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Product Realization Plan

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1.0 GENERAL

1.1 BASIC REQUIREMENTS

This Product Realization Plan (PRP) applies to hardware-software and ensures that Good Manufacturing Practices (GMP) and Quality Assurance requirements are satisfied throughout all phases of the project.

1.2 SCOPE OF REQUIREMENTS

This PRP describes the methods and controls to be implemented for the GMP and QA program. The PRP shall be invoked and maintained throughout the project. The deliverable hardware being built by (Your Supplier) for the project falls within the definition of Quality Assurance Level ?? of the Supplier Quality Assurance Plan.

The requirements of this PRP shall be flowed down to subcontractors and/or suppliers. Conformance to approved internal procedures shall allow subcontractors and suppliers to maintain compliance with the requirements of the project. The following list provides a summary of the developed hardware-software requirements for the project:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]
- h) [REDACTED]
- i) [REDACTED]
- j) [REDACTED]
- k) [REDACTED]
- l) [REDACTED]
- m) [REDACTED]

- n) [Redacted]
- o) [Redacted]

1.2.1 REFERENCES
(Your Co)

1.3 ORDER OF PRECEDENCE

Once approved by the Customer, this plan becomes the primary controlling document for all activities in the project, and other documents are only applicable to the extent specified herein. In the event of conflict between this document and any referenced document, this document shall govern. Document revisions in effect at the time of the PRP approval shall apply. The original signatories shall [Redacted]

1.4 MANAGEMENT OF THE ASSURANCE PROJECT

The Customer Project Office and the Company Program Manager have been given oversight responsibility for [Redacted]
[Redacted] Figure 1 shows the Company organization and Figure 2 shows the Company organization as structured for the project. A Responsible Engineering Authority (REA) must be assigned to the project. The REA shall [Redacted]
[Redacted]

Figure 1. (Your Co) Organization

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Figure 2. (Your Co) Quality Assurance Group Organization

The Company shall employ drafting, package design, fabrication, assembly, and Quality Control (QC) inspection services to build deliverable hardware. Figure 3 shows the Company organization that supports hardware fabrication. Quality Control (QC) inspectors work with the Customer personnel to [REDACTED]

[REDACTED] Quality Assurance has the following functions:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]

Figure 3. (Your Co) Department Organization

1.5 STATUS REPORTS

The REA shall report the status of QA activities, problems, and deficiencies, (both in-house and from outside subcontractors) to the Program Manager and the Customer Project Office monthly, via the Contracts Group. The REA shall include the following quality assurance information as part of the QA report:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]

1.6 PROCUREMENT

1.6.1 General

All purchased hardware specifications shall have quality requirements included in the procurement documents. The Company shall perform the following tasks as appropriate to verify the quality and reliability of hardware purchased from subcontractors and vendors for the project:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]

1.6.2 Supplier Controls

1.6.2.1 General

The Company shall review the reliability and quality requirements of purchased materials, articles, and services for the hardware as necessary.

1.6.2.2 Selection of Qualified Procurement Sources

When requested, the Company shall recommend procurement sources, which are capable of

[REDACTED]

1.6.2.3 Preferred EEE Parts Supplier

The Customer may have identified certain preferred manufacturers of parts and components, based on

[REDACTED]

1.6.2.4 Procurement Documents

The requirements of this plan shall be imposed upon subcontractors and/or suppliers to the extent necessary to assure compliance with the requirements of the project. Provisions shall be included for:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

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1.6.2.5 Specifications Review

All procurement specifications shall be reviewed prior to release. This review shall determine, as a minimum, that:

- a)
- b)

1.7 SURVEYS AND AUDITS

The Quality Assurance Group shall perform surveys and audits, as necessary, to

These surveys and audits provide a basis for measuring performance and aid in the management control of the plan. Elements of this plan may

The survey and audit reports shall be prepared by the Company. These reports shall outline

2.0 PRODUCT ASSURANCE REVIEWS

2.1 DESIGN DRAWINGS

The Project shall use a Level ?? drawing system. Level ?? drawing and change control signature responsibilities shall be documented. All drawing changes shall

2.2 DESIGN REVIEWS

2.2.1 Design Reviews

The Company, under the direction of the REA, shall conduct formal and documented design reviews of the hardware designs. These reviews shall include

Safety and software issues shall be agenda items during design reviews. Design data packages shall

The REA shall head the review board and

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2.2.2 Subsystem Design Reviews

Acceptance reviews shall be held for [REDACTED]
The REA shall schedule in-house reviews of [REDACTED]

2.2.3 Design Review Support

The Company shall participate in design reviews. The REA shall attend or arrange for representatives to participate in design reviews to ensure [REDACTED]

2.2.4 Review of Existing/Modified Designs

Certain components that have heritage in previously accepted hardware shall [REDACTED]

2.3 ACCEPTANCE DATA PACKAGE

An Acceptance Data Package shall be available ten days prior to the Final Acceptance Review as a part of the data package for that review. The Acceptance Data Package shall include [REDACTED]

3.0 PERFORMANCE VERIFICATION REQUIREMENTS

3.1 GENERAL

All components of the hardware (including instruments) shall be tested to levels necessary to ensure [REDACTED]

3.2 ACCEPTANCE TEST DOCUMENTATION

Acceptance tests shall be performed on all components and instruments. Acceptance tests shall have a test plan and test procedures as described in the Component Specification.

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3.2.1 Acceptance Test Report

A brief test report summarizing test results and their implications shall be available within 10 days after test completion. A final test report shall be prepared within 30 days after test completion.

3.2.2 Documents and Records of All Acceptance Tests and Inspections

The disposition of acceptance test documents and records shall be as specified in the Acceptance Test Plans and Procedures. The scope, duration, and number of inspections and tests to be conducted on the completed equipment shall [REDACTED]

[REDACTED] After acceptance tests and inspection have been completed, the REA and Program Manager shall [REDACTED]

[REDACTED] The Test Review Board shall [REDACTED]

3.3 GROUND SUPPORT EQUIPMENT (GSE)

Prior to use for testing hardware, all GSE (if applicable) shall [REDACTED] This includes [REDACTED]

3.4 TEST REVIEW BOARD (TRB)

A Test Review Board shall be established. The TRB members shall include (or represent) the cognizant Design Engineer, REA, QA Engineer, and Program Manager. The TRB shall:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

3.5 PROJECT DOCUMENTATION RECORDS

Records that provide evidence of inspections, tests, configuration and material review actions during the fabrication and assembly process shall be maintained. These records shall [REDACTED] The documentation listed below shall be used to provide a complete record of the hardware, including traceability, configuration control, and application history:

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- a) [Redacted]
- b) [Redacted]
- c) [Redacted]
- d) [Redacted]
- e) [Redacted]
- f) [Redacted]
- g) [Redacted]
- h) [Redacted]
- i) [Redacted]

3.6 PROBLEM/FAILURE REPORTS AND CORRECTIVE ACTION

Problem/failure reporting is initiated with acceptance testing of a component or instrument and continues throughout integration and test of the final assembly. Problem/failures occurring at subcontractor or other team organizations shall [Redacted]

3.7 FAILURE-FREE OPERATION

Hardware shall demonstrate a minimum of xx hours cumulative failure-free operation immediately prior to delivery.

4.0 SAFETY ASSURANCE

The Program Manager is responsible for ensuring safety in the project. This responsibility includes [Redacted]

[REDACTED]

4.1 PERSONNEL SAFETY

All appropriate precautions shall be taken to provide for maximum protection of personnel. Where necessary, special provisions shall [REDACTED]

[REDACTED]

4.2 HARDWARE SAFETY

Provisions shall be made to protect hardware from damage. Accepted safety practices include but are not limited to the following:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]

5.0 EEE PARTS REQUIREMENTS AND DEFINITIONS

The Company shall: (1) [REDACTED] (2) [REDACTED]
[REDACTED] (3) [REDACTED] (4) [REDACTED]
[REDACTED] (6) [REDACTED]

5.1 PARTS, MATERIALS, & PROCESS SELECTION and SPECIFICATION

Approved EEE parts for hardware include Customer Preferred Parts List (PPL) and those items purchased and/or screened to Customer requirements. The REA shall [REDACTED]

[REDACTED]

5.2 EEE PARTS SCREENING

5.2.1 EEE Parts Screening and Test

EEE screening shall be in accordance with documented requirements. Optional additional testing may be specified based on [REDACTED]

[REDACTED] Repeating any inspection or screen that has previously been

performed by the manufacturer (or third party) is optional. Deviation from the screening instructions provided herein requires [REDACTED]

[REDACTED]

5.2.2 Data Evaluation

All manufacturer test data purchased with EEE parts, and test data generated shall be reviewed for [REDACTED]
Test programs and hardware shall be approved prior to use on all part types electrically tested at the supplier). Deficiencies shall [REDACTED]

