1.0 GENERAL

Photonic Detectors Inc. will provide the necessary systems and controls to assure that all supplies, materials, components, sub-assemblies, final assemblies and surveys will conform to the contract and or purchase order requirements, whether manufactured or processed by Photonic Detectors Inc. or procured from a sub-contractor or vendors. PDI will perform or have performed the necessary inspections and tests required to substantiate product conformance to drawings, specifications and contract purchase order requirements. PDI inspection systems, documents, travelers, test data sheets and etc., shall be available for review by the government, sub-contractor or customer or representative prior to the initiation of production and through the life of the contract. The government or contractor, at it's option, may furnish written notice of the acceptability or non-acceptability of PDI's inspection system. PDI shall notify the government representative or sub-contractor in writing or any changes to the inspection system. The inspection system shall be subject to change disapproval if changes thereto would result in non-conforming products.

1.0 MANUFACTURING PROCESSES DOCUMENTATION

The processes of silicon processing, micro-assembly, soldering, adhesion, manufacturing of silicon photodiodes, I.R. emitters, hybrids and microcircuits shall be regarded as processes and shall be within the scope of this section and require written manufacturing documentation.

1.1 **CUSTOMER SPECIFICATION** All processes within the scope of this Manual shall be done according to the customer specification when such is applicable, otherwise the processes shall be in accordance with PDI specifications.

1.2 **PROCESS SURVEILLANCE** The processes listed in this section, when used, shall be kept under constant Quality Control Surveillance.

1.3 **RECORDS** Records of testing done on the manufacturing processes and on the products thereof shall be maintained.

1.4 **SUBCONTRACT OR SUPPLIER PROCESSES** Evidence of proper control of processes by suppliers, vendors or sub-contractors shall be maintained.

1.5 **FINAL PRODUCTS INSPECTION** All completed products shall be tested and inspected according to written test procedures and inspection instructions where applicable, to assure that the products meet the requirements of the contract and the applicable drawings and specifications.

1.6 **INSPECTION RECORDS** Test and Inspecting Data shall be recorded on the Documents described in the inspection instructions and these records shall be maintained for a designated period IAW Purchase Order and/or contractual requirements.

1.7 **INSPECTION EQUIPMENT** All test equipment or inspection measuring equipment shall be used which does not show evidence of that control or which is beyond it's stated date of re-calibration.

1.8 **INSPECTION CRITERIA** The latest revision of purchase orders, customer's drawings and specifications or documents such as Sales Orders, PDI Drawings and Inspection Sheets, which are directly related to those customer documents and cross-referenced as to the revision shall be used as inspection criteria at Final Test and Inspection.

1.9 **IN-PROCESS INSPECTION** All products in the process of manufacture and assembly shall be inspected at points called out in the assembly shop traveler and as dictated by Engineering and Assembly Drawing or Specifications.

1.10 In-process inspection includes first piece inspection, parcel inspection, parts inspections and inspection on sub-assemblies which are not the final finished product.

1.11 No parts or sub-assemblies shall be placed in stock or storage areas without indicating of inspection status with accept label. No reject material will be allowed in stock or bonded stores.

2.0 ENVIRONMENTAL TESTING AND SAMPLING

2.1 **QUALIFICATION TEST** Qualification testing is generally the responsibility of our customers, except when specifically contracted for.

2.2 **SAMPLING RATES** Quality Control shall establish the rate of sampling production testing. The rate shall be as defined in the departmental test instructions and/or procedures, MIL-STD-105 AQL sampling will be used.

2.2.1 **TEST PROCEDURES** Approved test procedures shall be used for production sampling test.

2.2.2 **SAMPLING TEST FAILURES** If any item within a selected sample fails to pass any of the sampling test, a second sample shall be selected at random from the same lot, if available, and shall be subjected to the particular test or tests which the previous sample failed. Should this second sample also fail, delivery of the products shall immediately be suspended for corrective action and/or customer authorization, or the product will be 100% tested.

