Other Contract Requirements. Compliance with all requirements of the quality assurance program and all detail requirements contained in the contract is mandatory.

c. Conformance. The contractor's Quality Program shall meet all criteria of the Quality Assurance Program set forth in this manual.

d. Contractor Responsibilities. The authority and responsibility of those in charge of the design, production, testing and inspection of quality shall be clearly stated. The contractor shall provide and maintain a quality assurance program that insures that all products and services submitted to the Government for acceptance conform to contract requirements whether manufactured or processed by the contractor or procured from subcontractors or vendors. The contractor's quality assurance program shall be documented and submitted to the Program Manager for review and approval prior to initiation of production. The program will be subject to government review throughout the life of the contract. Written notice of the acceptability or non-acceptability of the quality assurance program will be furnished by the Governemnt through the Program Manager. The contractor shall notify the Program Manager in writing of any change to his approved quality assurance program. Written notice of acceptability shall be received from the Government through the Program Manager before the contractor can implement any change.

The quality assurance program shall also include effective execution of responsibilities shared jointly with the Government or related to Government functions such as Government source inspection as applicable.

2. **Quality Assurance Management:**

a. Organization. Quality management positions shall be clearly defined by the contractor. Personnel performing quality functions shall have sufficient, well-defined responsibility, authority and organizational freedom to identify and evaluate quality problems and to initiate, recommend or provide solutions. Management should regularly review the status and adequacy of the quality

assurance program. The term "quality assurance program requirements" as used herein identifies the collective requirements of this manual. It does not mean that the fulfillment of the requirements of this manual is the responsibility of any single contractor, organization, function, or person.

b. Initial Quality Planning. The contractor, prior to contract performance, shall conduct a complete review of the requirements of the contract to identify and make timely provision for the special controls, processes, test equipment, fixtures, tooling and skills required for assuring product quality. The initial planning shall recognize the need to update inspection and testing techniques, instrumentation and correlation of inspection and test results with manufacturing methods and processes. This planning shall also provide appropriate review and action to assure compatibility of manufacturing, inspection, testing and documentation.

c. Work Instructions. The quality assurance program shall assure that all work affecting product quality will be prescribed in clear and complete documented instructions of a type appropriate to the circumstances. The instructions shall ensure inspection and test of materials, work in process and completed articles as required by this document. Product approval and rejection criteria shall also be provided. The instructions are intended to serve management, inspection and production personnel; and they shall be available to all levels of production.

d. Records. The contractor shall maintain and use all records or data essential to the effective operation of their quality control program. These records shall be made available for review by the Program Manager and copies of individual records shall be furnished as required in subsequent parts of this quality manual. Records are considered one of the principal forms of evidence of product quality. The quality assurance program shall assure that records are complete and reliable. Inspection and testing records shall, as a minimum, indicate the nature of the observations together with the number of observations made, and the number and type of nonconformances found.

Also, records for monitoring work performance shall indicate the acceptability of work or products and the action taken in connection with nonconformances. The quality assurance program shall provide for the analysis and use of records as a basis for management action Contractor and sub-contractor production records of quality control and inspection shall be retained by the contractor for the period of one (1) year after the completion or termination of the contract.

e. Corrective Action. The quality assurance program shall be designed to promptly detect and correct assignable conditions adverse to quality. Operations which could result in defective supplies, services, facilities, technical data, standards or other elements shall be identified and corrected. Corrective action shall extend to the performance of all uppliers and vendors and shall be responsive to data and products forwarded from users.

Corrective action shall include as a minimum:

(1) Analysis of data and the examination of packaging products scrapped or reworked to determine extent and causes of the defective package material;

(2) Analysis of trends in processes or performance of work to prevent nonconforming products;

(3) Introduction of required improvements and corrections, and initial review of the adequacy of such measures and monitoring of the effectiveness of corrective action taken.

**3. Control of Specifications and Changes:**

a. Control of Guidance Documents. A procedure shall be maintained by the contractor to assure that the latest applicable specifications, technical requirements, and contract change information shall be available at the time and place of contractor inspection. As soon as revised specifications or changes become effective, the contractor shall assure this information is given to all personnel involved and obsolete information is removed from all points of issue and use. A means of recording the above actions shall be employed and be available to the Goverment.

b. Measuring and Testing Equipment. The contractor shall provide and maintain measuring and testing equipment necessary to ensure that the materials conform to industries standards and regulations governing the various shipping methods. In order to ensure continued accuracy, this equipment shall be calibrated at established intervals against certified standards which have known valid relationships to national standards and ensure that all regulations are current. The contractor's personnel shall be made available for operation of such equipment for accuracy verification.

c. Use of Contractor's Inspection Equipment. The contractor's measuring and testing devicest shall be made available for use by the Government when required to determine conformance with contract requirements. If conditions warrant, contractor's personnel shall be made available for operation of such devices and for verification of their accuracy and condition.