5.2.3 Destructive Physical Analysis

When recommended, Destructive Physical Analysis (DPA) shall be performed in accordance with (Your #), Destructive Physical Analysis Procedure. DPA shall be imposed with the concurrence of the Program Manager. Pre-cap inspection by the Customer or its designated representative may be performed as an alternative to DPA. Factors that are considered in this decision include [REDACTED]

5.2.4 Re-testing of EEE Parts in Stock

Parts intended to be issued from existing stock shall be reviewed for [REDACTED]

5.3 (Your Customer) MANUFACTURED EEE PARTS

Parts manufactured at the Customer for assembly shall be evaluated as above. The REA shall perform inspection and evaluation of these parts to assure [REDACTED]

6.0 MATERIALS AND PROCESS CONTROLS

6.1 MATERIALS AND PROCESSES

Materials and processes used to fabricate hardware shall be reviewed for acceptability, compatibility, and conformance to applicable design documentation and quality assurance requirements. Controls are initiated from [REDACTED]

6.2 METALLIC MATERIAL SELECTION

Materials selected for use as structural elements, housings, brackets, etc. shall be subject to

6.3 PARTS AND MATERIALS LIST

Materials shall be identified in fabrication drawing bills of materials for hardware. An as-built parts and materials list shall be prepared for hardware, and shall include the following:

a)

b)

6.4 CRITICAL FASTENERS

For the project, any fastener whose failure could contribute to a single point failure of the system shall be designated a "Critical Fastener." "Critical Fasteners" shall be identified during the design phase of the project. The list of identified "Critical Fasteners" shall be supplied as

6.5 CORROSION PROTECTION

Metals shall be of the corrosion-resistant type or suitably protected to resist corrosion.

The hardware shall be designed so as to

6.6 FINISHES AND COATINGS

The use of cadmium, zinc and pure tin is prohibited.

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6.7 PRINTED WIRING BOARDS

Printed wiring boards (PWBs) shall meet the requirements of (Your #). Design requirements governing printed wiring boards, printed wiring assemblies, and design considerations for the mounting of parts and assemblies shall be in accordance with (Your #).

7.0 DESIGN ASSURANCE AND RELIABILITY REQUIREMENTS

7.1 RESPONSIBILITIES AND ORGANIZATION

The reliability tasks shall be undertaken and achieved using (Your #) as a guide.

7.2 WORST-CASE ANALYSIS

Electronic circuits and electromechanical and mechanical items shall be designed using [REDACTED]
[REDACTED]
[REDACTED] The results shall be reviewed at the Customer subsystem-level design reviews.

7.3 TREND ANALYSIS

Trend analyses shall identify performance parameters for [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

7.4 MAINTAINABILITY

To the extent possible, design features shall allow component access and facilitate performance of all checkout, repair, and maintenance tasks. Features intended to eliminate potential failures due to human error, to [REDACTED], and to [REDACTED] shall [REDACTED]

7.5 EEE PARTS STRESS DERATING

EEE parts derating shall be in accordance with (Your #). Each electronic/electrical design engineer shall be responsible for [REDACTED]
[REDACTED]
[REDACTED]

7.6 LIMITED-LIFE ITEMS

Limited-life items shall be identified on a Limited-Life Items List and included as part of the deliverable data package.

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8.0 QUALITY ASSURANCE

8.1 TRAINING AND CERTIFICATION OF PERSONNEL

Supervisors shall ensure that all persons working on high-reliability hardware have received the proper training to produce high quality workmanship. Training is comprised of specific instruction in several basic areas as follows:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]

8.2 ELECTROSTATIC DISCHARGE (ESD) CONTROL

Hardware shall be protected from ESD damage.

8.3 NON-CONFORMANCE CONTROL

Nonconforming articles or materials (defined as those not satisfying fabrication, processing, assembly, or configuration requirements) shall be reviewed initially by Quality Assurance personnel and shall be subjected to one of the following dispositions:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

8.4 MATERIAL REVIEW BOARD (MRB)

All referred non-conformances shall be evaluated by a MRB, as a minimum consisting of: (1) [REDACTED], (2) [REDACTED], (3) [REDACTED], and (4) [REDACTED]

The MRB shall draw upon the various skill centers as required. A report of the MRB action shall be prepared on a Nonconformance Report Form (NCR) and shall include [REDACTED]

Unanimous agreement must be obtained from the four MRB members, and for all articles and materials submitted to the MRB one of the following dispositions shall be directed. When there

is not unanimous agreement, one of the steps below shall be followed at the option of the Program Manager.

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

8.5 SUBCONTRACTOR QUALITY REQUIREMENTS

8.5.1 Source Selection

Source selection shall be based upon the supplier's past performance history. Where no previous quality records are available, a quality assurance survey of the supplier's facilities and quality control system may [REDACTED]

8.5.2 Supplier Product Assurance Requirements

Supplier Quality Requirements document QC-121-6 shall be generated to delineate the QA requirements.

8.5.3 Quality Assurance Inspection at Subcontractor Facilities

Source inspection at the supplier's facility may be required by purchase order or contract upon the recommendation of the QA authority and approved by the PM. The appropriate QA authority or a designated alternate shall [REDACTED]

8.5.4 Supplier MRB

When suppliers of components, subsystems, or systems are delegated MRB authority, they shall [REDACTED]

8.5.5 Hardware Buy-Offs

For subcontracted equipment, the buy-off meeting serves the purpose of the Integration Readiness Review for subsystems. The supplier's QA documentation package is reviewed, and [REDACTED]

8.6 INSPECTION AND CONTROLS

QA personnel shall work closely with the REA to jointly determine the most cost effective, practical approach to ensure QA requirements are met. Inspections, evaluations, and/or audits shall be performed at the level necessary to assure compliance with the following:

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- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]

Inspection of support equipment shall be limited to [REDACTED]
[REDACTED]
[REDACTED]

8.7 STAMP CONTROL SYSTEM

8.7.1 Stamp Log

An inspection stamp log shall be used to maintain traceability to the individual responsible for the use of each specific stamp. Issuance of the stamp and maintenance of the log are controlled by the Quality Group.

8.7.2 Stamp Use

Inspection stamps shall be used to signify that articles and materials have [REDACTED]
[REDACTED]
[REDACTED] The presence of the inspection stamp on the traveler shall signify [REDACTED]
[REDACTED]

8.8 SOFTWARE QUALITY ASSURANCE

The Software Group shall develop a Software Management Plan applicable to the project and shall [REDACTED]
The Software Management Plan shall be based on documented Guidelines. Key personnel shall [REDACTED]
[REDACTED]
[REDACTED]

8.9 INSPECTION, MEASURING, AND TEST EQUIPMENT CALIBRATION

Hardware acceptance testing requires the use of Class 1 test equipment as defined in Test and Measurement Equipment Calibration Practices and Procedures. Calibrations shall be performed using [REDACTED]
[REDACTED]
[REDACTED]

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8.10 PRESERVATION, PACKAGING, HANDLING, STORAGE, AND SHIPPING

8.10.1 General

The Company shall maintain procedures for preserving, packaging, handling, storing, and shipping to prevent damage, loss, deterioration, tampering, degradation, and substitution.

These procedures shall take into consideration [REDACTED]

8.10.2 Preservation

Preservation procedures shall be designed to [REDACTED]

8.10.3 Handling

Any article subject to damage due to normal handling during fabrication or testing shall [REDACTED]

8.10.4 Storage

The Company shall provide protected and controlled storage for all assembled articles. Special attention shall [REDACTED]

8.10.5 Packaging and Shipping

Packaging procedures shall be maintained for protection from damage or deterioration of the articles being shipped. These procedures shall take into consideration [REDACTED]

9.0 CONTAMINATION CONTROL REQUIREMENTS

9.1 PROTECTION

Gloves, protective covers, and other appropriate measures shall be used as required.

The hardware shall [REDACTED]

9.2 FACILITIES

All fabrication of electronic hardware shall be performed in class M7 air-conditioned areas. In addition, assembly and testing at the system level and for critical components shall be performed in [REDACTED]

9.3 MONITORING

During periods of activity, Quality Assurance personnel shall monitor the clean room areas for [REDACTED]

10.0 ACRONYMS AND ABBREVIATIONS

CDR Critical Design Review
CVCM Collected Volatile Condensable Mass
DCN Drawing Change Notice
DF Discrepancy Form
DESC Defense Electronic Supply Center
DPA Destructive Physical Analysis
DRR Drawing Release Review
EDR Engineering Design Review
EEE Electrical, Electronic, and Electromechanical
EMC Electromagnetic Compatibility
EMI Electromagnetic Interference
EO Engineering Order
ESD Electrostatic Discharge
FRR Fabrication Feasibility Review
GIDEP Government Industry Data Exchange Program
GSE Ground Support Equipment
GSI Government Source Inspection
ICD Interface Control Document
DMR Discrepant Material Report
IRR Integration Readiness Review
Mil-Spec Military Specification
MRB Material Review Board
NCR Nonconformance Report Form
NIST National Institute of Standards and Technology
QA Quality Assurance
PRP Performance Assurance Plan
PDR Preliminary Design Review
PER Pre-Environmental Review
PI Purchase Instruction (or Principle Investigator)
PM Project Manager
PPL Preferred Parts List
PPP&M Preservation, Packaging, Packing, and Marking
PSR Pre-Ship Review
PWB Printed Wiring Boards
QA Quality Assurance
QC Quality Control
QML Qualified Manufacturers List
QPL Qualified Product List
REA Responsible Engineering Authority
RR Readiness Review
TML Total Mass Loss
TRB Test Review Board
TRR Test Readiness Review

