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This Appendix I with the Supplier Quality Assurance Requirements for the E-LIGHTER program defines Fokker Aerostructures (Buyer) additional Program Specific Quality Requirements for contracts where AQAP 2110 is relevant because requirements are specified in terms of functional and technical requirements and the Supplier is therefore, responsible for design, development and production.

This Appendix I forms an integral part of the contract / Purchase Order (PO) concluded between Supplier and Buyer.

The contents of this Appendix I is in addition to or replacing one or more for the standard Fokker Quality Requirements as provided in Annex B "Supplier Quality Assurance Requirements (standard)". All terms defined in the Contract / Purchase Order shall be applicable to this Appendix I, unless explicitly defined otherwise in this Appendix I.

Supplier shall have systems and methods to assure full compliance to this Appendix I. When products or services applicable to the Contract / PO are procured by the Supplier from sub-tier suppliers, the supplier shall flow the Appendix I requirements as necessary to assure full compliance is achieved.

In case of of differences or inconsistencies with texts in the Main Contract, the stipulations in the Main Contract will prevail.

The latest issue to this document is the version that is available on the Fokker Aerostructures website: http://www.fokker.com/frfa-Supplier-Portal

### **APPROVAL**

Involvement	Name	Function	Signature and approval date
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# **CHANGE LOG**

Date/Issue	Change Reason
05.Jul.2013/01	New document, replacing all former Exhibit B's of the E-lighter Program
16.Sep.2013/02	Changed QN 03, 07 and 13



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#### 01 **GENERAL**

This Appendix I defines Buyer's additional Program Specific Quality Requirements and forms an integral part of the Contract / Purchase Order (PO) concluded between Supplier and Buyer.

The contents of this Appendix I is in addition to or replacing one or more for the standard Fokker Quality Requirements as provided in Annex B "Supplier Quality Assurance Requirements (standard)". All terms defined in the contract / Purchase Order shall be applicable to this Appendix I, unless explicitly defined otherwise in this Appendix I.

Supplier shall have systems and methods to assure full compliance to this Appendix I. When products or services applicable to the Contract / PO are procured by the Supplier from sub-tier suppliers, the supplier shall flow the Appendix I requirements as necessary to assure full compliance is achieved.

Deviating from above mentioned requirements is only allowed with Buyers written permission.

#### 02 QUALITY SYSTEM derived from Contract Article 8 and AQAP 2110 7.4.2

It differs from the in Annex B "required level of certification for \*(1) military programs as shown in Annex B table 1.

The E-Lighter® program Supplier is required during the execution of the contract to maintain a qualitymanagement system that demonstrably complies with AQAP 2110 (NATO Quality Assurance Requirements for design, development and production (AQAP 2110 Edition 3). The AQAP 2110 includes the requirements of ISO 9001:2008.

The Supplier shall flow down the applicable contractual requirements to Sub-suppliers by referencing the stated contractual requirement, including relevant AQAP(s).

The publication "AQAP 2009 NATO Guidance on the use of AQAP 2000 series" provides guidance on the structure, interpretation of the NATO additional requirements and the use of the AQAP 2000 series. Supplier can use this guidance to select the most appropriate AQAP publication to invoke in his contracts to all members of his supply chain that contributes the E-Lighter® program.

All requirements of this contract may be subject to GQA. You will be notified of any GQA activity to be performed.

#### 03 ACCESS derived from Contract Article 8 and AQAP 2110 - 9.1

Buyer, their Customer (representatives), and their customer's government/regulatory agencies shall have the right of entry into a supplier's facility or that of their subcontractors. Entry shall provide for access to quality system documentation and quality records as well as the ability to conduct audits and verify product and processes.

Supplier shall make arrangements that allow the GQAR to make investigations, necessary to determine compliance with requirements mentioned in this contract.

The investigations may include: audits, enquiries, questions, discussions and explanations, monitoring, witnessing, inspections, checks, inspection of complete products, parts or appliances produced for Buyer.

The arrangements should enable the Supplier to give positive assistance to the GQAR and co-operate in performing the investigation, which means that the GQAR has been given full and free access to the facilities (and those of its sub-tier suppliers) and any information relevant to the product and its production processes.

#### QUALITY AUDIT derived from AQAP 2110 - 9.1 04

On top of the requirements of Annex B Note 3.2 "Quality Systems"

The Supplier shall authorize reviews and audits by the Buyer's Quality departments and Buyer's Customer. When proprietary information is involved, the extend of these reviews, audits and/or inspections will be mutually agreed between Buyer and Supplier. The Buyer reserves the right to send an Fokker Quality Representative for a permanent or prolonged stay at the Suppliers facilities.