4. **Inspection:**

a. Inspection During Manufacture. The contractor shall establish and maintain inspection points in the production process satisfactory to the Program Manager to assure continuous control of quality of the product.

b. Complete or 100% Inspection. Specific production phases, such as packaging and distribution, shall be inspected 100%.

5. **Nonconforming Material.** The contractor shall establish and maintain a system for controlling nonconforming material and procedures for identifying, segregating, presenting and disposing of reworked or repaired materials. Rework of nonconforming materials shall be in accordance with documented procedures acceptable to the Program Manager. The acceptance of nonconforming materials is the Program Manager's prerogative. All nonconforming materials shall be positively identified to prevent use, shipment or intermingling with conforming materials.

6. **Sampling Inspection.** Procedures used by the contractor to determine quality conformance of materials by sampling will be subject to approval by the Program Manager.

7. **Inspection Provisions.** Alternative inspection procedures and inspection equipment may be used by the contractor when such procedures and equipment provide the quality assurance required by the contract. Prior to applying such alternative procedures and equipment, the Program Manager must approve of their use.

8. **Government Inspection at Subcontractor or Vendor Facilities:**

a. Government Right to Inspect at Source. The Government reserves the right to inspect at the source, supplies or services not manufactured or performed within the contractor's facility. Government inspection will not constitute acceptance, nor will it in any way replace contractor inspection or otherwise relieve the contractor of their responsibility to furnish an acceptable end product. A Government inspection of a subcontractor's plant cannot be used by the contractor as evidence of effective inspection by such subcontractor. The purpose of this inspection is to assist the Program Manager to determine the conformance of supplies or services with contract requirements. Such inspection can be requested only by the Program Manager or under his/her authorization.

b. Government Review of Purchased Documents. All purchased documents and reference data shall be available for review by the Program Manager to determine compliance with the requirements for the control of such purchases. The Program Manager will provide the instructions for furnishing purchasing documents for government inspection.

9. **Receiving Inspection.** Subcontracted or purchased supplies shall be subject to inspection by the contractor after receipt to ensure conformance to contract requirements. The contractor shall be responsible for any corrective action required between the contractor and his supplier.

10. **Government Evaluation.** The contractor's quality assurance program and materials generated by the program will be subject to evaluation and verification by the Program Manager. As a result of this evaluation, the Government may request from the contractor documented evidence of corrective action taken as outlined in paragraph 2.e. when nonconforming products are detected. Due to the paramount importance of information contained in the FLIP products, timely submission of corrective action documentation is essential.

## CHAPTER ONE (cont.)

## SYSTEM REQUIREMENTS

## SECTION 3

## QUALITY ASSURANCE DESCRIPTION

1. **Description Requirements.** The contractor shall develop a program system at his own expense which meets all quality requirements provided in Section 2. This program system shall be submitted in writing to the Program Manager for acceptance prior to contract performance. The contractor's quality assurance program can be disapproved whenever the system's procedures do not accomplish their objective.

2. **Quality Control/Quality Assurance System.** Attachments 22b are Distribution Checklists(2) the contractor may use as their checklists or design one of their own.

3. **Contractor Quality Assurance Program Data Package.** A basic quality assurance program data package is supplied, see enclosure. If the contractor elected to adopt the six Quality Control/Quality Assurance System, the information that applies to this contract shall be supplied. When a contractor chooses not to adopt the NGA system, it is required they develop a Company Quality Program manual. (See paragraph 4.c., this section.)

4. **System Development and Documentation.** The following information is furnished as additional guidance in developing and documenting an acceptable quality assurance program:

a. Documenting Company Policy on Quality. It is suggested that the company policy on quality be formally documented as the first step in developing a quality assurance program. The following statement of policy is a good example:

*"It is the policy of BLANK COMPANY to produce products on schedule with quality requirements and enhance the integrity of our name. Quality will be controlled modern quality control system which will provide for the identification and correction of basic causes of nonconformances in our surveillance of both our in-house and subcontractor or vendor quality control appraisal systems; preparation procedures and quality standards applicable to specific products; analysis of nonconformances; and if nonconformances are discovered. "*

b. Implementing Company Policy on Quality. The formal statement of policy establishes a quality goal. It then remains to implement this policy through the media of written procedures or instructions so that all who perform work functions will clearly understand what is required of them.