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Configuration Management

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3.0 ORGANIZATION & RESPONSIBILITIES

3.1 General

The Engineering, Manufacturing and Quality managers serve as the Configuration Control Board [CCB], which has full authority and responsibility for [REDACTED]

3.2 CCB responsibilities:

- 3.2.1 [REDACTED]
- 3.2.2 [REDACTED]
- 3.2.3 [REDACTED]
- 3.2.4 [REDACTED]
- 3.2.5 [REDACTED]
- 3.2.6 [REDACTED]
- 3.2.7 [REDACTED]
- 3.2.8 [REDACTED]
- 3.2.9 [REDACTED]
- 3.2.10 [REDACTED]
- 3.2.11 [REDACTED]
- 3.2.12 [REDACTED]
- 3.2.13 [REDACTED]
- 3.2.14 [REDACTED]
- 3.2.15 [REDACTED]
- 3.2.16 [REDACTED]
- 3.2.17 [REDACTED]
- 3.2.18 [REDACTED]
- 3.2.19 [REDACTED]

3.2.20 [REDACTED]

3.2.21 [REDACTED]

3.3 Material Review Board (MRB)

The MRB may use the Nonconformance Report Form QC-103-2 as a Calculated Risk Release or Advance Change Notice to [REDACTED]

[REDACTED] At least two members of the CCB must review and approve MRB dispositions to prevent any impact on configuration identification or control. The Project Engineer and the Quality Manager approve [REDACTED]

4.0 CONFIGURATION IDENTIFICATION

4.1 General

Every deliverable item of hardware maintains configuration identification in the form of technical documentation. These technical documents may include, but are not limited to, [REDACTED]

[REDACTED] The CCB must prepare an Engineering Order according to the Change Processing section herein to integrate the directives of the Bulletin.

NOTE:

Development and experimental effort to produce a configuration item is exempt from these provisions; however, [REDACTED]

4.2 Specifications

New specifications are prepared as needed to define the requirements relating to performance, functional and physical characteristics, test provisions, physical constraints and interfaces. These specifications should comply with the requirements of MIL-STD-961. As each specification is approved it is [REDACTED]

4.3 Engineering Drawings and Lists

To the extent necessary to provide the full engineering description of the physical and functional requirements of the supply, a set of engineering drawings and associated lists may be prepared according to the requirements for Level 2 drawings contained in ASME Y 14.100.

During all design, records keeping, fabrication, assembly, inspection, testing and related operations, the appropriate engineering drawing and its authorized changes are [REDACTED]

Purchase Orders for supplies may waive, supersede, obsolete or amend the requirements of the engineering drawing when [REDACTED]

All deliverable items are fabricated and assembled according to the configuration defined by the appropriate engineering drawing and its authorized changes.

No oral instruction or other random or unwritten authority is accepted in place of [REDACTED]

4.4 Test Plan

The Project Engineer prepares a Test Plan that defines the overall test program in terms of [REDACTED]

4.5 Test Procedures

Using the Test Plan as the overall guidance, the Project Engineer assigns the responsibility to the appropriate activity for the preparation of the required Acceptance Test Procedure (ATP).

The ATP defines [REDACTED]

4.6 Document Identification

All engineering documents are assigned identification numbers that are unique to the document. Once a number has been assigned to an engineering document that has been issued, the assigned number will [REDACTED]

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[REDACTED]

4.6.1 Forms

Forms are exempt from Engineering Order processing but must be controlled and may include, but are not limited to:

[REDACTED]

4.7 Re-identification Practices

A change to an item on an existing engineering document results in

[REDACTED]

4.8 Baseline Management

A configuration baseline may be established to identify and create the initial configuration identification of deliverable supplies at specific times during the contract cycle.

The baselines provide

[REDACTED]

For configuration management purposes, three major baselines may be required as discussed below. All descriptions of the baselines used to state product performance and design requirements are contained in configuration documents.

4.8.0.1 Pre-Release Baseline

The formal release of configuration documents is required prior to production of deliverable supplies; however,

[REDACTED]

4.8.1 Functional Baseline

The Functional Baseline (program requirements) is established prior to any scheduled Preliminary Design Review (PDR). During the early contract performance, the configuration identification and associated technical documentation contained in the proposal is

[REDACTED]

At the Functional Baseline, the configuration management system is operating and the released documents have described the following:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
5. [REDACTED]

4.8.2 Allocated Baseline

After successful completion of the Preliminary Design Review (PDR), the Allocated Baseline (design requirements) is established by the approval and release of the development (performance) configuration documents, which [REDACTED]

The development (performance) configuration documents include:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]

Formal change control procedures are invoked concurrent with the release of the development (performance) configuration documents.

4.8.3 Product Baseline

After successful completion of the Critical Design Review (CDR), the Product Baseline (Product Configuration) is established with the approval and release of the product specifications and design drawings that have interpreted the system/equipment requirements into the form of a specific product design. The product specifications define [REDACTED]

This baseline prescribes:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]

This baseline and approved changes serve as the configuration reference point for all subsequent reviews. Redlined technical documents may be used if [REDACTED]

4.8.4 Baseline Maintenance

Once established, the baselines serve as the approved departure point for updating by incorporation of changes that have been approved by the Configuration Control Board.

The baselines plus the approved changes represent [REDACTED]

The release of a technical document requires that it be placed into the normal control system for configuration documents. This control system:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
5. [REDACTED]

The release system is shown in Figure 2. The Document Control Center prepares the release package after [REDACTED]

5.0 CONFIGURATION CONTROL

5.1 General

Configuration control is the process of maintaining the baseline identification and regulating all changes to that baseline. The 'as-designed' technical documentation must [REDACTED]

This is accomplished by:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]

5.2 Configuration Control Board

Concurrent with the establishment of the baseline by the approved configuration documentation, change control is vested in the Configuration Control Board. All proposed changes to the baseline documents are [REDACTED]

Each CCB manager is fully authorized to commit his organization to perform the necessary actions to implement a change.

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5.3 **Change Evaluation**

The CCB is charged with the responsibility for evaluation of each proposed change that is presented to the CCB. This evaluation includes [REDACTED]

The need for the change is justified if [REDACTED]

Typically, this will include such areas of concern as [REDACTED]

All associated changes and affected hardware items or computer programs are included on the Engineering Order form. The evaluation by the CCB includes [REDACTED]

The CCB must prepare an Engineering Order according to the Change Processing section herein to integrate the directives of the Bulletin.

5.3.1 Multiple Program Usage

Joint change control authority is established where any program shares a commonly identified item with another program.

5.4 **Types of Configuration Changes**

Changes to the configuration are implemented after approval of engineering changes, deviations or waivers. The definition for each is as follows:

1. Engineering Change

[REDACTED]

2. Deviation

[REDACTED]

3. Waiver

[REDACTED]

5.5 Change Classification

5.5.1 General

Changes in configuration are classified by the CCB as either Class I or Class II. The change classification assigned by the CCB is entered on the Engineering Order, which serves as [REDACTED]

[REDACTED] The Company submits a copy of each Class II change to the designated Customer representative for concurrence in classification as required by the contract.

5.5.2 Class I Change

After the need for the change has been established by the CCB, the engineering change is classified as Class I when it affects one or more of the following:

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
5. [REDACTED]
6. [REDACTED]

5.5.3 Class II Changes

Any change that does not fall within the Class I definition is a Class II change. Class II changes are implemented after [REDACTED]

5.6 Change Implementation

5.6.1 General

All approved changes are implemented under the guidance of the configuration management function. Configuration Management maintains release records for all approved changes.

These records identify [REDACTED]

[REDACTED]

5.6.1.1 Multiple Release Levels

Superseded revision levels of drawings may be used by direction of the Contract or Engineering Groups using [REDACTED]

[REDACTED]

5.6.2 Engineering Change

During the evaluation of the ECP or EO, the CCB determines [REDACTED]

[REDACTED]

The definitions of the actual tasks required are in sufficient detail, including [REDACTED]

[REDACTED]

5.6.3 Deviation

[REDACTED]

5.6.4 Waiver

[REDACTED]

5.7 Change Control

The formal change control functions apply at the start of contract performance. As each of the configuration identification documents is prepared and released, they are subjected to [REDACTED]

[REDACTED]

Preliminary plans, specifications, diagrams and drawings become contractually binding documents upon Customer approval. If a change in the Customer approved preliminary version is to be made, it is [REDACTED]

[REDACTED]

5.8 Change Processing

5.8.1 General

Engineering changes are fully documented on an Engineering Order QC-109-3 and presented to the CCB for evaluation. All proposed changes are evaluated by the CCB for:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

The CCB exercises restraint in the processing of changes to limit them to

A summary of the processing flow is shown in Figure 1.