2.2.3 **CONTRACTUAL SPECIFICATIONS** When contracted for by the terms of the purchase order. production test shall be made according to a specific customer schedule in quantities and test specifications. Quality Assurance shall sample all testing as outlined above.

3.0 INSPECTING RECORDS

Adequate inspecting records of all in-process inspection shall be maintained as evidence that all components and sub-assemblies conform to quality standards called for ont he drawings or specifications throughout the manufacturing process.

3.1 **QUALITY ASSURANCE RECORDS**

3.1.1 Records of the following inspections shall be maintained:

Receiving Inspection
In-Process Inspection
Final Inspection
Gage and instrument
Special Processes

3.1.2 **CORRECTIVE ACTION** Records shall be maintained to show evidence of corrective action taken.

3.1.3 **SUB-CONTRACTORS' QUALITY** Records of Suppliers' and Sub-Contractors' quality history shall be maintained.

3.1.4 **RECORD RETENTION** Quality Assurance shall retain Quality Records for a period of four (4) years, unless a longer period is required by specified contract.

4.0 CORRECTIVE ACTION

The Quality Department will issue corrective actions. Corrective actions will be requested, when deemed necessary, for all quality related deficiencies for which there is an assignable cause. Form number 400-15-004 will be used denoting cause, corrective action and action to prevent recurrence. A corrective action log will be maintained for follow-up.

4.1 **IN-PLANT CORRECTIVE ACTION** When required, statistical records shall be kept and analyzed on production areas to determine non-conformance with product specifications. By means of this feed back information through reports and corrective action when deemed necessary, the highest quality standards are met and maintained throughout the company.

4.2 **CUSTOMER REJECTS** All customer corrective requests will be investigated promptly upon receipt of material and all answers will be routed to the Quality Assurance Manager or his delegate for his review and approval before returning to the customer.

4.3 **SUPPLIER REJECTS** Corrective Action Reports returned from suppliers will be used in determining the effectiveness of the vendor's performance and shall be retained in file for reference.

5.0 QUALITY ENGINEERING AND INSPECTION PLANNING

5.1 **CONTRACT REVIEW** The Quality Assurance Department shall review quality requirements of all contracts and issue special quality procedures as required.

5.2 **INSPECTION INSTRUCTIONS AND TEST PROCEDURES** Inspection instructions and test procedures shall be written for all inspection functions. These instructions shall contain all information necessary for the inspection operation and shall be available at the applicable inspection station.

5.2.1 Functional test procedures shall originate in the Engineering Department. These procedures may be rewritten by Quality Engineering in conjunction with Manufacturing to make them more usable in testing production volume.

5.2.2 The Quality Assurance Manager or his delegate shall approve all inspection instruction and/or procedures prior to their issuance.

5.2.3 Changes shall be made to inspection instructions as required by print changes, improved methods. etc. The Quality Assurance Manager or his delegate shall approve all such changes.

5.3 **QUALITY AUDITS**

6.0 DRAWING AND CHANGE CONTROL

The Engineering Department shall have the responsibility of issuing, controlling and circulating to the proper individuals adequate drawings and specifications for the fabrication, processing, inspecting, testing, identification, and packing of the Operations's products.

6.1 **CONTRACT REQUIREMENTS** The Engineering Drawings and specifications shall contain all requirements of the customer contracts.

6.1.1 **CONTRACT CHANGES** Engineering changes initiated by the customer through contract changes, purchase order changes, or drawing revisions, shall be made with an Engineering Change Notice (ECO) as described below.

6.2 **ENGINEERING CHANGES** Changes to drawings shall be initiated by an engineering change notice, which shall be regarded as a change request. This notice carries the same authority as the drawing; therefore, it shall be circulated and controlled in the same manner as the drawing. Engineering change notices shall show the nature of the change, date or lot of affectivity and disposition of all parts or materials, and shall have Quality Assurance Approval.