The Supplier will be required to provide adequate accommodation from which the representative can conduct his business.



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### 05 ORDER OF PRECEDENCE

The order of precedence in this contract / PO is;

- Contract / PO Requirements
- Drawing Requirements
- General Specifications (AQAP, STANAG, etc)

### 06 DOCUMENTATION\_REVISION AND CONFIGURATION CONTROL.

Suppliers must comply with all applicable specifications and revisions current at order placement

### 07 QUALITY PLAN derived from AQAP 2110 - 5.4

Supplier shall **submit a Quality Plan (QP)** to Buyer which addresses the contractual requirements to the GQAR and/or Buyer prior to the start of the activities unless otherwise directed.

The QP shall be a clearly identified discrete document or part of another document that is prepared under the contract.

The QP shall play two complementary roles:

- 1. Describe and document the quality management system requirements "contract-specific" necessary to satisfy the contract requirements (making reference, where applicable, to the "company-wide" quality management system); (See ISO 9001:2008 5.4) (Supplier should refer to Supplier's procedures which are mentioned in his QMS and are related to the ISO 9001-2008 § 5.4, this should be personalized to the contract.)
- 2. Describe and document the planning of the product realisation, in terms of quality requirements for the product, needed resources, required control activities (verification, validation, monitoring, inspection, testing), and acceptance criteria. (See ISO 9001:2008 7.1). (Supplier should refer to the Suppliers procedures which are mentioned in his QMS and are related to the ISO 9001-2008 § 7.1, this should be personalized to the contract.)

Supplier and Supplier's Sub-supplier shall provide objective evidence, that risks are considered during planning, including but not limited to Risk Identification, Risk analysis, Risk Control and Risk Mitigation. The planning shall start with risk identification during contract review and updated thereafter in a timely manner (for one time deliveries this is most likely not applicable)..

Supplier shall notify Buyer if a (sub)-contract and or order has been identified as constituting or involving risk. Supplier shall inform Buyer periodically with an update of the Risk Analysis results.

Buyer and/or GQAR reserve the right to reject QPs, Risk Plans and their revisions.

### NOTE:

The QP requirements for role 1 relate to clause 5.4, while the QP requirements for role 2 relate to clause 7.1. Contractual requirement for the content of the Quality Plan is established in AQAP 2105 "NATO requirements for Deliverable Quality Plans."

For more guidance on the AQAP 2105 see AQAP 2009 Ed. 3.

### 08 FIRST PART QUALIFICATION (FPQ)

Depending on the classification of the part, the maturity of the supplier organization, order/quality yields and past experience with comparable product a.o. Supplier shall perform a First Part Qualification (FPQ).

The purpose of the FPQ is:

- to validate the production processes and means used to ensure the reproducibility of the production of parts,
- to check the conformity of a selection of the first production parts and their manufacturing documentation before the remaining parts and their processes are developed

The exact process how to perform a FPQ will be defined by the Quality Procurement Department of Buyer and will be provided to the Supplier when applicable.

### 09 PRODUCT REALIZATION

#### **Customer-Related Processes**

a. Review of Requirements Related to the Product:



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Verbal agreements or instructions shall under no circumstances be construed as approval or authorization to proceed.

b. Customer Communication:

Changes that may affect quality must be documented and communicated to Buyer's Quality Assurance and/or Purchasing Representative prior to effectivity of the change.

c. All reports, correspondence, drawings, notices, marking and other communications between the supplier and the customer must be written in the English language.

### 10 PRODUCT AND SERVICE PROVISION derived from AQAP 2110 - 7.6

#### a) Special Processes:

Unless otherwise specified Buyer will outsource Special Processes at Nadcap approved sources. When Special Processors are Nadcap approved, Buyer shall only audit that part of the process that is not covered by the scope of the approval.

In all other cases Special Processes have to be qualified before applied by the supplier. In these cases Buyer will perform a process qualification at supplier, in conformity with the process requirements.

#### b) Measurement, Analysis and Improvement:

The measurement and calibration system applied to this contract shall be in accordance with the requirement of ISO 10012.

When an item of measuring equipment is found to fail re-calibration or is not in calibration, and when there are affected products, the Buyer is to be informed and presented with details of affected products, including products already delivered.

### 11 SPECIAL PROCESS derived from AQAP 2110- 7.5.2.

Supplier should identify the special processes referenced by specification within the engineering design required to produce the items under contract.