5.8.2 Processing Class II Changes

Class II changes are prepared by the Engineer or designee and processed through the CCB in the form of an E.O. The Engineer or designee must complete all blocks up to the CCB signature blocks. After approval by the CCB, the EO should be released for immediate implementation of the change and incorporation of the change into the affected document.

5.8.2.1 Supplement Releases

All changes require the processing of an Engineering Order; however, Supplements to existing documents that change or eliminate requirements may be processed and released by the CCB. Supplements to existing documents are intended to

5.8.3 Processing Class I Changes

Proposed Class I engineering changes are approved by the CCB and are submitted to the Customer in the form of an Engineering Change Proposal (ECP) or an Engineering Order (E.O.) as required by contract. A Class I Engineering Change is not implemented until Customer

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approval is obtained or a CCB approved Calculated Risk Release is produced using form QC-103-4 or equivalent. The determination of need for all Class I Engineering Changes is the responsibility of the CCB, which evaluates [REDACTED]

[REDACTED] A summary of the change control flow and resulting actions is shown in Figure 1.

5.9 Subcontractor and Vendor Changes

Baselines are established by the subcontract or purchase order. Only those subcontractors having a funded design effort are permitted to implement Class II changes with submittal to the Company for review and concurrence or non-concurrence in classification. For all suppliers' subcontractors, proposed changes to baseline documents are [REDACTED]

[REDACTED]

5.10 Management Directives

Management members of the CAB/CCB/MRB issue their binding policies, procedures and directives to personnel within their exclusive organization in the form of a Bulletin (Engineering, Manufacturing or Quality). The Bulletin is completed as required by individual format. The Bulletin is the only accepted form of correspondence for intra-company and inter-company requests for work to be performed or when providing instruction for performing work. The signed and completed Bulletin is forwarded to the Document Control Center for processing. A Bulletin cannot cause [REDACTED]

[REDACTED]

5.10.1 Work Instructions/Process Guides

Management members of the CCB or delegated Supervisors may issue Work Instructions (for permanent retention) to personnel within their exclusive organization using the Specification Form, QC-129-2, modified to use single or multiple release signatures. These instructions are [REDACTED]

[REDACTED]

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6.0 Configuration Accounting

6.1 General

The baseline documentation is entered into a database that maintains current and historical data for every configuration list. As new configuration lists are generated, approved and placed in the release system, they are added to the database. As changes are approved and released, the change information is [REDACTED]

[REDACTED] Project personnel are responsible for the production of configuration documents that meet the requirements of the Customer provided documents.

6.2 Configuration Accounting Records and Reports

By appropriate sorting of the configuration accounting database, the revision level is determined for each configuration item and its sub-tier items. Selected projects make use of the available configuration documentation to support baseline reviews, configuration audits and hardware acceptance.

The following lists are revised as required to include the latest configuration status of listed documents. Typical records and reports include:

- 1. Numerical lists [REDACTED]
- 2. Indentured Lists [REDACTED]
- 3. As-Built Parts List [REDACTED]
- 4. EO Status [REDACTED]

[REDACTED]

5. Data Lists

[REDACTED]

6.3 Configuration Account Record

For systems, integrated and tested by the Company, a configuration account record is produced. The record identifies the supply and includes

[REDACTED]

Differences are reported to the project manager and to the Quality Group; they are evaluated for [REDACTED]

6.4 Configuration Item Identification Report

As part of the product acceptance for each configuration item, a review of the 'as-designed' configuration is made and compared with the 'as-built' configuration. All differences are investigated to insure

[REDACTED]

6.4.1 As-Built vs. As-Designed Configuration

The 'as-designed' configuration for each deliverable supply is contained in a database. For each serialized subassembly or assembly a listing of the current 'as-designed' configuration is prepared at the time a release to build is processed. This configuration listing is used as

[REDACTED]

Quality Group acceptance of the As-Built Parts List is a pre-requisite to acceptance of deliverable hardware. When the product is accepted into controlled stores, submitted for final

Customer acceptance or integrated into the next higher assembly, the As-Built Parts List is updated.

Any subsequent changes or rework affecting the completed item, even during higher level assembly operations, requires [REDACTED]

7.0 Interface Management

7.1 Interface Control Responsibilities

The Program Manager is responsible for interface definition and control. This activity...

- 1. [REDACTED]
- 2. [REDACTED]
- 3. [REDACTED]
- 4. [REDACTED]

8.0 Configuration Audits

8.1 Quality Group Audits

Each physical item presented for acceptance to the Quality Group is accompanied by [REDACTED]

Product acceptance includes [REDACTED]

8.2 Audit Reports

Audit reports (including all necessary interim reports) document [REDACTED]

9.0 Subcontractor and Supplier Control

9.1 Requirements

The applicable configuration management [CM] requirements of this document are flowed-down by the statement of work or purchase order issued to the supplier. The absence of a flow-down clause in procurement documentation indicates [REDACTED]

[REDACTED] Applicability of specific CM elements to procurements is determined by the Program or Quality function by classifying suppliers as follows:

Category A [REDACTED]

Category B

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[REDACTED]

Category C

[REDACTED]

Category D

[REDACTED]

9.2 Evaluation of Supplier CM System

All CM plans and supplier internal documentation required by the Company are evaluated. Where deficiencies are observed, approval of procedures is [REDACTED]

[REDACTED]

Continued compliance is evaluated by [REDACTED]

9.3 Subcontractor Control

All major subcontractors to the Company establish and operate subsidiary CCB's conducted in the same manner as the Buyer's CCB. Direction to the subcontractor's CCB is provided by [REDACTED]

[REDACTED]

Each subcontractor's CCB is responsible for [REDACTED]

[REDACTED]

9.4 Vendor Control

All vendor items procured by the Company and its subcontractor(s) are documented on appropriately controlled engineering drawings. Once documented and agreed upon by the Company and the vendor as correctly representing the item, the delivered supplies are [REDACTED]

[REDACTED]

10.0 Software Configuration Management

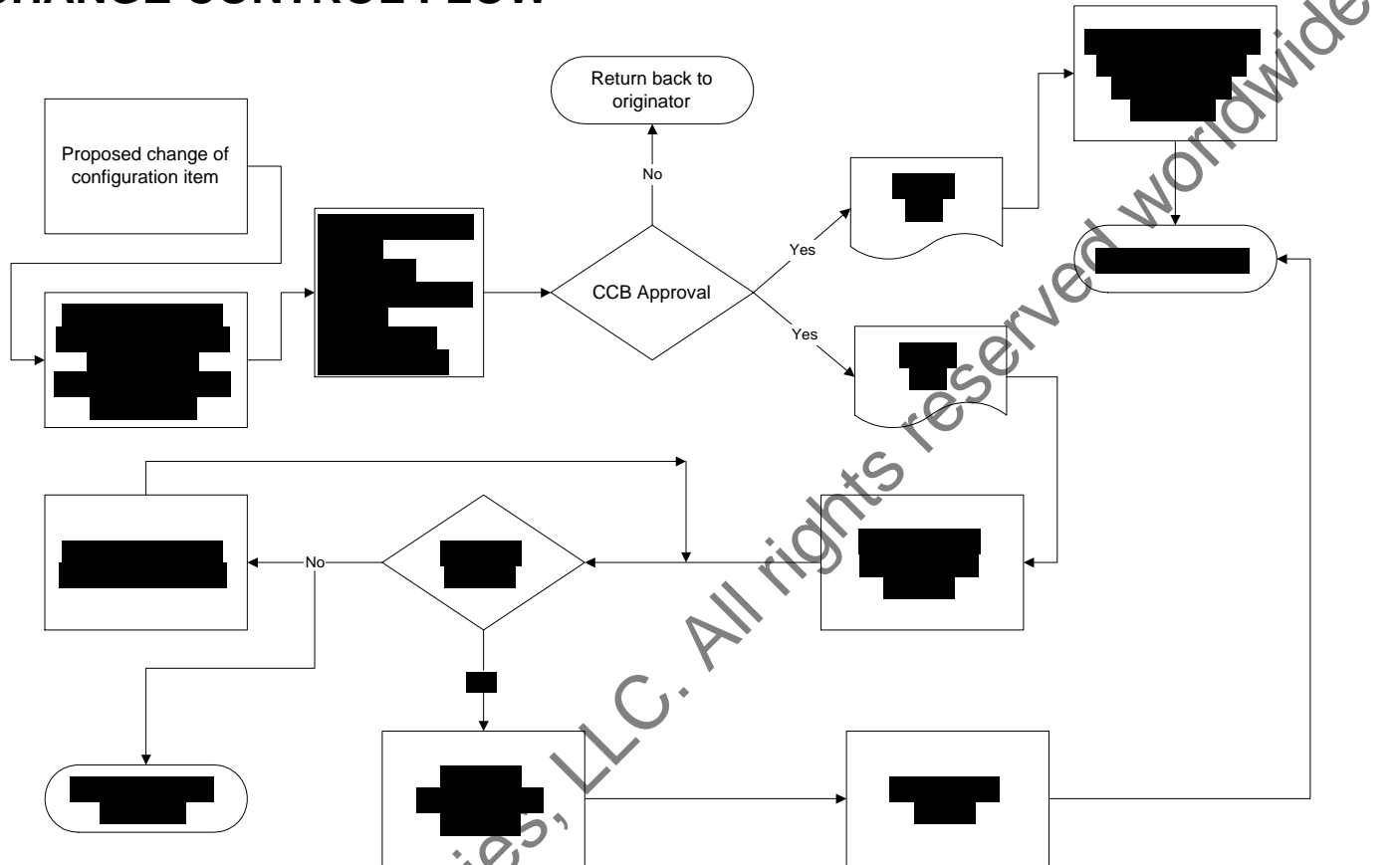
10.1 Product and Test Software Control

Production of software for integration into deliverable products is controlled according to [REDACTED] as a rough guide.