6.3 **OBSOLETE DRAWINGS** Drawings which are obsolete by revisions shall be removed from all production areas and returned to the Engineering Department for disposition. Obsolete drawings which must remain in circulation to complete work-in-process, shall have the applicable ECN affixed and shall be removed when the date or lot of affectivity is attained.

6.4 **CONTROL OF CHANGES AFFECTING SUB-CONTRACTORS** It shall be the responsibility of the Engineering Department to forward all revised drawings and/or engineering changes via the Purchasing Department to sub-contractors affected by the changes.

6.5 **CONTROL OF DRAWINGS AND CHANGES** It is the responsibility of the Quality Assurance Department to insure compliance with provisions of this section.

7.0 MEASURING AND TEST EQUIPMENT

All equipment used as an inspection media to determine the acceptability of a product or a part, shall be controlled in accordance with MIL-STD-45662.

7.1 **PRIMARY STANDARDS** Equipment used as the basic reference for measurement attributes shall be reserved as primary standards and shall be traceable as to calibration accuracy to N.I.S.T. A test accuracy ration of 4:1 will be maintained for all characteristics being calibrated. Certifications showing this traceability shall be available and shall be up-to-date according to the established frequency of calibration shown in the inspection instructions.

7.2 **SECONDARY STANDARDS** Only instruments used in the calibration of other inspection instruments shall be included in this classification. These instruments shall be calibrated with primary standards and shall have a calibration frequency as shown in the inspection instructions.

7.3 **INSPECTION FREQUENCY** Inspection instruments shall be inspected and calibrated at an initial frequency based upon the stability of the instrument, the degree of usage and it's purpose. This frequency shall be re-adjusted according to the history of the instrument as shown by the calibration record card or report.

7.4 **NEW OR REPAIRED EQUIPMENT** New or repaired gages or instruments shall be inspected prior to use. identification numbers shall be affixed and control cards initiated if the gages or instruments are satisfactory.

7.5 **OBSOLETE, DEFECTIVE AND INACTIVE EQUIPMENT** Gages and instruments which are inactive. obsolete, or defective shall be removed from service and stored in the designated place until disposition has been made.

7.6 **CALIBRATION RECORDS** Records shall be maintained to identify items calibrated, instrument identification. current calibration interval, date of last calibration, calibration source, calibration procedure, results of previous calibrations, corrective actions taken, indications of erratic behavior or operations failures and calibration certificate or report number.

7.7 **ENVIRONMENTAL CONTROLS** Environmental conditions which could affect the accuracy, stability, or calibration of M&TE and measurement standards should be identified and controlled. Unusual environmental control requirements are described in the appropriate calibration procedures. Adequate compensation and/or corrections are applied in instances where the defined environmental conditions are not met.

7.8 **TOOLS, JIGS AND FIXTURES AS MEDIA OF INSPECTIONS** All equipment used as media of acceptance of inspection shall fall within the scope of control as designated in this section.

7.9 **CALIBRATION LABELING** Labels on measuring and test equipment shall indicate the last and the next calibration date and by whom the last calibration was made. When this is not feasible, because of size or the environment, the label shall be installed on the protective container box or case of the instrument.

7.10 **GAGE AND INSTRUMENT PROCUREMENT** All purchase orders for gages or instruments to be used in determining acceptability of products shall be approved by the Quality Assurance Department for their adequacy in the intended application and for certification requirements to be met by the vendor.

7.11 **CALIBRATION PROCEDURES** The calibration procedures in MIL-STD-120 will be used for all mechanical hand tools. The manufacturer's calibration procedures will be used for all electronic equipment.

7.12 **SIGNIFICANT OUT-OF-TOLERANCE CONDITIONS** A significant out of tolerance condition is described as any out of tolerance that exceeds three (3) of the smallest increments that the instrument will resolve. Whena significant out of tolerance condition is identified, corrective action is begun immediately to determine the impact on work in progress, inventory and, if necessary, customer inventory.

8.0 STATISTICAL QUALITY CONTROL

Sampling inspection as described in the particular inspection instructions shall be used in determining the acceptability of products at inspection areas when 100% inspection is not used.

