



SUPPLIER QUALITY REQUIREMENTS MANUAL

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Introduction

Forterra (“Buyer”) is dedicated to building a high-performance supply chain that delivers superior value to our customers and boosts overall productivity. Our process involves carefully choosing Suppliers based on their performance, capabilities, and commitment to continuous improvement. Through proactive and professional relationship management, we foster strong, structured partnerships with our Suppliers.

We are committed to continuous improvement: enhancing our organization, processes, and skills to create value for suppliers, partners, customers, and employees alike. By reducing variability and fostering excellence, we aim to drive shared success across the entire ecosystem. We expect our suppliers to embrace these same principles, striving for ongoing improvement to deliver the highest standards.

We also embrace a zero-defect philosophy to deliver uncompromising quality, reduce waste, and maximize efficiency. By eliminating errors at the source, we lower costs, improve profitability, and strengthen competitiveness. We expect our Suppliers to share this commitment, working with us to create exceptional value for our customers and across the entire supply chain.

Definitions

- **8D Corrective Action** – Refers to the Eight Disciplines (8D) Problem Solving methodology, a structured approach for teams to find and eliminate the root causes of recurring problems, especially in manufacturing and quality control, involving steps like forming a team, describing the problem, and implementing permanent corrective actions.
- **Buyer** – A person or entity responsible for sourcing and purchasing goods or services. For the purposes of this document the buyer is “Forterra”.
- **Containment** – An activity to contain the problem at its root with all necessary means.
- **Corrective Action (CA)** – Reactive improvements to processes taken to eliminate causes of non-conformities, utilizing root cause analyses.
- **Design Intent** – The overarching vision, purpose, and logic behind a design, specifying how it should look, function, and feel, ensuring all parts and features work together cohesively, especially when modified, allowing for smart updates, efficient manufacturing, and consistent user experience.
- **Deviation Approval** – A temporary deviation, by time or number of components that without compromising critical functions or dimensions allows the supplier to deliver outside specification.
- **Electro-Static Discharge (ESD)** – A sudden transfer of static electricity between two objects with different electric potentials.
- **Engineering Change Request (ECR)** – Request for a change in product or process and is used to describe a suggested enhancement or problem with a product.
- **Failure Mode and Effects Analysis (FMEA)** – A systematic technique for failure analysis that involves reviewing as many components, assemblies, and subsystems as possible to identify failure modes, and their causes and effects.
- **Foreign Object Damage** – Damage caused by debris or objects that are not supposed to be in a specific area, particularly in aviation and manufacturing environments.
- **Foreign Object Debris (FOD)** – Any object, particle, substance, debris or agent that is not where it is supposed to be during the manufacturing process.
- **Interim Approval** – Temporary approval during QAP for a period that would allow for deliveries even if not all requirements are yet fully fulfilled.

- **Non-Conforming Material Control (NCM)** – Any item from a raw chemical compound to a fully assembled product that fails to meet one or more of its established requirements, standards, or specifications.
- **Notification of Escape (NOE)** – Standardized process used to inform customers about potential problems with products that have already been delivered. It is part of a product quality insurance system and is essential for ensuring that any nonconformities are communicated promptly.
- **Production Part Approval Process (PPAP)** – Standardized process that helps manufacturers and suppliers communicate and approve production designs and processes before, during, and after manufacture.
- **Quality Assurance Plan (QAP)** – A structured plan for preparing supplier processes for serial production. The QAP is to be used to define and establish necessary steps to ensure that the product fulfills specified requirements.
- **Quality Control Plan** – A detailed document (plan) linking manufacturing process steps to key inspection and control activities. It should list all products and process inspection points required to deliver a defect free outcome, and is essential for maintaining process control over time.
- **Quality Management System (QMS)** – A structured framework that defines and documents an organization's processes, procedures, and responsibilities for achieving quality policies, practices, and objectives.
- **Quality Systems Representative** – A person who is responsible for developing, implementing, and maintaining quality standards and procedures in an organization.
- **Returned Material Authorization (RMA)** – An approval from the supplier for the customer to return inventory for credit, replacement, or repair.
- **Seller** – A person or entity that transfers ownership of goods, services or assets to another party.
- **Waiver Request** – A formal process to manage exceptions to rules, ensuring business continuity when contractual compliance isn't possible.
- **Waste** – Any resource, material, time, or effort that does not add value to the end product or service delivered to the buyer.

Scope

This manual sets forth the Buyer's requirements for all of its Class 1 and Class 2 Suppliers. The Quality Management System (QMS), product, part and service requirements specified in this document, are intended to be complementary to all contractual, legal and regulatory requirements.