Figure 1

Change Control Flowchart

CHANGE CONTROL FLOW

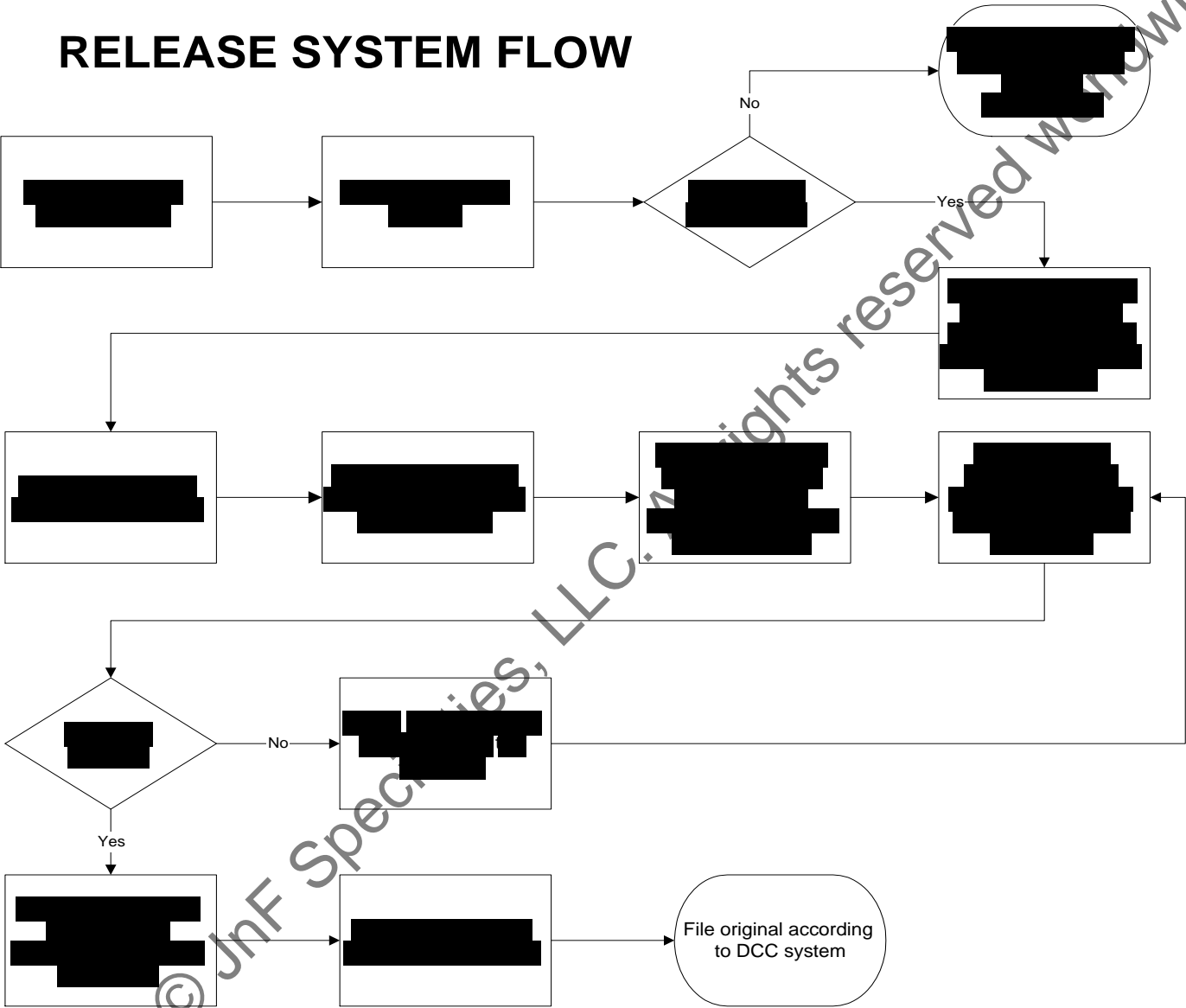


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Figure 2

Release System Flowchart

RELEASE SYSTEM FLOW



Supplier Quality Requirements

Mo/Yr

Revisions					Rev:			
Letter	E.O. Number	Description	Date					
Used On	Contract#:	Your Company Name						
Prepared By:							Date	
Your Dept:							Date	
Your Dept:		Date	YOUR PROGRAM					
Your Dept:		Date	Your Procedure #					
Your Dept:		Date	Size:	A	CAGE:		Form Rev: Orig	1 of 4

Your Company Logo

☐ PURPOSE and SCOPE

To establish the minimum requirements for supplier Quality Systems necessary to ensure that materials, parts, components, and services meet the requirements of the Contract. Procedures used to implement the provisions of this requirement shall be subject to (Your Co) approval upon request.

☐ APPLICABILITY

These requirements shall apply to all supplies and services when referenced on the Purchase Order and amendments thereto.

When (Your Co)'s Purchase Order indicates Level I as a requirement, Seller's contractual commitment for an Inspection System shall be defined by all paragraphs of this specification. When (Your Co)'s Purchase Order indicates Level II as a requirement, Seller's contractual commitment for an Inspection System shall be defined only by those paragraphs of this specification that are checked-off.

☐ DEFINITIONS and ABBREVIATIONS

- A. The term 'Buyer' or '(Your Co)' means (Your Co).
- B. The term 'Seller' means the legal entity that is the contracting party with the Buyer with respect to the Purchase Order.
- C. 'IAW' means in accordance with.
- D. 'MRB' means Material Review Board

☐ SELLER's QUALITY SYSTEM, GENERAL

The Seller shall maintain an effective Quality System planned and developed in conjunction with his other functions to comply with contractual requirements. In order that the Quality System will be effective, it shall provide

[REDACTED]

Records shall be kept available for six (6) years.

☐ NEGOTIATIONS

It is not the intent of this specification to restrict the Seller in his mode of operation; therefore,

[REDACTED]

☐ PROPRIETARY INFORMATION

The Seller must identify in writing the intended use in performance of the Purchase Order of an item, material, component or process with respect to which access by (Your Co) or (Your Co) Customer representatives for purpose of Quality Assurance by inspection, test or process surveillance is proposed to be restricted. The written identification shall state

[REDACTED]

☐ PROCESS CONTROL

The Seller shall provide for complete review of contract requirements at the earliest practical phase of contract performance to make timely provisions for the special controls, processes, test equipment, fixtures, tooling and skills required for assurance of a quality product.

Work instructions for all work affecting quality shall

[REDACTED]

The Plan shall identify

[REDACTED]

The Plan shall identify

The Plan shall also identify

[REDACTED]

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(Your Co) contracts and resultant facility planning by Seller shall be reviewed by the Seller's Quality Control Department prior to release for production and/or pre-production to assure that all (Your Co) quality requirements are reflected in production and inspection procedures. All Purchase Orders that apply to (Your Co) contracts generated by Seller shall [REDACTED]

When approval or certification of special processes, operating personnel, special equipment, or procedures is required by the contract, drawing, or specification, the Seller shall [REDACTED]

Seller MRB is not authorized. [REDACTED]

A Seller Failure Review Board is required and minutes shall be taken and furnished to (Your Co) upon request. The Seller shall not change any process, material, or procedure from that used to qualify Seller's product without prior (Your Co) approval if such process, material, or procedure was originally subject to approval by (Your Co) as specified in the Purchase Order. The effect that changes have on reliability, safety, weight, interchangeability, or other special requirements must [REDACTED]

The 1st Article item and the inspection record shall be identified as 1st Article Items. (Your Co) may elect to [REDACTED]

[REDACTED]
Notify (Your Co) 10 days prior to start of 1st Article production.

Neither surveillance, inspection and/or tests made by (Your Co) at either the Seller's, Seller's subcontractors, or (Your Co)'s facility, nor the Seller's compliance with all applicable Seller Quality Control requirements shall [REDACTED]

☐ SUBCONTRACTOR CONTROL

The Seller shall be responsible for adequate and effective control over his procurement sources to ensure that materials, supplies, and services purchased for use on (Your Co) contracts meet all Purchase Order requirements. (Your Co) inspection is required at your facility. Notify the (Your Co) Purchasing Manager at the start of production.