8.1 **SAMPLING PLANS** The latest revision of MIL-STD-105E for inspection by attributes shall be used for sampling inspection unless a Contract requires the usage of a particular revision.

8.2 **INSPECTION LEVEL** The inspection instructions shall clearly state the AQL.

8.3 **RECORDS OF SAMPLING INSPECTION** Sample sizes, lot sizes and number defective found shall be recorded. The defective characteristics shall also be recorded. Disposition of lots will be shown on the proper form.

9.0 INDICATION OF INSPECTION STATUS

9.1 **INSPECTION STAMPS** The Quality Assurance Department will issue inspection stamps and maintain a record of all numbers and the date they are assigned to inspectors.

9.2 **ACCEPTED MATERIAL** All material accepted into the plant for manufacturing and process purposes will show evidence of acceptance by an inspector acceptance stamp on material or attached tag. On multiple copy forms, each copy must be stamped.

9.3 **IN-PROCESS MATERIAL** All accepted material will be moved from one area to another by a traveler, move order or acceptance tag, which indicates the inspection status of the material.

9.4 **REJECTED MATERIAL** All rejected material, parts, or sub-assemblies rejected will be identified by inspector's signature or stamp on a reject tag or other form which will give full description and any necessary information about the rejected material or parts. The rejected parts will then be placed in a designated area separate from accepted parts.

10.0 CONTROL OF NON-CONFORMING MATERIAL, PARTS AND ASSEMBLIES

Scope: Any material, parts, or product in which one or more characteristics do not conform to the requirements specified by the drawing or other applicable product description.

10.1 Any non-conforming material, part or assembly found at any stage of manufacture, inspection, or test shall be identified by use of the proper form and removed from the production lot or area for disposition as soon as practical.

10.2 Such materials shall be held in an appropriate area until such time as acted upon by authorized members of Engineering, Production, Quality Assurance and where required, the customer.

10.3 Corrective action shall be initiated by Quality Assurance as a result of serious or repetitive rejections and directed to the department responsible for the rejection for timely objective corrective action.

10.4 Adequate records shall be maintained by Quality Assurance Department of disposition, material review board action and corrective action as evidence of sufficient control to assure conformance to company quality and reliability product standards.

11.0 MATERIAL REVIEW BOARD

PDI shall appoint a Material Review Board and provide procedures and forms for implementation of MRB whenever this function is required by the customer's contract.

11.1 **PRELIMINARY REVIEW** The appointed Review Board shall act as a preliminary review board on decisions as to the acceptability of material to customer specifications.

12.0 CONTROL OF PURCHASES

All PDI vendor purchases will be made using a controlled purchase request and purchase order system. A Quality Attachment form will be issued with each vendor purchase for items used on a Military Contract. This Quality Attachment shall include, but not limited to, certification of compliance, Inspection Test Data, chemical/physical analysis, Traceability requirements, shelf life and storage requirements, first article inspections, source inspection, statistical data, Government source inspection, Quality System requirements and Calibration requirements.

13.0 SUPPLIER QUALIFICATION

All new suppliers to PDI are in a "suspense" mode, subject to 100% inspection until three (3) consecutive acceptable lots are received. After the third lot is accepted, the new supplier is approved and will remain approved until corrective action is deemed ineffective.

14.0 RECEIVING INSPECTION

All incoming production materials, parts, and assemblies shall be subject to inspection for acceptance at receiving inspection.

14.1 Such materials shall be inspected in accordance with applicable purchase orders and inspection instructions in conjunction with approved engineering drawings and/or specifications.

14.2 No material or parts shall be placed in storage or used without evidence of acceptance on or with them.

14.3 Materials designated for use in a research and development deliverable end item shall be treated as normal materials. Research and development materials which will not be used in deliverable end items shall be inspected only to the extend defined by Engineering and approved by Quality Assurance.

14.4 Statistical sampling methods shall be used in all cases where materials are received in such quantity as to make this type of inspection practical.