c. Company Qualitv Program Manual. If this option is selected, the contractor shall develop a quality control/quality assurance manual. This manual will include the policy, responsibilities, standards, techniques, procedures, work instructions, inspection checklists, nonconformance criteria, subcontractor quality interface, and other general information concerning the quality program of the company. Manner

of documentation is the prerogative of the contractor. It is required that, as a minimum, the questions contained in the Enclosure, Contractor Quality Program Data Package, be clearly and completely answered to the satisfaction of the Program Manager, and all requirements of the NGA Contractor Quality Program for Distribution of DoD Flight Information Publications Books and Charts are met.

d. Further Information and Guidance. If further information or guidance is required in documenting or developing the quality assurance program, inquiries should be directed to the Program Manager.

# CHAPTER TWO

# PACKAGING AND DISTRIBUTION

## SECTION 1

## GENERAL

1. **Purpose and Scope.** This part of the manual supplements Chapter One and provides additional details concerning contractor responsibilities in managing an effective system of quality control for packaging and distribution of FLIP products. Basic information has been provided on Key Inspection Stations, Sampling, Inspection, Records and Acceptance Criteria. Detailed guidance on the quality control of each major production operation will be found in the chapters that follow.

2. **Basic Concepts.** The quality control system used in the packaging and distribution phases of the contract shall ensure that:

a. The product is produced with raw material (tape, cartons, etc.) which have been certified as meeting industry standards/specifications.

b. The product is in conformance with all specified requirements of the contract.

c. The product is distributed to the correct recipient in exact quantities (except for overage allowance for prepacks) no later than the date specified by the Government.

3. **Inspection Stations.** The contractor shall establish and maintain a system of inspection at key points in the packaging and distribution processes. The list of inspection stations shown in Figure I are key points in the inspection system. They shall be installed and maintained as an integral part of the production process. Omission of one or more stations is, of course, permissible when a process is not part of an individual product requirement.

**Figure 1 Inspection Stations**

| Station | Primary Quality Characteristics |
|---|---|
| Raw Materials | document preparation |
| Shipping Documents | count and product |
| Order Pulling | placement and address |
| Labeling | material and sealing |
| Packaging | Accuracy and accountability (negotiable) |
| Distributing | shipment release |

*****Consolidation of Stations. Inspection stations may be consolidated if the production process used by the contractor and the physical location of the operations in question justify the consolidation; however, all operations consolidated shall be inspected.

4. **Sampling.** Sampling procedures will not be used in the inspection of shipping document preparation, order pulling, labeling, or packaging and distributing phases of production process.

5. **Inspection.** The contractor shall perform production and quality assurance surveillance inspections, as described in Chapter 1, Section 1, paragraph 10, for each major operation of the production process. The contractor shall also use inspection checklists as noted in Chapter 1, Section 1, paragraph 12. Each station shall receive 100% inspection for the process involved. Inspection operations shall be scheduled so that ample time will be available if corrective action is required. Materials and workmanship shall be evaluated to assure that they conform to the requirements of the general specifications, and also the standards and tolerances shown in the sections that follow. Items processed in the following phases of production require complete or 100% inspection:

a. Receipt of Raw Materials
b. Order Pulling
c. Labeling
d. Packaging
e. Distributing.

6. **Inspection Records, Quality Reports, and Raw Materials Reports.** Records and reports submitted by the contractor shall be in accordance with the provisions of Chapter 1, Section 2, paragraph 2d and the following:

a. Inspection Records and Quality Reports:

(1) Quality reports are due to the Program Manager seven (7) calendar days after the date of distribution.

(2) A separate inspection report shall be submitted for each volume, each book, each chart, etc. Reports shall contain as a minimum, the information noted below:

(a) Contractor's name.

(b) Effective date of product.

(c) Identification of book or chart inspected by number and/or title.

(d) Name of the contractor, subcontractor, or element performing the inspection.

(e) Inspector's I.D.

(f) Date of inspection.

(g) Quantity produced of the inspected product.

(h) The quantity of nonconformances in each classification for each inspection station. Only **report product nonconformances, exceeding** the AQL, which were distributed.

(i) Explanation of all nonconformances falling into either major classifications are critical for each inspection station.

(j) Description of corrective action taken for all #6 defects and all #3 defects that exceed the AQL. Do not just report Corrective Action Taken (CAT). Give a detailed description of what was done to correct the nonconformance to prevent it, or similar nonconformances, from recurring. Utilization of Enclosure 2 will help in completing this analysis.

