

DATE	REVISION LEVEL	REASON	Comments	Author
01/24/13	-	New Release	ECO E63231	PLM
02/23/15	A	Update to include QA Clauses / References to AS9100	ECO E63799	PLM
07/24/15	B	Updated Clause 16 in QA Clauses	ECO E64022	PLM
08/19/15	C	Updated QA Clause 11 and 20	ECO E64078	PLM
09/30/15	D	Updated QA Clause 16	ECO E64119	PLM
1/22/18	E	Updated to clarify QA clauses, References to AS9100D	ECO E65589	Wilson Duong
2/28/18	F	Clarify NAI RoHS requirements. Add AS6174 in para. 16. Clarify clauses 18 & 19.	ECO E65659	Wilson Duong
3/29/18	G	Para. 19 - Add new flow-down for NAI finishing specifications. Reference QWI 8.5.1.2-1	ECO E65781	Wilson Duong
3/19/19	H	Updated document name and changed header and footer	ECO E66410	mmulle

REVISION HISTORY

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1.0 Purpose:

1.1 To outline NAI's Supplier Quality Monitoring Program and quality clause flow-downs.

2.0 Scope:

2.1 This Supplier Quality Assurance Manual applies to all Vendors of NAI.

3.0 Expectation of Suppliers:

3.1 NAI's expectations for our suppliers are high and it reflects the demand our customers place on us. We expect our suppliers to meet or exceed the requirements in the following areas:

Quality:

It is expected the suppliers will have systems to ensure zero discrepancies and actively work towards prevention based on the AS9100 and/or ISO 9001 standard. If nonconformance occurs, suppliers are expected to have systems to contain the nonconformance, notify NAI, and provide a quick response to mitigate impact to NAI. A corrective action approach is required to prevent reoccurrence and is described in NAI quality clauses. It is also imperative the suppliers ensure 100% compliance to NAI Purchasing and Quality Clauses where applicable.

Delivery:

It is expected that suppliers will deliver 100% on time and are responsible for any consequences because of failure to do so. Any late order may be requested to be sent by premium freight at supplier's expense. Additionally, incidents of premium freight and NAI customer disruptions caused by the supplier will have a negative impact on your supplier performance rating.

4.0 Supplier Qualification System:

4.1 Supplier qualification status is maintained via NAI database and contain the following information:

- Vendor Survey Results (QAF 8.4)
- Certification Records
- Approval status

4.2 New Suppliers

4.2.1 NAI Procurement Department shall furnish this Supplier Quality Manual and a Vendor Survey (QAF 8.4) Form to new vendors.

4.2.2 The supplier will fill out the NAI supplied form and return it to the Procurement/Quality Assurance Department for review.

4.2.3 Vendors who do not have an active certification to AS9100 / ISO 9001 may be subject to on-site auditing prior to approval as a vendor.

4.2.4 Upon approval by the Quality Manager and the Procurement Manager, the Vendor File in the Approved Vendors list is updated to include the new vendor.

APPENDIX A. NORTH ATLANTIC INDUSTRIES QUALITY CLAUSES

- NOTES:**
- Clauses 1 to 16** apply to all Purchase Orders.
 - Clause 17** apply to all Purchase Orders for calibrated equipment or calibration services.
 - Clause 18** applies to all Purchase Orders for raw material.
 - Clause 19** applies to Purchase orders containing specialty metals or special finishing.
 - Clause 20** Information Technology
 - Clause 21** FAR(s) Flow-down

1. NAI PURCHASE ORDERS

Receipts against purchase orders will not be accepted if greater than 10 days past required due date without authorization by NAI buyer.

The Purchase Order (along with this document) is the contractual agreement between NAI and the seller that conveys what is to be supplied and the administrative, technical, and quality requirements to be met. Suppliers are advised to read the terms and conditions imposed by the purchase order and are responsible for the compliance thereto.

The supplier shall review the Purchase Order (PO) and product manufacturing, processing, and/or testing requirements prior to acceptance of the PO. If errors or inconsistencies are noted with the PO, or other document referenced by the PO, the seller must immediately notify NAI or its acting delegation. Supplier proceeding with work without written concurrence does so at his own risk.

RoHS Compliance requests

NAI Part Numbers referenced in NAI POs which start or end with the prefix or suffix "RH" signify a RoHS compliant part.

2. QUALITY INSPECTION SYSTEM AND FIRST ARTICLE INSPECTIONS

The supplier shall maintain a quality/inspection system which is in conformance with the requirements of AS9100 and/or ISO9001 to include applicable: Receiving, First Article Inspection in accordance with AS9102 as applicable, In-Process, and Final inspection. Records of inspection and test shall be retained in accordance with Clause 4.