100 Common Requirements

101. **Ethical Business Conduct:** Suppliers must conduct their activities in a manner consistent with the Buyer's [Supplier Code of Conduct](#) which is available at www.forterra.com.
102. **Quality Management System (QMS) Certification:** All Forterra Suppliers must be registered to, compliant with, or working towards ISO 9001, or a derivative QMS such as AS9100 or IATF-16949 and must maintain an active certification with an accredited registrar (if currently registered). Upon request, suppliers must provide evidence of compliance and allow the Buyer on-site to verify the QMS and address subsequent findings of non-conformance via the Seller's or the Buyer's corrective action process, depending on the severity of the finding.
103. **Notification of change in status of QMS:** The Seller must immediately notify the Buyer of any lapse, probation, loss of certification status, or failure to acquire a planned certification.

The Buyer reserves the right to provide identified Quality Management System findings to the Seller's Certification Body.

104. Notification of changes: The Seller must promptly notify the Buyer of any changes to the Supplier's facility location, organizational structure, or business practices that could affect the performance of the Seller's product(s) or services. Any relocation, manufacturing or design services to a foreign site requires the Buyer's prior written approval. Written approval also applies to transferring products or services to a Sub-tier Supplier. Notification and Buyer approval must occur before any such transfer. All Sub-tier Suppliers are required to comply with clause 102 of this manual. Products manufactured or processed at an unapproved location will be considered non-conforming.

105. Electro-Static Discharge (ESD): The Seller must establish and maintain a written electrostatic discharge control program for the control of ESD during fabrication, handling, and packaging of electrical and electronic parts, assemblies, and equipment. The program, packaging, and labeling for ESD products must comply with the latest versions of MIL-STD-1686 or ANSI / ESD S20.20.

106. Counterfeit Prevention: Suppliers are required to establish and maintain a documented program to prevent the introduction of counterfeit parts, including electronic and non-electronic parts and materials, into any product or service provided to the Buyer. This program should include processes for verifying sources by purchasing only from original manufacturers or authorized distributors, implementing inspection and testing procedures to detect counterfeit components, and maintaining full traceability of parts throughout the supply chain. Suppliers must also provide training for personnel in identifying and preventing counterfeit parts and ensure prompt reporting to the Buyer if any counterfeit parts are suspected or detected.

107. Calibration: The Seller must maintain a calibration system that is traceable to ANSI/NCSL Z540-1, ISO/IEC 17025, or an equivalent standard. Records demonstrating the calibration and measuring equipment must be maintained and made available to Buyer upon request. The Supplier must have a positive recall system for calibration and an established process to assess the impact of any out-of-tolerance conditions on products. When calibration or testing activities are outsourced, the Seller must ensure that the sub-tier complies with these same requirements.

108. Materials of Concern List: Buyer's policy is to eliminate or minimize the use of Materials of Concern (MOCs) throughout every stage of the product lifecycle, including design, manufacturing, assembly, disassembly, maintenance, repair, overhaul, operation, and end-of-life processing. The list below outlines the substances that are either prohibited or restricted in Buyer's products. If a design requires any listed material, the Seller must submit a waiver request to the Buyer. The request will be reviewed and the Seller will be notified of the Buyer's final decision, which may be an approval, conditional approval, or denial.

Substances in the following NAS411-1 groups are prohibited:

1. Asbestos (friable)
2. Hexavalent Chromium Compounds
3. Mercury and Mercury Compounds
4. Ozone Depleting Substances (ODSs) Class I and II
5. Persistent Organic Pollutants (POPs)
6. Polychlorinated biphenyls (PCBs)

7. Cadmium and cadmium compounds
8. Lead and Lead compounds excluding the following usages:
 - i. Electronic components
 - ii. Solder alloys
 - iii. Anti-seize compounds
 - iv. Dry film lubricants
9. The following Persistent Bioaccumulative Toxic (PBT) Chemicals per TSCA are prohibited:
 - i. Tris(4-isopropylphenyl) phosphate (PIP 3:1)
 - ii. Decabromodiphenyl ether (DecaBDE)
 - iii. 2,4,6-Tris(1,1-dimethylethyl) phenol (2,4,6-TTBP)
 - iv. Pentachlorothiophenol
 - v. Hexachloro-1,3-butadiene
10. The following Hydrofluorocarbons (HFCs) are targeted for minimization and elimination under the Environmental Protection Agency (EPA) American Innovation in Manufacturing (AIM) Act:
 - i. HFC-134 b. HFC-134a
 - ii. HFC-143 d. HFC245fa
 - iii. HFC-365mfc f. HFC-227ea
 - iv. HFC-236cb h. HFC-236ea
 - v. HFC-236fa j. HFC245ca
 - vi. HFC-43-10mee l. HFC-32
 - vii. HFC-125 n. HFC-143a
 - viii. HFC-41 p. HFC-152
 - ix. HFC-152a r. HFC-23

109. Shelf-Life Certificate: The Seller must furnish the following data for materials or products that have a limited or specified shelf life:

- Cure or manufacture date
- Expiration date or shelf life
- Lot and/or batch number
- Special handling or storage requirements

110. Special Processes: If the Seller performs special processes (e.g., welding, soldering, plating, heat treating etc.) then the Seller must provide a complete list of applicable specifications or demonstrate NADCAP approval for those processes.