14.5 Appropriate records indicating the results of incoming inspection shall be maintained.

15.0 PRESERVATION, PACKAGING, PACKING AND SHIPPING

All items to be shipped and the shipping documents shall be monitored to determine that they are properly stamped, labeled, packaged and marked in acceptance with the applicable specification and procedures.

15.1 **SPECIAL PACKAGING** Where special packaging is required by the contract, this information shall be stated on the Sales order. It is the responsibility of the Quality Assurance Department to monitor compliance with this section.

15.2 **PACKAGING MATERIALS** Materials used in unit packaging and for shipping containers shall comply with the prescribed specifications. No materials other than those approved and used as standard packaging practice shall be used. No change in materials or procedure shall be made without prior testing and approval by the Quality Director and/or an applicable engineering change notice.

15.3 **CERTIFICATION OF SHIPMENTS** When certification of compliance is called for on a customer's purchase order and no other instructions are given, a standard industry form shall be used.

15.4 This certificate may be signed only by an officer of the Company, the Quality Assurance Manager, or his delegate.

15.5 When customer purchase orders contain special certification instructions, or are accompanied by special forms, these shall be used in lieu of the standard form.

16.0 POLICY

The Quality Assurance Department shall provide and maintain a procedure outlining department organization functions and responsibilities to effectively implement company Quality Assurance Policies.

16.1 INSTRUCTIONS

16.1.1 The Quality Assurance Department is responsible for format, distribution, revision, and conformance to applicable company standards, specifications and where required, contract requirements.

16.1.2 Page formate should note subject, issue, revision date and page numbers.

16.1.3 Distribution should be limited to personnel authorized to implement and/or have need of it's contents.

16.1.4 Each controlled quality manual should be assigned a Serial Number and Registered to the assignee.

16.1.5 A revision should consist of (Properly Authorized) reissuance of total section or page, and will be accompanied by a new index page noting applicable revision date so that currentness and completeness will be assured.

16.1.6 All applicable sections contained within the Quality Assurance Manual shall conform to Approved Company Quality Standards and/or customer specifications and as required; MIL-I-45208A, MIL-STD-105E and MIL-STD-45662.

16.1.7 The Quality Manual shall be reviewed, as a minimum, once a year, and updated where necessary by the Quality Assurance Department.

16.1.8 Any/All suggested revisions by other departments should be submitted, in detail, to the Quality Assurance Department.

16.1.9 Any and all approved revisions will be amended on the "revision page" at the beginning of this Quality Manual upon inclusion. The annual revision as per section 16.1.7 will also be noted even if no changes were made.

photonic detectors INC.

805-527-390
FAX 805-527-39

PHOTONIC DETECTORS INC.
QUALITY ASSURANCE MANUAL

APPROVED FOR RELEASE: _____
Mr. Robert Kinard, President

SERIAL NUMBER: 073 DATE ISSUED: 1-19-99

REV	DATE	PAGES	ECO INCORP.	DESCRIPTION	APPRV.
N/C	11-2-94	ALL		NEW RELEASE	
A	11-10-95	NONE		REVIEW & RELEASE	
B	12-1-96	NONE		REVIEW & RELEASE	
C	1-2-98	NONE		REVIEW & RELEASE	

DOCUMENT NUMBER: 932-20-100 Rev (see above)

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1.0 GENERAL

Photonic Detectors Inc. will provide the necessary systems and controls to assure that all supplies, materials, components, sub-assemblies, final assemblies and surveys will conform to the contract and or purchase order requirements, whether manufactured or processed by Photonic Detectors Inc. or procured from a sub-contractor or vendors. PDI will perform or have performed the necessary inspections and tests required to substantiate product conformance to drawings, specifications and contract purchase order requirements. PDI inspection systems, documents, travelers, test data sheets and etc., shall be available for review by the government, sub-contractor or customer or representative prior to the initiation of production and through the life of the contract. The government or contractor, at it's option, may furnish written notice of the acceptability or non-acceptability of PDI's inspection system. PDI shall notify the government representative or sub-contractor in writing or any changes to the inspection system. The inspection system shall be subject to change disapproval if changes thereto would result in non-conforming products.