First Article Inspection Reports may be furnished using seller's format so long as AS9102 guidelines are followed. First Article Inspection Reports shall be delivered with product shipments to NAI or submitted electronically (attn: Quality Management) in advance of product shipment.

Exemptions: Unless specified on the Purchase Order, commercial off-the-shelf items (COTS) as end items delivered to NAI are exempt from First Article Inspections. COTS items furnished by seller still require Certification of Conformance with each shipment.

3. CERTIFICATION OF CONFORMANCE

(C of C) attesting to the conformance of material (which shall include chemical and/or physical reports with "actual" or "typical" as contractually required results of tests conducted on all materials shipped, verifying conformance to specifications referenced on drawings and/or purchase orders), outside services performed, hardware, machining/manufacturing, etc. The C of C shall include, at a minimum date, purchase order number, suppliers name, part number, drawing number and/or representative, lot, batch, serial number or other identification, signed by an authorized representative of the Supplier, and shall accompany an order upon receipt of said items to NAI.

- a. **For RoHS compliant parts**, certificates of conformance and shall include RoHS compliance information and/or statement.

- b. **For orders containing specialty metals** (see clause 19), the supplier shall declare the country of melt for each applicable lot of articles included in the order.
- c. Parts supplied for this Purchase Order shall not, and indicate, "have not been exposed to functional **mercury or mercury compounds**" on the Certificate of Conformance.

4. RECORD RETENTION AND CERTIFICATIONS

Records must be maintained for a period of 7 years and must be retrievable within 48 hours of a request by NAI. Certification test data shall be traceable to the organization performing the testing, special processing and/or inspection(s) requested via NIA's Purchase Order, including any information required to demonstrate conformance to NAI specification and/or Purchase Order requirements.

5. SURVEILLANCE AT SELLER SITE

All items specified by the purchase order are subject to surveillance by NAI or NAI's customer. This includes review, verification, examination, test and/or analysis of the seller's manufacturing and associated systems, procedures, and processes at the sellers site. If necessary, such activity shall be coordinated by NAI personnel in advance of arrival. Note: Delegation of supplier verification to subcontractor is not practiced at NAI.

5.1 RIGHT OF ENTRY

The seller shall include provisions in the subcontract to allow the NAI, NAI's customer, and regulatory agencies Right of Entry to determine and verify the quality of contracted work, records and materials at the supplier's site.

6. REJECTION OF PRODUCT NONCONFORMANCES

When supplied material or parts are found to be substandard or defective at our facility or at our customer's facility, NAI will inform the seller. Nonconforming product may be subject to return to the seller at the seller's expense.

6.1 CORRECTIVE ACTION REQUEST

Acceptance of this purchase order obligates the seller to perform, upon request, a corrective action investigation when discrepant material is received by the buyer.

In the event of discrepancies in supplied product or services the supplier shall provide a corrective action report that includes the following information:

- 6.1.1 Root causes of the defect and the non-detection of the defect.
- 6.1.2 Containment information and containment actions.
- 6.1.3 Corrective actions for each identified defect.
- 6.1.4 Preventative action for each identified root cause including implementation timelines.
- 6.1.5 Validation of effectiveness of the identified corrective actions and preventative actions.

The following also applies:

1. A corrective action report shall be furnished, within a period of five business days upon notification from NAI and shall be specific and conclusive to prevent a reoccurrence of the discrepancy.
2. Supplier corrective action reports sent to NAI may utilize the supplier's corrective action format provided that all of the requirements listed in section 6.1 are met.

3. NAI reserves the right to request that additional analysis tools be utilized during a complaint investigation. These could include, but are not limited to, cause and effect diagrams, 5-Why forms and/or additional forms required by NAI customers.
4. Implementation of corrective actions may be subject to verification by NAI.
5. In the event where an acceptable corrective action has not been supplied, NAI reserves the right to audit the supplier's corrective action process and/or place additional controls on the supplier's manufacturing process.

7. PRODUCT IDENTIFICATION

The seller shall ensure that all items are legibly marked in accordance with the NAI purchase order specifications.

Identification requirements include the following:

- d. Purchase Order Number
- e. Purchased Part Number and Revision Level
- f. Item Description
- g. Manufacturer's identification
- h. Lot or date code
- i. Serial number information as applicable
- j. Quantity

The following exceptions apply:

- a. Items too small of a configuration or material prohibiting individual marking are packaged in suitable containers which are marked as above.
- b. Material that the supplier receives from NAI is identified upon return to NAI with the NAI information supplied on the purchase order and the shipper that originally transferred the material to the supplier.