(k) Percent defective for each production operation.

(1) Name of person approving inspection.

(m) Action taken when critical defects are discovered.

(n) Whether inspection is OQC or IQC.

(o) Description of raw material, purchase order number, lot number and date of purchase.

(p) Date and time distribution was completed.

(3) A sample NGA Quality Report form is shown in Figures 2. This form "Quality Report Packaging and Distribution Operation" has been included in this manual as an aid in preparing the required inspection records and reports. Each section of this form deals with a category of information. Portions of the form and a detailed explanation regarding use are contained in this and succeeding chapters. If the contractor elects to use this form in accordance with the provision of Chapter 1, Section 1, paragraph 12, the Government will furnish a suitable reproduction copy.

Figure 2-NGA Quality Report for Packaging and Distribution Operation (reduced size to fit)

| **NGA QUALITY REPORT<br>PACKAGING AND DISTRIBUTION OPERATION** | | **Date of Report** | **Jacket #** |
|---|---|---|---|
| **Contractor:** | **Mode of Transit:** | | **Audit By:** |
| **Location:** | **Effective Date:** | **Contract No.** | **Approved By:** |

| **CERTIFIED RAW MATERIALS USED**<br>Container: Meets requirements based on certification and/or test results.<br>Meets requirements based on certification and/or test results. | Yes | No |
|---|---|---|
| | | |
| | | |

| | **OQC** **Shipping Documents** | | **IQC** | | |
|---|---|---|---|---|---|
| # **Inspected** | **Total NonConfo** | **Total % NonConformances:** | # **Inspected** | **Total NonConformances:** | **Total % NonConformances:** |
| _____ | #3_____ | #3_____ | _____ | #3_____ | #3_____ |

| | **OQC** **Pulling / Packing** | | | **IQC** | | | |
|---|---|---|---|---|---|---|---|
| # **Inspected** | **Total NonConfo** | | **Total % NonConformances:** | # **Inspected** | **Total NonConformances:** | | **Total % NonConformances:** |
| _____ | #3_ | #6_ #3_____ | #6_____ | _____ | #3_____ | #6_____ | #3_____ #6_____ |

| | **OQC** **Packaging** | | | **IQC** | | | |
|---|---|---|---|---|---|---|---|
| # **Inspected** | **Total NonConfo** | | **Total % NonConformances:** | # **Inspected** | **Total NonConformances:** | | **Total % NonConformances:** |
| _____ | #3_ | #6_ #3_____ | #6_____ | _____ | #3_____ | #6_____ | #3_____ #6_____ |

| | **OQC** **Labeling** | | | **IQC** | | | |
|---|---|---|---|---|---|---|---|
| # **Inspected** | **Total NonConfo** | | **Total % NonConformances:** | # **Inspected** | **Total NonConformances:** | | **Total % NonConformances:** |
| _____ | #3_ | #6_ #3_____ | #6_____ | _____ | #3_____ | #6_____ | #3_____ #6_____ |

| | **OQC** **Metering** | | | **IQC** | | | |
|---|---|---|---|---|---|---|---|
| # **Inspected** | **Total NonConfo** | | **Total % NonConformances:** | # **Inspected** | **Total NonConformances:** | | **Total % NonConformances:** |
| _____ | #3_ | #6_ #3_____ | #6_____ | _____ | #3_____ | #6_____ | #3_____ #6_____ |

| | **OQC** **Distribution** | | | **IQC** | | | |
|---|---|---|---|---|---|---|---|
| # **Inspected** | **Total NonConfo** | | **Total % NonConformances:** | # **Inspected** | **Total NonConformances:** | | **Total % NonConformances:** |
| _____ | #3_ | #6_ #3_____ | #6_____ | _____ | #3_____ | #6_____ | #3_____ #6_____ |

**REMARKS:**

For all # 6 nonconformances and those # 3 nonconformances exceeding the AQL (Acceptable Quality Level),

Provide the following information and the respective inspection checklist involved:

- Product involved-Nonconformances description - Corrective action taken.

(4) The Heading portion of the Quality Report (Figure 2) should be filled in. An explanation of the specific information required is as follows:

(a) **Date of Report.** If the form is used in the contractor's plant for recording on-site inspection data, record the date that the inspections are made in this block. If it is a final Quality Report to be submitted to NGA, record the date that the report is finalized by the contractor's Quality Assurance Staff.

(b) **Contractor and/or Subcontractor Location.** Where more than one plant is involved in a contract, show the plant's location.

(c) **Product Effective Date.** Record the product effective date.