1.0 MANUFACTURING PROCESSES DOCUMENTATION

The processes of silicon processing, micro-assembly, soldering, adhesion, manufacturing of silicon photodiodes, I.R. emitters, hybrids and microcircuits shall be regarded as processes and shall be within the scope of this section and require written manufacturing documentation.

1.1 **CUSTOMER SPECIFICATION** All processes within the scope of this Manual shall be done according to the customer specification when such is applicable, otherwise the processes shall be in accordance with PDI specifications.

1.2 **PROCESS SURVEILLANCE** The processes listed in this section, when used, shall be kept under constant Quality Control Surveillance.

1.3 **RECORDS** Records of testing done on the manufacturing processes and on the products thereof shall be maintained.

1.4 **SUBCONTRACT OR SUPPLIER PROCESSES** Evidence of proper control of processes by suppliers, vendors or sub-contractors shall be maintained.

1.5 **FINAL PRODUCTS INSPECTION** All completed products shall be tested and inspected according to written test procedures and inspection instructions where applicable, to assure that the products meet the requirements of the contract and the applicable drawings and specifications.

1.6 **INSPECTION RECORDS** Test and Inspecting Data shall be recorded on the Documents described in the inspection instructions and these records shall be maintained for a designated period IAW Purchase Order and/or contractual requirements.

1.7 **INSPECTION EQUIPMENT** All test equipment or inspection measuring equipment shall be used which does not show evidence of that control or which is beyond it's stated date of re-calibration.

1.8 **INSPECTION CRITERIA** The latest revision of purchase orders, customer's drawings and specifications or documents such as Sales Orders, PDI Drawings and Inspection Sheets, which are directly related to those customer documents and cross-referenced as to the revision shall be used as inspection criteria at Final Test and Inspection.

1.9 **IN-PROCESS INSPECTION** All products in the process of manufacture and assembly shall be inspected at points called out in the assembly shop traveler and as dictated by Engineering and Assembly Drawing or Specifications.

1.10 In-process inspection includes first piece inspection, parcel inspection, parts inspections and inspection on sub-assemblies which are not the final finished product.

1.11 No parts or sub-assemblies shall be placed in stock or storage areas without indicating of inspection status with accept label. No reject material will be allowed in stock or bonded stores.

2.0 ENVIRONMENTAL TESTING AND SAMPLING

2.1 **QUALIFICATION TEST** Qualification testing is generally the responsibility of our customers, except when specifically contracted for.

2.2 **SAMPLING RATES** Quality Control shall establish the rate of sampling production testing. The rate shall be as defined in the departmental test instructions and/or procedures, MIL-STD-105 AQL sampling will be used.

2.2.1 **TEST PROCEDURES** Approved test procedures shall be used for production sampling test.

2.2.2 **SAMPLING TEST FAILURES** If any item within a selected sample fails to pass any of the sampling test, a second sample shall be selected at random from the same lot, if available, and shall be subjected to the particular test or tests which the previous sample failed. Should this second sample also fail, delivery of the products shall immediately be suspended for corrective action and/or customer authorization, or the product will be 100% tested.

2.2.3 **CONTRACTUAL SPECIFICATIONS** When contracted for by the terms of the purchase order, production test shall be made according to a specific customer schedule in quantities and test specifications. Quality Assurance shall sample all testing as outlined above.

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Adequate inspecting records of all in-process inspection shall be maintained as evidence that all components and sub-assemblies conform to quality standards called for ont he drawings or specifications throughout the manufacturing process.

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3.1.1 Records of the following inspections shall be maintained:

Receiving Inspection
In-Process Inspection
Final Inspection
Gage and instrument
Special Processes

3.1.2 **CORRECTIVE ACTION** Records shall be maintained to show evidence of corrective action taken.

3.1.3 **SUB-CONTRACTORS' QUALITY** Records of Suppliers' and Sub-Contractors' quality history shall be maintained.