#### Special process:

Where the results of the process cannot be fully verified by subsequent inspection and nondestructive testing of the product and where, for example, processing deficiencies may become apparent only after the product is in use.

#### Qualification:

Proving that a process conforms to the requirements (plan, test, verify, report).

### Certification:

Formal statement by the responsible person(s) that the qualification process has been properly carried out and consequently releasing of the process for production.

Special processes (example, soldering, cleaning, X-ray, welding, magnetic particle and penetrant inspection, heat treating, plating, etc.) shall be identified, documented and controlled by the Supplier.

Supplier is responsible to ensure all special processes are capable and qualified in accordance with specification requirements. Objective evidence of Suppliers special processes shall be send to Buyer for approval.

Changes to special processes or special process suppliers require prior written approval of Buyer.

All Special processes shall be approved by Buyer, including those provided by sub-tier special process suppliers.

Approval of special processes does not relieve the Supplier of the responsibility for assuring that work performed by sub-tier suppliers is in accordance with specification requirements.

### 12 REQUIRED DOCUMENTS derived from AQAP 2110 – 8.2.4

On top of the requirements of Annex B Part 3.1 "Required documents" As a minimum the following information must be on the COC

- 1. Original manufacturer's and/or distributor's name and address
- 2. Buyer's Purchase Order number
- 3. Buyer's Part number, revision if applicable, product name and quantity
- 4. Drawing or specification number and revision, to which the part is manufactured
- 5. Serial number(s) or date code(s) or lot/batch/heat number(s) (as applicable)
- 6. If applicable Shelf life / life time data (date of manufacturing)
- 7. Authorized signature, Name, title and date (legible)
- 8. Statement, declaring that the delivered products are in compliance with the requirements of the purchase order.
- 9. Release date of certificate



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10. Deviation of the product related to requirements on the purchase order, if applicable and authorized by Buyer.

- Only if requested for per purchase order, drawing, specification or Quality Note in this Appendix, products have to be delivered with material test certificates, test reports and dimensional measuring reports.

Full traceability of the supply chain shall be guaranteed and be proven by the paperwork.

Distributors shall make every attempt to purchase material direct from the manufacturer. When such is not possible, the distributor will provide documentation that identifies all distributors and the manufacturer with each shipment.

#### **Shipment documentation:**

Each shipment by the Supplier shall be accompanied with the documents in accordance with the above.

### 13 INSPECTION REPORTS FOR EACH SHIPMENT derived from AQAP 2110 - 9.1

After FAI has been performed Buyers Quality Assurance will determine which **characteristics** must be measured for each part during series production.

After proven production stability sampling can be introduced in close consultation with Buyers Quality Assurance.

For each determined characteristic, inspection data documentation showing required and actual inspection results, traceable to each part measured, must be included with each shipment.

#### 14 PHYSICAL/CHEMICAL TEST REPORTS derived from AQAP 2110 – 9.1

On top of the requirements of Annex B Part 3.1 "Required documents"

A Physical/Chemical test report for Raw Material is required and shall contain the following;

- Name/number of the specification with which the material is in compliance.
- The melt/heat lot number or other traceable designation (i.e. purchase order number, invoice number, etc.).
- The reports shall indicate the percentage of each element that makes up the chemical composition and the physical properties of the raw material and a statement of conformance to the applicable specification.

On Fokker's request the applicable reports shall be available to Fokker within 48 hours after becoming available to the Supplier.

### 15 CORRECTIVE ACTION derived from AQAP 2110 – 8.3

When requested to provide corrective action, prepare a report documenting the occurrence, findings, and assessment of the affected product and submit to the Buyer.

Provide objective evidence of relentless root cause analysis and implementation of corrective action that eliminates risk of reoccurrence.

### 16 GOVERNMENT SOURCE SURVEILLANCE derived from AQAP 2110 – 9.1

During performance on this contract, manufacturing and associated processes, products and inspection and /or test data are subject to review, verification, examination, test and/or analysis by authorized Government representatives. Government inspection or release of product prior to shipment is not required unless you are otherwise notified.

### 17 MATERIAL SAFETY DATA SHEET (MSDS)

Whenever the material supplied in fulfillment of this Purchase Order is supplied to Buyer for the first time, a current, detailed Material Safety Data Sheet (MSDS) shall accompany the shipment, given that the material is either toxic or hazardous or both as defined by any applicable law, code statute or regulation. Whenever an MSDS is revised, a post revision copy shall be furnished with the next shipment.

### **Shipment documentation:**

Whenever an MSDS needs to accompany a material shipment to Buyer, an additional copy of the MSDS shall be sent, under separate cover, to the cognizant Buyer.