(d) **Quantity.** Enter the quantity of orders pulled, packed and shipped.

(e) **Audit By.** Enter name of contractor's inspector.

(f) **Approved.** Name of the individual who is responsible for overall quality assurance should be entered in this space.

(5) Forward one copy of the letter of transmittal and one copy of the Quality Report to the Program Manager

(6) The Certified Raw Materials Used portion of the Quality Report should include the following information:

*Container and Type.* The yes/no conformance data recorded in the #I Inspection Checklist raw materials can be recorded directly onto the Quality Report. The format and data requested on the Quality report and the report. The format and data requested on the Quality Report and the #I Inspection Checklist for Raw Materials are similar for ease of recording. The contractor is required to maintain current manufacturers certifications/test results showing that the containers and tape meet Industry standards.

7. **Acceptance Criteria:**

a. Quality Acceptance. Acceptance for quality shall be in accordance with the AQLs shown in Figure 3.

Products containing nonconformances beyond the AQLs may be accepted at the option of the Program Manager at a reduced cost which will be negotiated by the Contracting Officer.

b. AQL Adjustment. Conscientious efforts to eliminate nonconformances and control quality, results in the production of products that are consistently better than the AQL. The AQL is adjusted by the Program Manager to benefit the contractor. Adjustments are taken into consideration when final acceptance is made. The rules for adjustment are as follows:

(1) If the AQL allowed for #6 nonconformances is not reached, the unused portion may be added to the AQL allowed for #3 nonconformances. The increased AQL for the #3 nonconformances is the adjusted AQL.

(2) Unused differences are never shifted from a #3 to a #6.

c. Critical Nonconformance Discovered Before Distribution. The contractor shall notify the Program Manager when a #6 nonconformance is discovered prior to distribution, for which corrective action by the contractor is not anticipated. The Program Manager will then decide upon a desirable disposition for the nonconformed products. Products with known #6 nonconformances shall never be distributed, unless this action has been directed by the Program Manager.

d. Critical Defect Discovered After Distribution. In the event products have been distributed and the contractor discovers that #6 nonconformances exist in the products, he shall immediatelv notify the Program Manager.

## CHAPTER TWO (cont.)

## PACKAGING AND DISTRIBUTION

## SECTION 2

## PACKAGING AND DISTRIBUTION

1. **General.** This section contains guidance for the control of quality in the packaging and distribution of FLIPs and related publications of the contract order. The primary objective of distribution control is to deliver the FLIP product required for mission accomplishment to the ultimate recipient not later than three (3) days prior to the issue effective date with 100% reliability. Refer to appropriate general and technical provision which will provide additional information on deadlines, along with distribution requirements.

2. **Process Standards.** The standards for distribution relate to preparation of shipping documents, selecting required items in proper quantity, labeling, packaging, metering and release of copy for transporting to the correct destination in a timely manner:

a. Shipping Documents. The timely receipt of documentation, the annotation of required information, the preparation of packing lists will contain the following: account number, product name, tracking information, quantity, unit cost, total cost, cost of shipment) etc., and the distribution of these shipping documents. The Government will perform a post-distribution quality assurance audit/inspection of the distribution information provided by the contractor.

b. Order Pulling. Every order shall be filled with the exact quantity indicated by the NGA supplied database file.

c. Labeling. The correct application of stamps and labels, as well as annotation of markings onto proper containers/packages, shall meet exact specifications.

d. Packaging. The method of packaging, materials utilized, and container sealing shall be in accordance with specifications that meet or exceed industry standards. Each box will contain a packing list.

e. Distributing. Every order released to the carrier transport system shall be according to the distribution schedule pertinent to the contract.

3. **Inspection.** Inspection shall be made, as indicated, for each of the following stations of the distribution process. Nonconformances discovered during inspection shall be classified according to the Nonconformance Evaluation Criteria contained in paragraph 4, corrected, and reported in the Quality Report submitted to the Program Manager. Application and completion of an "Inspection Stamp" on each package will provide final verification that each inspection phase was accomplished.

a. Shipping Document Preparation. All shipping documents shall receive 100% inspection:

(1) CBL (if used by contractor) shall be typewritten, properly distributed, and contain the following information:Number and kind of package.
(a) Container number.
(b) Weight of each lot.
(c) Total pieces and poundage.

(2) Freight labels shall be completed with piece number, lot number, and weight for each individual piece.

(3) Packing lists shall be prepared in three (3) copies. One copy to be included in the last container of each lot, one copy retained by the contractor and one copy returned to the Program Manager. The list shall ontain the following:

(a) CBL number.
(b) Account number or address of consignee.
(c) Abbreviated title of publication.
(d) Carton number.
(e) Quantity in each container.
(f) Totals of each column.