- Note: The use of any pretreatment, plating, painting, or coating of any kind that contains Hexavalent Chrome is strictly prohibited. The Seller must have systems in place to monitor and control the coating processes used by Sub-tier Sellers. Hexavalent Chrome can appear in several forms and can be known by many nomenclatures (e.g., Hexavalent chromium, Hexavalent chromium, Hexavalent chrome, Hex chrome)

111. Substitute Parts: The Seller may not substitute any parts without the Buyer's prior written approval and associated approved product deviation number.

112. Export/Import Requirements: Shipments to Buyer from outside the United States must include complete and accurate details on all shipping documents to ensure smooth customs clearance.

Required information included in paperwork:

- Customs Invoice
- Country of Origin
- 10-Digit HTS Code
- Country of Cast and Smelt (if applicable)
- % of copper content, % aluminum content, or % steel content, as applicable
- United States ECCN or USML code

113. Awareness and Training of Seller Personnel: The Seller must ensure its personnel understand their role in product or service conformity, safety, and the importance of ethical behavior. Personnel must be competent based on education, training or experience, and the Seller must retain records verifications of all required training.

114. Nonconforming Material Control: The Seller must maintain a program for control of nonconforming material, including authorities for material disposition. The Seller must notify the Buyer and obtain approval prior to shipment for any product the Seller wishes to release under concession, waiver, Use-As-Is or repair (MRB) disposition. The Seller may not exercise disposition authority for products that are under the Buyer's design control. If the Seller needs a temporary deviation, it must be formally reviewed and approved by the Buyer before the product(s) are accepted. Once approved, the deviation's traceability number must accompany the product(s) until the deviation's quantity and or time limits have been fulfilled. Any product(s) that arrives with unapproved deviations affecting form, fit, or function will be considered nonconforming (Reference section 500).

115. Notification of Escape (NOE): When the Seller becomes aware of a potential non-conforming product / non-compliant process that has escaped from the Seller's facility the Seller must notify the Buyer within 24 hours.

- The notification must be in writing and addressed on the Seller's own letterhead. Once composed with the minimum required information, send the notification to supplierquality@forterra.com.
- At a minimum, the notification must include the following information:
 - Seller Name
 - Description of the defect
 - Affected part number
 - Purchase order number (s)
 - Quantities and dates delivered
 - Date of manufacture
 - Traceability information (serial numbers, lot numbers etc.)
 - Attachment with test / inspection data
 - Rejection and containment information
 - Root Cause & Corrective action information, including Engineering Risk Assessment if requested.

116. Certificate of Conformance (CoC): The Seller must provide a Certificate of Conformance (CoC) with each shipment. The CoC must clearly state the product meets all drawing, specification, and/or purchase order requirements and include the following:

- Part number(s) listed on the Buyer's purchase order
- Part Revision
- Part Description
- Quantity of each line
- Purchase order number
- Packing slip number
- Date
- Be on company letterhead
- Be signed by an authorized quality representative
- When applicable, authorized concessions and/or VRMA/Deviation numbers must be referenced.

117. **Configuration Management:** The Seller must ensure that delivered products and services are performed to meet the requirements of the specified configuration of all models, drawings, specifications, technical data, and other requirements referenced in the purchase order. The Seller is responsible to obtain the latest revision of all requirements. Standards and specifications called out on drawing notes must be understood and performed as indicated.

118. **Foreign Object Debris (FOD) control:** The Seller must prevent the introduction of Foreign Object Debris or Foreign Object Damage into goods. This may include establishing a program for the prevention, detection, and removal of foreign objects. The Seller must ensure that Foreign Object Debris and subsequent Foreign Object damage is eliminated from all parts prior to shipment. Evidence of FOD Control compliance is subject to review upon request from Buyer.

119. **Sub-Tier Flow down:** The Seller must maintain a process for product/service control and ensure that sub-tier Sellers can meet the requirements of the Purchase Order.

120. **Control of Records:** Seller must maintain quality records for a minimum of 7 years. When the quality record is related to a safety critical item, design qualification, or production data then the Seller must maintain the record for the life of the product + 7 years.