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### 18 SHELF LIFE MATERIALS

Used shelf life materials shall be "factory new" unless Buyer's written permission. In addition to the requirements of Annex B note 6 "Product characteristics"

Articles with shelf life limitations shall be delivered with at least 75% (3/4) of the allowed shelf life remaining unless prior written consent of the Buyer is obtained.

### 19 RESPONSIBILITIES OF SUPPLIER

Supplier shall report to Buyer all cases where products, parts or appliances have been released and subsequently identified to have deviations from the applicable design data.

### 20 RESTRICTIONS IN THE USE OF HAZARDOUS SUBSTANCES derived from Contract PvE

The E-Lighter system parts shall comply with the MoD restrictions in the use of hazardous substances in equipment and consumables as described in:

Appendix M "Customer Environmental Requirements" of the contract or E-lighter- Appendix M on the Fokker Aerostructures website in case of a purchase order: <a href="http://www.fokker.com/frfa-Supplier-Portal">http://www.fokker.com/frfa-Supplier-Portal</a>

Note: the Supplier shall explicitly state in its quotation that it will conform to these restrictions.

### 21 REACH REQUIREMENTS – guidance on Annex B note 7.

The supplier shall provide information of parts containing one or more substances, identified in the candidate list, with a concentration higher than 0.1% mass/mass.

- Supplier shall establish via proper calculations whether each of these substances contained in the "Items" provided to Fokker, exceed or not the 0.1% mass/mass threshold.
- Supplier shall give Fokker the list of all the items containing one or more substances listed in the candidate list, together with the technical description of the concerned substances (name, CAS Number , EINECS Number ), details about the materials (reference, manufacturing site, etc...) and shall mention if this substance exceed or not 0,1% mass/mass.
- The REACH-report is part of the Delivery Documentation.

### 22 CHANGES derived from AQAP 2110 - 7.2.3

Supplier agrees that the work produced internally and/or the work procured from sub-tier suppliers under this contract shall comply with the following requirements unless a documented Request for Change is approved by the Buyer.

- 1. Work shall not be moved from the original location of manufacture to another location of manufacture within a production facility or to any other production facility.
- 2. After First Article Inspection no changes shall be made to the design, manufacturing processes, materials, activities or production location.
- 3. A documented process shall be in place to review, identify and submit a Request for Changes to Buyer. A documented Request for Change shall be submitted to Buyer 30 days prior to planned implementation. The change will not be implemented unless approved by Buyer.

### 23 DISCREPANCIES BETWEEN BUYERS DRAWINGS AND MANUFACTURERS PARTNUMBER

Manufacturers part numbers on Buyers drawing are for reference only. In case of any discrepancy between the manufacturers part number and Buyers drawing, Buyers drawing will prevail. It is Suppliers responsibility to check if the referred manufacturer part number is in accordance with Buyers drawing. Supplier shall report in writing to Buyer of all such discrepancies prior to delivery.

### 24 MANUFACTURER'S PART NUMBERS

If an item on this Purchase Order is controlled by a drawing that references a "Suggested Source of Supply"



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	and/or "Manufacturer Part Number", this shall not to be construed as a guarantee that the suggested supplier and/or manufacture's part number meets the requirements of the drawing. It is the Suppliers responsibility to assure that the "Suggested Source of Supply" and/or "Manufacture Part Number" meets all drawings required on this Purchase Order.
25	TRACEABILITY derived from AQAP 2110 – 7.5.3.
	Traceability can be required by serial, date code, batch and/or lot number. When serial number traceability is required, do not duplicate serial numbers. Serial numbers cannot be duplicated per part number.
26	PRESERVATION, PACKAGING derived from AQAP 2110 - 7.5.5
	See Appendix C "Goods Delivery Specification" of the contract or E-lighter - Appendix C on the Fokker Aerostructures website in case of a purchase order: <a href="http://www.fokker.com/frfa-Supplier-Portal">http://www.fokker.com/frfa-Supplier-Portal</a>
27	TOOLING/EQUIPMENT DOCUMENTATION, CONTROL, ACCOUNTABILITY
	See Appendix G "Tooling" of the contract or E-lighter - Appendix G on the Fokker Aerostructures website in case of a purchase order: <a href="http://www.fokker.com/frfa-Supplier-Portal">http://www.fokker.com/frfa-Supplier-Portal</a>
28	BUYER'S PERMISSION
	Deviating from above mentioned requirements is only allowed with Buyer's written permission.



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