(4) Postal documents shall be completed.

(5) Shipping documents shall be correctly distributed.

b. Order Pulling. Every order filled against the Government supplied distribution database receives 100% inspection for count and content. The 100% inspection for distribution of one item (one book, one chart, one collated set, etc.) shall be done as follows:

(1) 100% inspect the labels to assure they are a quantity of one and for the same item.
(2) 100% inspect the stock to assure it matches the labels.
(3) Assure outdated or incorrect stock and/or labels are not utilized.
(4) Verify label and stock when placing in container.

**NOTE:** The verification of stock and labels shall be made by someone other than the order filler.

c. Labeling. Every package shall receive 100% inspection for placement of labels, meter tapes, postal forms, critical to flying safety stickers, as well as correct shipping weight annotation, account number, and bill of lading numbers on the freight labels.

d. Packaging. Every package shall receive 100% inspection for proper sealing, banding, and adequate labeling, properly dimensioned containers, as well as authorized packaging materials (containers, fillers, and etc.).

e. Distributing. All shipments shall be reviewed to ensure release to the carrier by specified deadlines, segregation/separation of APO/FPO shipments, correct matching of CBLs with shipments, containers are properly stacked and secured to skids when required.

4. **Nonconformance Evaluation Criteria:**

| **Code** | **Nonconformance Description** | **Class** |
|---|---|---|
| ***Shipping Documents*** | | |
| 257-1 | Shipping document receipt not validated. | 3 |
| 257-2 | CBLs are not properly completed by typewriter or billing machine, do not contain all required entries (number and kind of package, container number(s), weight of each lot by account number, total pieces, and pounds for each CBL) | 3 |
| 257-3 | Freight labels do not contain all required information(piece number, lot number, and individual container weight. | 3 |
| 257-4 | Packing list for freight shipments not prepared in proper quantities, i.e., two copies; one copy retained by contractor, and one copy included with shipment. | 3 |
| 257-5 | Packaging lists do not contain all required entries (CBL numver, account number or address of consignee, abbreviated title of publication, container number, quantity of products each container, columns totaled. | 3 |
| 257-6 | CBLs not distributed or distributed in correctly after obtraining signature/date of carrier (yellow copy retained by contractor, first four copies (attached together) given to carrier. | 3 |
| 257-7 | Postal document entries incomplete | 3 |
| ***Order Pulling*** | | |
| 257-9 | Selective distribution with overage. | 3 |
| 257-10 | Selective distribution with shortage | 6 |
| 257-11 | Prepackaged distribution with overage | 3 |
| 257-12 | Prepackaged distribution with shortage | 6 |
| ***Labeling/Packaging*** | | |
| 257-13 | Postal forms or labels missing, illegible, mislabeled. | 6 |

| | | |
|---|---|---|
| 258-1 | "Critical to Flying Safety" labels not applied to all four sides of container or lower left of envelope. | 3 |
| 258-2 | Postal forms, labels, over flap joints or obscured. | 3 |
| 258-3 | Incorrect piece numbers, lot numbers, and container weight . | 3 |
| 258-4 | Blank labels used indiscriminately (not as replacement for torn or damaged labels). | 3 |
| 258-5 | Improper sealing, inadequate packaging or banding, or use of noconformance materials. | 3 |
| 258-6 | Use of unauthorized materials | 6 |
| 258-7 | Containers filled only to 80-90% capacity with FLIP items. | 3 |
| 258-8 | Containers filled less than 80% of capacity with FLIP items. | 6 |
| 258-9 | Container's weight exceeds specified limits | 6 |
| 258-10 | Container's dimensions exceed specified limits. | 6 |
| 258-11 | Packing list portion of label not enclosed within container/last carton of multiple carton shipments or applied with address portion of label to last container's exterior. | 3 |
| ***Distribution*** | | |
| 259-11 | *Failure to release or deliver to carrier system or gateways by specified deadline. | 6 |
| 259-12 | Advance copy shipments by proper mode not made within 4 hours after contractor completion of last product | 6 |
| 259-13 | GMR, Dulles Airport, Washington, DC shipment not available for carrier pickup by specified time/date. | 6 |
| 259-14 | Carriers not notified by contractor in timely manner of those shipments available for pickup. | 6 |
| 259-15 | Contractor not obtaining carrier's signature and date on CBLs when making pickup. | 3 |
| 260-1 | Containers/cartons not stacked and secured to skids when applicable. | 3 |
| 260-2 | Failure to verify carton piece count on CBL when released to carrier | 6 |