3.1.4 **RECORD RETENTION** Quality Assurance shall retain Quality Records for a period of four (4) years, unless a longer period is required by specified contract.

4.0 CORRECTIVE ACTION

The Quality Department will issue corrective actions. Corrective actions will be requested, when deemed necessary, for all quality related deficiencies for which there is an assignable cause. Form number 400-15-004 will be used denoting cause, corrective action and action to prevent recurrence. A corrective action log will be maintained for follow-up.

4.1 **IN-PLANT CORRECTIVE ACTION** When required, statistical records shall be kept and analyzed on production areas to determine non-conformance with product specifications. By means of this feed back information through reports and corrective action when deemed necessary, the highest quality standards are met and maintained throughout the company.

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5.2.1 Functional test procedures shall originate in the Engineering Department. These procedures may be rewritten by Quality Engineering in conjunction with Manufacturing to make them more usable in testing production volume.

5.2.2 The Quality Assurance Manager or his delegate shall approve all inspection instruction and/or procedures prior to their issuance.

5.2.3 Changes shall be made to inspection instructions as required by print changes, improved methods, etc. The Quality Assurance Manager or his delegate shall approve all such changes.

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The Engineering Department shall have the responsibility of issuing, controlling and circulating to the proper individuals adequate drawings and specifications for the fabrication, processing, inspecting, testing, identification, and packing of the Operations's products.

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6.1.1 **CONTRACT CHANGES** Engineering changes initiated by the customer through contract changes, purchase order changes, or drawing revisions, shall be made with an Engineering Change Notice (ECO) as described below.

6.2 **ENGINEERING CHANGES** Changes to drawings shall be initiated by an engineering change notice, which shall be regarded as a change request. This notice carries the same authority as the drawing; therefore, it shall be circulated and controlled in the same manner as the drawing. Engineering change notices shall show the nature of the change, date or lot of affectivity and disposition of all parts or materials, and shall have Quality Assurance Approval.

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Sampling inspection as described in the particular inspection instructions shall be used in determining the acceptability of products at inspection areas when 100% inspection is not used.

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9.2 **ACCEPTED MATERIAL** All material accepted into the plant for manufacturing and process purposes will show evidence of acceptance by an inspector acceptance stamp on material or attached tag. On multiple copy forms, each copy must be stamped.

9.3 **IN-PROCESS MATERIAL** All accepted material will be moved from one area to another by a traveler, move order or acceptance tag, which indicates the inspection status of the material.

9.4 **REJECTED MATERIAL** All rejected material, parts, or sub-assemblies rejected will be identified by inspector's signature or stamp on a reject tag or other form which will give full description and any necessary information about the rejected material or parts. The rejected parts will then be placed in a designated area separate from accepted parts.

10.0 CONTROL OF NON-CONFORMING MATERIAL, PARTS AND ASSEMBLIES

Scope: Any material, parts, or product in which one or more characteristics do not conform to the requirements specified by the drawing or other applicable product description.

10.1 Any non-conforming material, part or assembly found at any stage of manufacture, inspection, or test shall be identified by use of the proper form and removed from the production lot or area for disposition as soon as practical.

10.2 Such materials shall be held in an appropriate area until such time as acted upon by authorized members of Engineering, Production, Quality Assurance and where required, the customer.

10.3 Corrective action shall be initiated by Quality Assurance as a result of serious or repetitive rejections and directed to the department responsible for the rejection for timely objective corrective action.

10.4 Adequate records shall be maintained by Quality Assurance Department of disposition, material review board action and corrective action as evidence of sufficient control to assure conformance to company quality and reliability product standards.

11.0 MATERIAL REVIEW BOARD

PDI shall appoint a Material Review Board and provide procedures and forms for implementation of MRB whenever this function is required by the customer's contract.

11.1 **PRELIMINARY REVIEW** The appointed Review Board shall act as a preliminary review board on decisions as to the acceptability of material to customer specifications.