7.1 IDENTIFICATION OF LIMITED SHELF LIFE MATERIAL

Materials with limited shelf life (epoxy, paint, adhesives, etc.) shall indicate the date of manufacture, lot number and applicable specification on the container. Time lapse between cure or manufacturing date and date of scheduled receipt shall be consistent with applicable specification or Purchase Order requirements. At a minimum, product receipt shall not have less than 75% of its shelf life remaining.

7.2 COMPONENT DATECODES

All electronic component date codes must be within 3 years of the NAI receipt date unless otherwise authorized by North Atlantic Industries. Components that do not meet this clause requirement shall be reviewed for acceptance as a deviation by NAI Quality Assurance and NAI procurement prior to PO issuance.

7.3 NAI SUPPLIED MATERIAL

If materials are provided by NAI to the supplier for the performance of work, the supplier, by acceptance of the material and subsequent delivery of product, warrants that no mixing of any such material with other material (either acquired by the supplier or provided by other customers to the supplier, etc.) has occurred.

8. MRB AUTHORITY AND OUTSOURCING

- The seller does not have material review authority and shall not make any unauthorized repairs by any means without NAI or NAI's customer's written approval.
- No outsourcing without prior written approval from North Atlantic Industries, Inc.
- The supplier must notify North Atlantic, in writing, prior to making any process changes that may affect form, fit, or functionality of the product.
- Relocation of manufacturing affecting NAI purchased product shall also be reported to NAI for approval prior to shipment of affected products to NAI.
- **CHANGE APPROVAL** - For those items produced against a supplier generated set of requirements (proprietary products and the like), the supplier shall obtain NAI approval, in writing, before making any changes in material or production processes that may affect form, fit, function, interchangeability, or reliability.

9. CONTROL OF SPECIAL PROCESSES AND STATISTICAL DATA

9.1 Special processes used by the seller and any sub-tiers shall be approved by NAI and/or NAI's customers. These include operations subject to process controls such as: coating, joining, heat treating, cleaning, non-destructive test, etc. The seller shall be approved in writing to perform specific required Special Processes, or use Special Process vendors by the PO or other contractual document.

9.2 Statistical data (including Cpk/Ppk studies) when required by purchase order shall be supplied with each shipment or as otherwise specified. Statistical data must be identified as to the purchase order number and shipping date. Statistical data may be submitted electronically to NAI Quality Assurance upon written approval by NAI delegation.

10. DEVIATION FROM REQUIREMENTS

10.1 FOUND PRIOR TO THE START OF PRODUCTION

When it is known by the seller that an NAI specified requirement cannot be met due to:

1. Technical requirements
2. Errors noted on POs and contractual documents
3. Manufacturability issues
4. Lead time
5. Cost

The seller must obtain written approval for such deviation from NAI prior to the start of production.

Continued...

10.2 FOUND DURING PRODUCTION OR PRIOR TO SHIPMENT

Any departures from drawings, specifications, or other procurement requirements shall be submitted to NAI for review and consideration. Disposition must be approved by NAI before shipment of the product, unless otherwise directed by NAI.

10.3 INFORMATION REQUIRED FOR DEVIATIONS

Any request for deviation must be in writing and contain as a minimum the following:

- a. Purchase order number, item part number or description and revision level if applicable.
- b. Specification or drawing requirement.
- c. Actual condition or requested deviation.
- d. Deviation(s) from contractual requirements, as applicable
- e. Contact of appropriate personnel at seller's site
- f. Lots or quantities to which request applies.

10.4 NAI DEVIATION APPROVAL

A request for deviation does not guarantee NAI acceptance or approval. NAI acceptance and approval with authorization to ship is applicable only to the lots and discrepancies requested and DOES NOT constitute acceptance or approval of additional lots or discrepancies.

11. PROHIBITED MATERIAL USES

11.1 Mercury or Mercury Compounds - Unless specified by NAI (drawing, or specification), parts supplied for this Purchase Order shall not, and indicate, "have not been exposed to functional mercury or mercury compounds" on the Certificate of Conformance.

11.2 Hexavalent Chromium - Unless specified by NAI (drawing, or specification), Hexavalent Chromium Finish (MIL-STD-5541 TYPE 1 or equivalent, any class), may not be used in any product supplied to NAI without prior written approval from NAI.