☐ DRAWING and CHANGE CONTROL

The Seller shall have a procedure and designate a responsible department for [REDACTED]

The procedure shall also provide for [REDACTED]

☐ RECEIVING INSPECTION

The Seller shall inspect incoming material to assure [REDACTED]

Acceptance requirements shall include [REDACTED]

All radiographic negatives, mechanical, physical, and chemical test results, and other inspections required to assure acceptance shall [REDACTED]

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[REDACTED]

☐ STOCK CONTROL

The Seller shall provide for protection and control of supplies and materials stored for use in deliverable (Your Co) products.

Control shall cover such items as [REDACTED]

Procedures for the handling of nonconforming material shall [REDACTED]

(Your Co) furnished material shall be inspected upon receipt by Seller to detect [REDACTED]

[REDACTED]

☐ SAMPLING INSPECTION

Acceptance sampling procedures, if other than ANSI Z 1.4, must have (Your Co) approval prior to use; sampling to permit defects is not allowed.

☐ TOOL, GAGE, and TEST EQUIPMENT

The Seller shall be responsible for providing and ascertaining the accuracy and stability of tools, gages, and test equipment to assure supplies conform to contractual requirements.

A written procedure, compliant to MIL-STD-45662, shall be maintained to provide for [REDACTED]

[REDACTED]

☐ MATERIAL CONTROL

Nonconforming material shall be positively identified and segregated from other material being processed or stored, and held for appropriate documented review action and disposition.

Seller may not [REDACTED]

The Seller shall maintain traceability of raw material used in the manufacture of deliverable products. A correlation shall be made between [REDACTED]

[REDACTED]

The Seller shall maintain controls to assure accomplishment of preservation, packaging and shipping requirements of the contract. The lack of a specific requirement in the Purchase Order does not relieve the Seller of the responsibility for [REDACTED]

[REDACTED] Unless otherwise specified, the provisions of ASTM B 3951 preservation, packaging, packing, and marking shall apply. Direct shipment of your supplies to (Your Co)'s Customer is required.

[REDACTED]

☐ TECHNICAL REQUIREMENTS

Unless otherwise specified, (Your Co) is responsible for [REDACTED]

[REDACTED]

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Your Company Name

Company Name:					
Street Address:					
City:		State:		Zip:	
Phone No:		Fax No:			

GENERAL INFORMATION

Quality Program Representative: _____ Title: _____

Does the above have other responsibilities? Yes____ No____

If yes, explain: _____

Describe/List Company's major products/services:_____

Plant/Facility Area _____ Mfg. Area _____

Quality System: Commercial:___ MIL-I-45208:___ MIL-Q-9858:___

ISO 9001:_____ Other: _____

Does your Company have a Quality Control Manual? Yes___ No___

If yes, indicate Features that are included:

[illegible]

QC-121-4 Form Rev: Orig

Specification(s) to which your Company works? _____

Does your Company have a Material Review Board (MRB)?

If yes, name of Chairperson: _____ Title:_____

BUYER USE ONLY BELOW LINE

APPROVAL STATUS: Conditionally Approved _____ Approved _____

QC-121-4 Form Rev: Orig

MATERIAL REPORT

☐ Nonconformance ☐ Continuous Improvement Opportunity ☐ Calculated Risk Release

SUBCONTRACTOR: _____

DATE RECEIVED: _____

MR#:

SHEET _____ OF _____

[illegible][illegible]

Nonconformance Disposition Procedure

Mo/Yr

Revisions					Rev:		
Letter	E.O. Number	Description	Date				
Used On	Contract#:	Your Company Name					
Prepared By:							Date
Your Dept:							Date
Your Dept:		Date	YOUR PROGRAM				
Your Dept:		Date	Your Procedure #				
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1.0 SCOPE

These policies and procedures define the actions taken and the documentation used when suspect material is detected in supplies.

2.0 APPLICABILITY

The following documents will serve as guidelines. This document will take precedence should a conflict arise concerning Material Review Procedure.

Military

ANSI Z1.4

ANSI Z1.9

Inspection by Attributes

Inspection by Variables

Your Co:

ISO 9001

QC-109

Quality Management System

Configuration Management Policies and Procedures

3.0 MATERIAL CONTROL

When a deliverable supply is suspected of noncompliance to applicable drawings, specifications or other requirements it is identified and segregated to the extent practicable and held for review action.

3.1 Documentation

The Material Report (MR) QC-103-2 is used to document suspect material, MRB action, specification interpretation, precautionary direction or Continuous Improvement Opportunities. Copies of MR's are retained on file and the MR number is recorded on applicable manufacturing records at the point of occurrence in the process. The MR is also used for

3.1.1 Material Report (MR)

Reporting document for suspect material is provided to all necessary personnel. This document provides: traceability, identification, a description of the suspect condition, specification requirements, cause, corrective action, material disposition and necessary personnel signatures.

3.1.2 Request for Corrective Action, QC-103-3

This document as well as the MR form is used to request corrective or preventive actions.

3.1.3 Material Report, Purpose

The MRB checks a box at the top of the Material Report to identify the purpose of the MR.

A 'Nonconformance' MR is used to

3.1.4 Material Report, Change Implementation

"Conditional Acceptance" recommendations are subject to a review for [REDACTED]

The MRB may waive the requirements of technical documents for a specific length of time, length of procurement, quantity of product, specified program, individual purchase order or subcontract. The MRB may utilize the Material Report as a Calculated Risk Release or an Advance Change Notice to configuration controlled documents according to [REDACTED]

3.2 Remedial and Preventive Action

The following MRB functions may be performed, but are not limited to:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]
- h) [REDACTED]
- i) [REDACTED]

3.3 Material Review Dispositions

3.3.1 Initial Review

An Initial Review of the prepared MR is conducted by QA to determine the adequacy and completeness of the record. Immediate action may include, but is not limited to:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

A Material Report may not be voided by the Initial Review procedure since the MR may act as [REDACTED]

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3.3.2 Submit to MRB

Three qualified MRB signatures are required to implement MRB dispositions. Dispositions may include, but are not limited to:

[Redacted]

3.3.3 Return to Vendor (Receiving Inspection)

Receiving inspection initiates an MR for suspect material. After review of production schedules and contractual commitments, QA may request Receiving Inspection personnel to conduct a 100% inspection of the material to screen out all suspect material in order to obtain enough conforming material to maintain the production schedules.

Returned supplies are accompanied by an MR or Discrepancy Notice, or other suitable documentation in the event that

[Redacted]

Corrective action may be requested based on the following criteria:

- a) [Redacted];
- b) [Redacted];
- c) [Redacted];
- d) [Redacted]

3.4 Material Review Board (MRB)

Material Review is conducted by a delegated board comprised of

[Redacted]

Material Review Board members may consult with other Groups and personnel as required to arrive at optimum decisions. MRB decisions shall be determined by

[Redacted]

[Redacted]

3.4.1 Responsibility

The Material Review Board:

- a) [Redacted]
- b) [Redacted]
- c) [Redacted]
- d) [Redacted]
- e) [Redacted]
- f) [Redacted]

At least two members of the Configuration Control Board (CCB) must review and sign all MRB dispositions to determine the affect dispositions have on the configuration status of the affected project.

3.4.2 Applicable Dispositions

MRB dispositions may include, but are not limited to:

Clarification

[Redacted]

Conditional Acceptance

[Redacted]

Non-Flight

[Redacted]

Notification

[Redacted]

[Redacted]

Precautionary

[Redacted]

Repair (Non-Standard and Standard)

[Redacted]

Request for Waiver/Deviation

[Redacted]

Return to Supplier (Receiving Inspection)

[Redacted]

Rework (Non-Standard and Standard)

[Redacted]

Scrap

[Redacted]

3.4.2.1 Applicable Classifications

Major: This classification applies to

[REDACTED]

Minor: This classification applies to

[REDACTED]

None: This classification applies to

[REDACTED]

3.4.2.2 Customer Disposition Authority

Major: A Waiver/Deviation disposition is RTV and Scrap dispositions are *not*

[REDACTED]

Minor: Conditional Accept and Non-Standard Rework/Repair dispositions are

[REDACTED]

Scrap, RTV, or Standard Rework/Repair dispositions are *not*

[REDACTED]

None:

[REDACTED]

3.4.3 Customer MRB Review

An incomplete MR is not subject to Customer review.