| | | |
|---|---|---|
| 260-3 | APO/FPO consolidations not sorted, separated, and segregated. | 6 |
| 260-4 | Correct placards not properly affixed to shipment | 6 |
| 260-5 | Failure to schedule delivery appointment with USPS gateways (ISC). | 6 |
| 260-6 | Failure to have APO/FPO consolidations delivered to USPS gateway by specified time (ISC). | 6 |
| 260-7 | Failure to obtain signed receipt showing date/time of delivery to USPS gateway (ISC). | 6 |
| 260-8 | Failure to notify gateway information to the Program Manager within 24 hours of scheduled delivery time. | 6 |
| 260-9 | Failure to notify consignees making their own pickup when shipment is available for pickup. | 6 |
| 260-10 | Failure to make distribution. | 6 |

***NOTE: A failure to release on schedule will not result in a nonconformance assignment if the contractor provides for, and utilizes, a more rapid means of transport that will ensure on-time delivery of copy to ultimate recipient.**

**5. Quality Report.** The part of the NGA FLIP Quality Report provided for this purpose is shown in Figure 2, and the information required is outlined in paragraphs a, b, c, and d. The inspection checklists used to accumulate the information relative to the FLIP Quality Report can be seen in this section.

a. Number of Orders Distributed. Show the total number of orders/distributions made.

b. Number of Nonconformances. Report total nonconformances and describe the nonconformances and corrective actions taken in each case in the "Remarks" section. The explanatory remarks are considered important in evaluating the inspection efficiency of the quality program. Give a full explanation of all corrective actions. Utilization of Enclosure 2 will help in this analysis.

c. Percent of Orders Inspected by Quality Control Staff. This item is self explanatory.

d. Distribution Date/Time. Report date and time "final" distribution/release was made as identified in the contract.

**Figure 3. AQLs for Packaging and Distribution**

**ACCEPTABLE QUALITY LEVELS**

| **Process (as applicable)** | **Percent Defective** | |
|---|---|---|
| **#3** | **#6** | |
| Raw Material | 0% | 0% |
| Shipping Documentation | 3% | 0% |
| Order Pulling | 3% | 0% |
| Labeling | 0% | 0% |
| Packaging | 0% | 0% |
| Postage/Freight | 0% | 0% |
| Distributing | 0% | 0% |

The above AQLs shall be maintained on both normal and reduced sampling. If either sampling indicates the AQL is being exceeded, the contractor shall take whatever corrective action necessary to bring the production lot within the AQL, including additional sampling, 100% inspection, sorting and/or reworking, if necessary. When computing percent nonconformance, round off to nearest tenth of a percent.

**ENCLOSURE 1**

**CONTRACTOR QUALITY ASSURANCE PROGRAM DATA PACKAGE PACKAGING AND DISTRIBUTION**

Contractor:

Address:

Subcontractor (If applicable):

Name/Address:

Products/Functions Performed:

**1. ORGANIZATION:**

a. Sketch or provide as an enclosure, the company's organization chart. Give names and titles of key personnel.

b.Is the inspection function independent from production to the extent that the inspectors have the freedom and authority to identify and evaluate quality problems and to initiate, recommend, and provide solutions?

**2. QUALITY ASSURANCE:**

a. Inspectors report to whom? Do they report their findings to someone who has the authority to see the corrections are made?

b. What ratio will be used with respect to the number of employees assigned to inspection and the number of employees assigned to production/distribution?

c. How many inspectors do you have on board?

d. Do you have a source for additional personnel to handle peak workloads?

e. What is this source?

f. How much training and experience have your inspection personnel had, especially with respect to the type of products produced for the Government?

g. What provisions have been made to train inspectors, particularly in the event there is a change of personnel during contract performance?

h. Inspection Records. Records are objective evidence of quality. They are data for quality analysis which deals with the investigation and study of the inspection system, the products, the processes, and the people. Quality analysis is required in order to determine the causes, types, frequency, significance and the ability to control errors and the quality level achieved. The record forms in the NGA Contractor Quality Control/Quality Assurance Manual should be used; however, if the contractor elects to design his own inspection record forms, they shall include all data shown on NGAs suggested forms. If contractor-designed forms are to be used, furnish copies.

i. Inspection. Details of the inspection system shall be related to the minimum inspection requirements for specific products or services as outlined in Chapter 2 of this Manual.

(1) What are the planned points of production inspection? (Use production plan to illustrate the points of inspection that will apply to each production process.)