11.3 3TG Conflict Minerals – Dodd-Frank Act (Section 1502) "Conflict Minerals from the Democratic Republic of Congo"

The supplier shall ensure that all material/components delivered to NAI do not contain 3TG minerals; Tantalum (derived from Columbite-Tantalite), Tungsten (derived from Wolframite), Tin (derived from Cassiterite), Gold and/or finished material originating or sourced from the Democratic Republic of Congo. The supplier shall immediately notify NAI with the pertinent facts if a supplier becomes aware or suspects that it has supplied conflict minerals to NAI.

12. FOREIGN OBJECT DEBRIS / DAMAGE (FOD)

The seller shall employ appropriate housekeeping practices to assure timely detection and removal of residue/debris generated, if any, during operations and/or normal daily tasks and shall ensure FOD requirements are flowed down to sub-contractors and suppliers at every tier.

13. EMPLOYMENT ETHICS

All sellers are required to comply with the Equal Employment Opportunity requirements of FAR 52.222-22. The Equal Opportunity Clauses required by Executive Order 11246, as amended, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. 4212 (formerly 2012), Section 503 of the Rehabilitation Act of 1973, as amended, and the implementing regulations at 29 CFR 471 Appendix A to Subpart A. 41 CFR Chapter 60 (41 CFR 60-1.4, CFR 60-300.5 and 41 CFR 60-741.5 respectively) are part of this purchase order and binding upon the Seller (Subcontractor, Vendor, or Supplier) unless exempted by rules, regulation or orders of the Secretary of Labor. This contractor and subcontractor shall abide by the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a), and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

14. PACKAGING

At a minimum, the seller shall package all material in a manner that will ensure protection against corrosion, oxidation, deterioration and physical damage during shipment. Damaged product due to inadequate packaging will be rejected and returned to the supplier. In addition, when materials delivered are lot-controlled and multiple material lots are shipped, each lot shall be separately packaged and identified.

Electronic Components shall be packaged in compliance to ANSI/ESD S541.

15. SUB-TIER FLOW-DOWN

The seller shall flow-down all applicable NAI requirements to subcontractors and suppliers at every tier.

The seller and associated sub-tiers shall ensure that persons are aware of: (AS9100D para. 8.4.3)

- Their contribution to product or service conformity
- Their contribution to product safety
- The importance of ethical behavior

16. COUNTERFEIT PREVENTION

The seller shall implement counterfeit component avoidance and prevention controls compliant to AS5553 and AS6174. The seller shall ensure that counterfeit work and/or material is not delivered to NAI.

NAI defines counterfeit work/material as a suspected work/material that is a copy or substitute without legal right or authority to do so, or material whose performance or characteristics are knowingly misrepresented by a supplier in the supply chain. The seller shall immediately notify NAI if the seller becomes aware of or suspects that it has supplied counterfeit work/material.

Unless otherwise approved by NAI Quality, seller shall only purchase authentic parts/components directly from the Original Equipment Manufacturers ("OEMs") / Original Component Manufacturer ("OCM") or through the OEM's/OCM's authorized distributor(s).

17. CALIBRATED PRODUCTS AND SERVICES

Seller's product or calibration service provider's calibration system shall meet the requirements of: ISO 17025, ISO 10012-1, AS9100, ANSI-Z540-1, MIL-STD-45662 or greater.

17.1 CERTIFICATION OF CALIBRATION

Sellers of calibrated product and calibration service providers shall furnish a certificate attesting to the accuracy of the items procured and be supplied with each shipment. This certification must contain all the test parameters necessary to demonstrate conformance to the manufactures specifications and shall be traceable to National Institute of Standards and Technology (NIST).

18. RAW MATERIAL

Raw Material Certification

When product furnished by seller is raw material (i.e. metal stock, sheet metal, plastic stock, etc.) the seller shall obtain chemical and physical analysis of raw material demonstrating compliance to the applicable material specification. The following also applies:

- Unless specified by NAI, raw material certification and analysis (chemical and physical analysis report) for raw material and Certification of Conformance (see clause 3.) are required on every lot of material shipped to NAI. If a material certification and analysis is not received with the material, NAI reserves the right to request any required documentation prior to acceptance or return the product to the seller at the seller's expense.
- Raw material shall be identified in accordance with the procuring specification (i.e. ASTM, AMS, etc.).
- Seller shall retain certifications and material test reports IAW clause 4.

19. SPECIALITY METALS and FINSHES

Supplier-Furnished Specialty Metals: In the case where specialty metals, as defined in DFARS 252.225.7008 & 252.225.7009, are contained in material delivered to NAI, the supplier shall certify that:

1. The specialty metal(s) meet(s) DFARS 252.225-7008 when supplied as raw material to NAI or...
2. The specialty metal(s) meet(s) DFARS 252.225-7009 (excluding Paragraph (d)) when supplied as a manufactured article to NAI, including COTS fasteners, unless exempt from this requirement based on DFARS 252.225-7009 paragraph (c).