3.4.4 MRB Qualification

A Material Review Board member must:

1)

[REDACTED]

2)

3)

[REDACTED]

3.5 Definitions

The following definitions apply:

a) Anomaly

[REDACTED]

b) Continuous Improvement Opportunity

[REDACTED]

c) **Major Nonconformance**

[REDACTED]

d) **Minor Nonconformance**

[REDACTED]

e) **None**

[REDACTED]

f) **Repair**

[REDACTED]

g) **Rework**

[REDACTED]

h) **Scrap**

[REDACTED]

i) **Suspect**

[REDACTED]

j) **Technical Documents**

Engineering Specifications, Purchase Orders, Procedures, Standards, Written Requirements, Material Notes, Bulletins, Contract Requirements, and Environmental, Health and Safety Directives

3.6 **Corrective Action Board (CAB)**

The CAB insures that causes of nonconformances are determined according to the "Applicable Classifications" paragraph herein, and responsible managers take appropriate corrective action. This function is performed by [REDACTED]

3.6.1 **CAB Authority and Responsibilities:**

a) [REDACTED]

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b)

c)

d)

3.6.2 SPC Data Review (Optional)

When process control techniques are used, and analysis of cumulative data for a targeted condition reveals

3.6.2.1 Process Control (SPC is Optional)

When corrective action is required due to inadequate SPC process control, and until such time as it has been demonstrated that the corrective action has been effective, the CAB may request that the subject process include:

a) Monitoring:

1)

2)

3)

4)

b) Documentation of analysis results

3.6.3 Monitoring Effectivity

The CAB insures that reviews of MRB decisions are

3.7 Disposition of Material

3.7.1 All Material Reports are disposed of by an MRB decision:

a)

b)

c)

d)

e)

f)

g)

h)

i)

j)

k)

l)

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m) [REDACTED]

3.7.2 Reprocessing

Instructions for reprocessing material after repair are included in Standard Repair Procedures or other repair documentation. The instructions include [REDACTED]

3.7.3 Customer Repair/Rework Approval

Proposed repair/rework methods are submitted to the MRB and the Customer for review and approval prior to and/or during the repair/rework action. The act of approving the repair/rework method does not [REDACTED]

3.7.4 Repair Inspection

Material that has been satisfactorily repaired is subject to Customer inspection as specified in the Standard Repair Process, or as otherwise directed by the Customer or MRB.

3.7.5 Scrap Identity

Scrapped material is [REDACTED]

3.8 Material Report Documentation

3.8.1 Summary

The system maintains records of suspect material, dispositions, assignable causes, corrective actions and effectiveness of corrective actions. The cycle time between Material Report (MR) preparation and completion is targeted at no more than [REDACTED]

Records are organized to permit efficient retrieval for:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

3.8.2 MR Preparation

The Material Report documents all suspect conditions. The Material Report includes:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]
- h) [REDACTED]
- i) [REDACTED]

3.8.3 MR Completion

The MRB adds the following information to the documentation:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]

Upon signature approval by all MRB members the MR is closed. Pending action items are implemented and closed by the Discrepancy Supervisor on an Action Item Notice or equivalent record.

3.8.4 Request for Corrective Action [RFCA]

If the MRB requires corrective action according to the "Applicable Classification" paragraph herein, the following information is recorded on the MR or RFCA as appropriate to internal or external activities:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]

3.8.5 Analysis of Trends (Optional)

If corrective action is not warranted according to the "Applicable Classifications" paragraph herein, but corrective action is elected by the MRB, the CAB insures that documentation of the corrective action complies with the "Request for Corrective Action" paragraph herein.

3.8.6 Costs (Optional)

Data for costs associated with material reporting is collected to the extent specified by the CAB. A system using actual costs, relative cost constants, estimates by qualified personnel, or any combination thereof is used. The CAB uses the cost data for appropriate action. The cost data may include, but is not limited to the following:

- a) [REDACTED]
- b) [REDACTED]
- c) [REDACTED]
- d) [REDACTED]
- e) [REDACTED]
- f) [REDACTED]
- g) [REDACTED]
- h) [REDACTED]
- j) [REDACTED]

3.9 Summary Report (Optional)

A Summary Report may include, but is not limited to:

- a) [REDACTED]
- b) [REDACTED]

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- c)
- d)
- e)
- f)
- g)
- h)
- i)
- j)
- k)

3.9.1 Data Availability (Optional)

This data is available for on-site review by the Customer unless it is defined as "Competition Sensitive".

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Your Company Name	REV	CAGE	DOC#:	13 of 13
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REQUEST FOR CORRECTIVE ACTION

[illegible]

Your Logo

QC-103-3 Form Rev: Orig

CALCULATED RISK RELEASE

[illegible]

Your Logo

QC-103-4 Form Rev: Orig

FEDERAL, MILITARY and SOCIETY SPECIFICATIONS

Use latest revision at the time of contract, or as specified by contract

A/D = As Designed; A/B = As Built; or use A/T = As Tested

* An asterisk placed in the revision column indicates

SUMMARY OF DATA LIST REVISIONS

QC-109-8 Form Rev: Orig

[illegible]

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Procedure Writing Technique, Style 1

Mo/Yr

Revisions					Rev:			
Letter	E.O. Number	Description	Date					
Used On	Contract#:		Your Company Name					
Prepared By:		Date						
Your Dept:		Date						
Your Dept:		Date						
Your Dept:		Date	PROCEDURE					
Your Dept:		Date	QC-129-1					
Your Dept:		Date	Size:	A	CAGE:		Form Rev: Orig	1 of 1

1.0 Scope

Document procedures using block diagrams or flowcharts that describe discrete operations in a process. Prepare work instructions to explain details in procedures but only when [REDACTED]
[REDACTED] The less disclosure in a procedure or work instruction the better because [REDACTED]

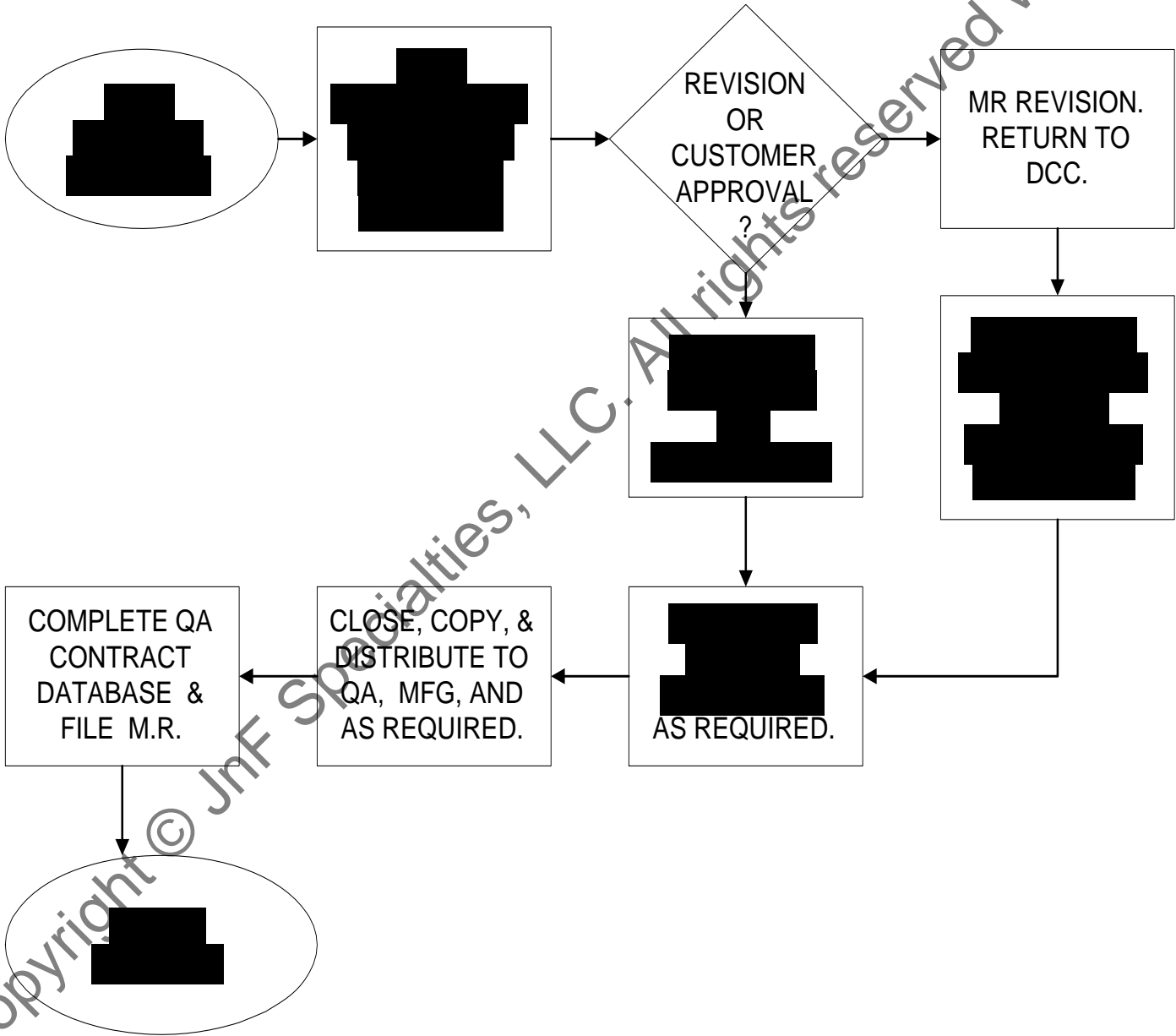
[REDACTED] Don't attempt to nail everything down in a procedure with words; simply address operations that [REDACTED]
[REDACTED]

An example of this writing technique follows on pages 3, 4, and 5.