(2) What will your procedure be when one of your inspectors finds a critical nonconformance in a product during OQC or IQC?

(a) OQC

(b) IQC

j. Maintenance and Calibration of Measuring and Test Equipment.

(1) What measuring and test equipment will be used on this contract? (List and identify each device and explain where it is to be used.)

(2) By what method and at what frequency will equipment be calibrated?

(3) How will measuring and test equipment be controlled at subcontractors?

k. Are you aware of the quality control requirements in the NGA Contractor Quality Program for Distribution of DoD Flight Information Publications Books and Charts manual? Will your existing Quality Control System fulfill these requirements?

**3. ADMINISTRATIVE CONTROLS:**

a. Specifications and the NGA Contractor Inspection System Instruction:

(1) Submit a flow chart which identifies individual equipment utilized and when each phase of your production begins and finished.

(2) How will specifications in the NGA Contractor Quality Program for Distribution of DoD Flight Information Publications Books and Charts, changes, exhibits, etc., be controlled during the production cycle?

(3) How and where will this information be filed? (Will it be readily available to personnel during overtime or night shift production?)

(4) How will this information be distributed to production line, inspection and management personnel so that all elements, including subcontractors, are alerted to requirements on an up-to-date basis?

b. Work Instructions. Work instructions or job plans should indicate the steps required to complete the assignment, the order of execution, and any deviations from normal production procedures. Work instructions may also include schedules, inspection points, specifications data, type of materials to be used, and any other information needed during the production cycle.

(1) How will your work instructions be documented for all functions related to this contract? (Furnish a representative example.)

(2) Will these instructions be written so that an employee will know exactly what he/she is supposed to do? If not, explain.

(3) How and where will these instructions be filed?

(4) What are the provisions to assure that employees are reminded to refer to the instruction during the accomplishment of work functions?

(5) What is the procedure whereby employees are periodically asked to explain the instructions to assure that they really know what they are supposed to do?

**4. OPERATIONS AND PERSONNEL. DISTRIBUTION OPERATIONS:**

a. Distribution Personnel:

(1) What is the size of the work area(s) that you will employ for the distribution of FLIP products?

(a) Bulk storage?

(b) Mail and freight processing/distribution area?

(c) Storage space for finished shipment awaiting pickup or turnover to carriers?

(d) Truck dock (square feet and doors/bays)?

(2) Is space and layout such that work functions and inspections can be efficiently performed? If not, explain.

(3) How will you protect FLIP products from loss or other damages while they are in your possession?

c. Distribution Equipment (indicate number and condition):

(1) Postage metering systems? (List components and operational capacity):

(2) Mechanical scales?

(3) Conveyor lines?

(4) Hydraulic hand lifts or fork lifts?

(5) Tape dispensers?

(6) Banders (metal or plastic strap)?

(7) Shrink wrap equipment (list capacity)?

(8) Skids/Pallets?

(9) At what frequency will scales be calibrated?

(10) What is back-up emergency maintenance for postage metering systems?

(11) What security do you intend to provide for postage meter heads?

d. Materials Requirements:

(1) Boxes (O/Sea's, Domestics)

(2) Metering supplies (tape, ink, AD plate, etc.)

(3) Packing tape (filament, etc.)

(4) Envelopes.

e. Postal Facilities:

(1) Location of nearest post office accepting zone-related metered mail?

f. Airport Facilities:

(1) Location of nearest airport having direct flights departing same day as delivery date for shipments consigned to London, England?

(2) Location of nearest airport having direct flights departing same day as delivery date for shipments consigned to Frankfurt, Germany?

(3) How will shipments be delivered to Chicago, IL? From what airport if flown?

(4) How will shipments be delivered to Miami, FL? From what airport if flown?

**5. FIRE PROTECTION:**

a. What type of fire protection do you have in the production areas?

**6. TRANSPORTATION:**

a. Is there any problem in transportation which might come up between you and another subcontractor that could affect distribution?

**7. PRODUCTION CONTROL:**

a. What means do you have for production control scheduling that will assure NGA of delivery on time?

b. What is your man-hour estimate and calendar time schedule for order pulling, packaging, metering and distribution operations?

c. Do you have any other Government contract or commercial commitment that will interfere with performance of this contract?

d. Describe how you will identify, segregate, and dispose of nonconforming material to prevent its use, shipment, or intermingling with conforming materials.

**8. ENVIRONMENTAL REQUIREMENTS:**

Adequate electrical/heating service, etc. Other requirements/contracts that would interfere with performance of this contract.

**9. REMARKS:**

**Signed** _____

**Title** _____

**Date** _____