In addition, the supplier shall furnish all applicable chemical and physical test reports, including the country where the specialty metals were melted.

These requirements shall be flowed down to all sub-tier suppliers in accordance with DFARS 252.225-7008 and DFARS 252.225-7009 sub-tier flow-down guidelines, whichever applies.

NAI Finishing Specification: QWI 8.5.1.2-1 is an NAI document used to control part finishes. NAI custom parts that require part finishing will have QWI 8.5.1.2-1 and a controlled drawing with a "partnumber-F0" suffix both specified in the Bill of Materials. Refer to the Purchase Order part number for finishing callout, then refer to the -F0 drawing tables for references to QWI 8.5.1.2-1. These documents shall be furnished with NAI purchase orders for custom metal / sheet metal parts, otherwise, they are available upon request from NAI procurement.

20. INFORMATION TECHNOLOGY

(xvii) IN ACCORDANCE WITH DFARS 252.204-7008 "COMPLIANCE WITH SAFEGUARDING COVERED DEFENSE INFORMATION CONTROLS" SELLER SHALL INDICATE WHETHER DEVIATION FROM ANY OF THE SECURITY REQUIREMENTS IN THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST) SPECIAL PUBLICATION (SP) 800-171, "PROTECTING CONTROLLED UNCLASSIFIED INFORMATION IN NONFEDERAL INFORMATION SYSTEMS AND ORGANIZATIONS", <http://dx.doi.org/10.6028/NIST.SP.800-171> THAT IS IN EFFECT AT THE TIME THE PRIME CONTRACT SOLICITATION IS ISSUED IS ANTICIPATED IN THE PERFORMANCE OF THE PURCHASE ORDER BY SELLER OR CONTRACTORS AT ANY TIER.

(xviii) IN ACCORDANCE WITH DFARS 252.239-7009 "REPRESENTATION OF USE OF CLOUD COMPUTING" SELLER SHALL INDICATE WHETHER THE USE OF CLOUD COMPUTING IS ANTICIPATED IN THE PERFORMANCE OF THE PURCHASE ORDER BY SELLER OR CONTRACTORS AT ANY TIER.

21. FAR CLAUSE(S) FLOW DOWN

(b) (1) Notwithstanding the requirements of any other clause in this contract, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (b)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause—

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (Apr 2010) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-8, Utilization of Small Business Concerns (Dec 2010) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$650,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) 52.222-17, Nondisplacement of Qualified Workers (Jan 2013) (E.O. 13495). Flow down required in accordance with paragraph (1) of FAR clause 52.222-17.

(iv) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Veterans (Sep 2010) (38 U.S.C. 4212).

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (Oct 2010) (29 U.S.C. 793).

(vii) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496).
Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.

(viii) 52.222-41, Service Contract Act of 1965, (Nov 2007), (41 U.S.C. 351, *et seq.*)

- (ix) 52.222-50, Combating Trafficking in Persons (Feb 2009) (22 U.S.C. 7104(g)).
Alternate I (Aug 2007) of 52.222-50 (22 U.S.C. 7104(g)).
- (x) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (Nov 2007) (41 U.S.C. 351, *et seq.*).
- (xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-- Requirements (Feb 2009) (41 U.S.C. 351, *et seq.*)
- (xii) 52.222-54, Employment Eligibility Verification (Jul 2012).
- (xiii) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations. (Mar 2009) (Pub. L. 110-247). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.
- (xiv) 52.247-64, Preference for Privately-Owned U.S.- Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.
- (xv) 2.5.2.204-7012, Safeguarding Covered Defense Information and Cyber Reporting (Dec 2015)
- (xvi) 252.204-7009 Limitations on the use or disclosure of Third-party Contractor Cyber Incident Information.

Appendix B.
Acknowledgement of Receipt of:
Supplier Quality Manual Revision: H

(Company Name)_____acknowledges that the said company has received a copy of NAI Supplier Quality Manual (SQM), which describes important information about North Atlantic Industries (NAI) supplier policies, expectations and requirements. Said company understands that it should consult the Quality Assurance department of NAI if said company has questions regarding the SQM. Said company understands and agrees that it will read and comply with the policies contained in this manual and any revisions, and bound by the provisions contained therein, and that said continued business is contingent on following those policies.

Signed: _____

Date: _____

Please return to: wduong@naii.com

For NAI use only:

Reviewed by: _____

Reviewed on: _____