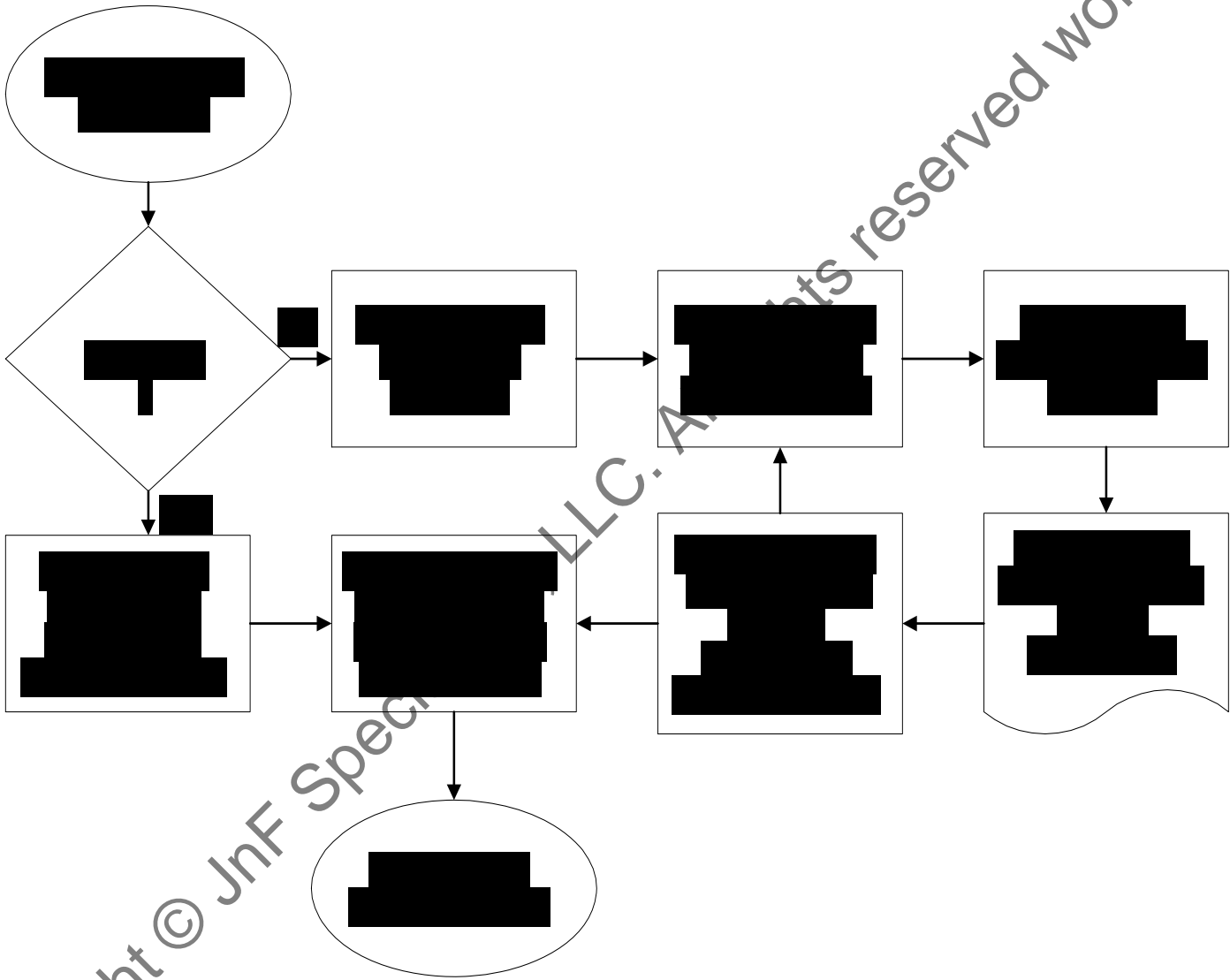
Your Company Name	REV	CAGE	DOC#:	2 of 2
			QC-129-1	

Option: Insert image

MATERIAL REPORT PROCESSING
(DISCREPANCY SUPERVISOR)
SUB-FLOWCHART

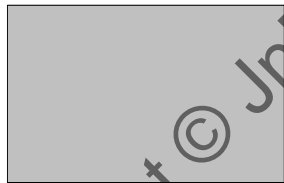
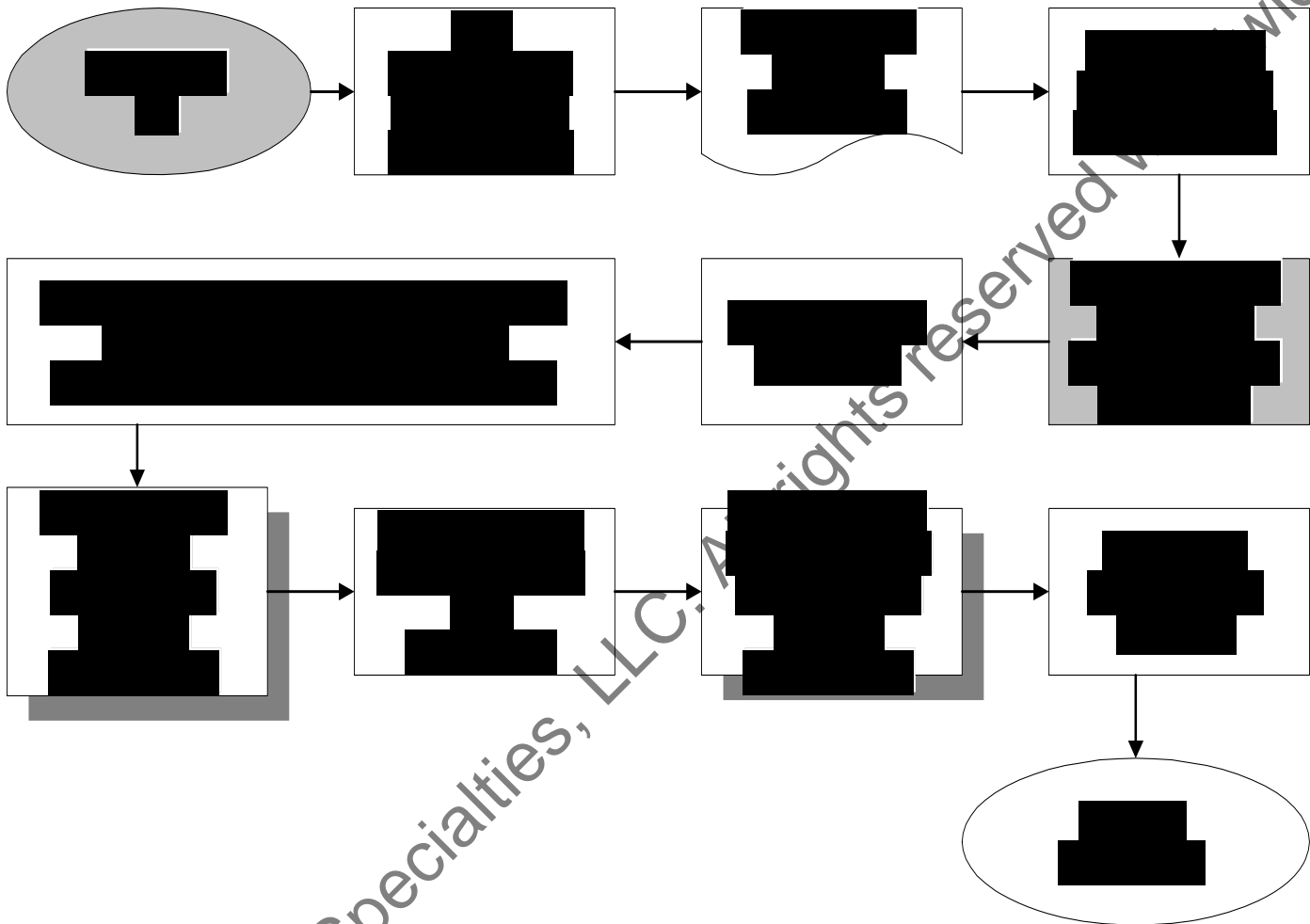


MATERIAL REPORT "DCC" ROUTING
FOR SIGNATURES (MRB) SUB-FLOWCHART



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MATERIAL REPORT (MR) ROUTING
FLOW-CHART



NOT PART OF
DCC ROUTING.

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Writing Procedure, Style 2

Mo/Yr

Revisions				Rev:				
Letter	E.O. Number	Description	Date					
Used On Surveys	Contract#:	Your Company Name						
References:	Your #							
Reports:	Your #							
			WORK INSTRUCTION					
Prepared By:			QC-129-2					
Approved:			Size:	A	CAGE:		Form Rev: Orig	1 of 1

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