12.0 CONTROL OF PURCHASES

All PDI vendor purchases will be made using a controlled purchase request and purchase order system. A Quality Attachment form will be issued with each vendor purchase for items used on a Military Contract. This Quality Attachment shall include, but not limited to, certification of compliance, Inspection Test Data, chemical/physical analysis, Traceability requirements, shelf life and storage requirements, first article inspections, source inspection, statistical data, Government source inspection, Quality System requirements and Calibration requirements.

13.0 SUPPLIER QUALIFICATION

All new suppliers to PDI are in a "suspense" mode, subject to 100% inspection until three (3) consecutive acceptable lots are received. After the third lot is accepted, the new supplier is approved and will remain approved until corrective action is deemed ineffective.

14.0 RECEIVING INSPECTION

All incoming production materials, parts, and assemblies shall be subject to inspection for acceptance at receiving inspection.

14.1 Such materials shall be inspected in accordance with applicable purchase orders and inspection instructions, in conjunction with approved engineering drawings and/or specifications.

14.2 No material or parts shall be placed in storage or used without evidence of acceptance on or with them.

14.3 Materials designated for use in a research and development deliverable end item shall be treated as normal materials. Research and development materials which will not be used in deliverable end items shall be inspected only to the extend defined by Engineering and approved by Quality Assurance.

14.4 Statistical sampling methods shall be used in all cases where materials are received in such quantity as to make this type of inspection practical.

14.5 Appropriate records indicating the results of incoming inspection shall be maintained.

15.0 PRESERVATION, PACKAGING, PACKING AND SHIPPING

All items to be shipped and the shipping documents shall be monitored to determine that they are properly stamped, labeled, packaged and marked in acceptance with the applicable specification and procedures.

15.1 **SPECIAL PACKAGING** Where special packaging is required by the contract, this information shall be stated on the Sales order. It is the responsibility of the Quality Assurance Department to monitor compliance with this section.

15.2 **PACKAGING MATERIALS** Materials used in unit packaging and for shipping containers shall comply with the prescribed specifications. No materials other than those approved and used as standard packaging practice shall be used. No change in materials or procedure shall be made without prior testing and approval by the Quality Director and/or an applicable engineering change notice.

15.3 **CERTIFICATION OF SHIPMENTS** When certification of compliance is called for on a customer's purchase order and no other instructions are given, a standard industry form shall be used.

15.4 This certificate may be signed only by an officer of the Company, the Quality Assurance Manager, or his delegate.

15.5 When customer purchase orders contain special certification instructions, or are accompanied by special forms, these shall be used in lieu of the standard form.

16.0 POLICY

The Quality Assurance Department shall provide and maintain a procedure outlining department organization functions and responsibilities to effectively implement company Quality Assurance Policies.

16.1 INSTRUCTIONS

16.1.1 The Quality Assurance Department is responsible for format, distribution, revision, and conformance to applicable company standards, specifications and where required, contract requirements.

16.1.2 Page formate should note subject, issue, revision date and page numbers.

16.1.3 Distribution should be limited to personnel authorized to implement and/or have need of it's contents.

16.1.4 Each controlled quality manual should be assigned a Serial Number and Registered to the assignee.

16.1.5 A revision should consist of (Properly Authorized) reissuance of total section or page, and will be accompanied by a new index page noting applicable revision date so that currentness and completeness will be assured.

16.1.6 All applicable sections contained within the Quality Assurance Manual shall conform to Approved Company Quality Standards and/or customer specifications and as required; MIL-I-45208A, MIL-STD-105E and MIL-STD-45662.

16.1.7 The Quality Manual shall be reviewed, as a minimum, once a year, and updated where necessary by the Quality Assurance Department.

16.1.8 Any/All suggested revisions by other departments should be submitted, in detail, to the Quality Assurance Department.

16.1.9 Any and all approved revisions will be amended on the "revision page" at the beginning of this Quality Manual upon inclusion. The annual revision as per section 16.1.7 will also be noted even if no changes were made.