200 Inspection and Test Requirements

201. **First Article Inspection:** When specified on the Purchase Order, and once the transition from Development to Low Rate Initial Production (LRIP)/Production is ready to begin, the Seller is responsible for completing and submitting a First Article Inspection ("FAI") Report covering all design characteristics. This report must include documentation for material traceability, process traceability and dimensional verification, or providing equivalent report containing the same information. The FAI First Article must be performed on a sample part representative of the first production run and applies to final assemblies, subassemblies, and individual parts manufactured or assembled to a specific drawing. Each FAI documentation package must include a bubbled drawing identifying the location of all characteristics. For any design change, the seller must evaluate, coordinate with the Buyer, and submit as advised.

202. **Source Inspection:** Products or services may be subject to source inspection by Buyer or the Buyer's representatives upon request. The Seller must provide access, equipment and resources necessary to complete the inspection effectively. When source inspection is required, the Seller must submit all supporting documentation, including test results, inspection records, purchase orders, and engineering documents, as soon as the shipment is ready for review. The Buyer may conduct the inspection on-site or review the documentation remotely.

203. **Quality Control Plan:** The Seller is responsible for 100% verified quality for all production items delivered. If the Seller uses statistical methods for acceptance of products or processes, such methods must comply with industry-accepted sampling standards.
204. **Test Data Sheets:** When applicable, the Seller must provide test data sheets showing the results of product testing performed with calibrated test equipment. The calibration pedigree must be equal to or higher than the product being tested.
205. **Wire Harnesses & IPC/WHMA-A-620:** The Seller must certify that each cable shipment meets all applicable specifications. Test reports must include details of physical, chemical, and/or electrical inspections and tests conducted, along with numerical results where applicable. Upon the Buyer's request, the Seller must provide evidence of compliance with IPC/WHMA-A-620 requirements, including employee certification and training, when such specifications are referenced in the design data.
206. **Process Control:** Upon request, the Seller must provide process capability data for production orders or rates the Buyer deems significant.

300 Raw Materials / COTS

301. **Raw Material Control:** The Seller must not mix material of any type / thickness. The shipment must clearly identify the raw material type/thickness, quantity/weight, and heat lot. The Seller must provide a copy of the test chemical and physical test report/certificate and the manufacturer's Certificate of Conformance for all raw material.
302. **Certificate of Conformance (Chemical and Physical Test Reports):** The Seller must provide a copy of the test report / certificate and the distributor's Certificate of Conformance for all received raw material. The test reports / Certificate of Conformance must, at a minimum, include:
 - Name of the producing mill
 - Country of production, melt, or cast
 - Chemical and physical characteristics
 - Process used in manufacturing the material
 - Material specification(s) and revision level(s)
 - Raw material heat / lot number
 - Actual quantitative results of all lot acceptance testing, as required, by the engineering documentation (e.g., chemical, physical, and metallurgical)
 - Signature of the authorized mill and/or distributor representative, as applicable
303. **Validation of Test Reports:** The Seller must validate the accuracy of the Certificate of Conformance(s) and/or test reports and ensure that the data complies with the applicable material specification and/or product requirements.
304. **Commercial-Off-The-Shelf (COTS) Materials:** The Seller must provide the Buyer with a Product Change Notification when there are changes to configuration, form, fit, function or product safety of a COTS item. The Product Change Notification must contain information describing the change(s), reason for the change(s), change timeline, and projected impact.

305. **Specialty Metals:** The Seller must not provide or otherwise offer product(s) or material(s) that constitute or otherwise incorporates any specialty metals that are not melted or produced in the United States, its outlying areas or a qualifying country (as those terms are defined in the Defense Federal acquisition Regulations Supplement (DFARS) 252.225-7009).

306. **Certain Magnets, Tantalum and Tungsten:** The Seller must not provide or otherwise offer covered materials melted or produced in any covered country, or any end item manufactured in any covered country that contains a covered material (as those terms are defined in DFARS 252.225-7052).

307. **Conflict Minerals, Social, and Environmental Responsibility:** The Seller must not source (or use such goods that source) any raw material from any region determined to be a conflict-affected and high risks area (CAHRA) as defined in the [OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas](#). Such raw materials include, but are not limited to, gold, tin, tantalum, and tungsten (3TG). Sellers providing raw materials must implement a Conflict Minerals Policy that aligns with industry best practices and applicable laws and regulations and must provide a copy upon Buyer's request. Buyer may conduct direct or third-party assessments of the Seller's compliance with this clause.

400 Production Part Approval Process (PPAP)

401. PPAP Requirements

The Production Part Approval Process (PPAP) defines requirements for production part approval. The purpose of PPAP is to determine if all Buyer's engineering design records and specification requirements are properly understood by the Seller, and that the Seller's manufacturing process can consistently produce parts that meet these requirements during an actual production run at the quoted production rate.

The Seller must use the AIAG PPAP documentation package or a report that contains an equivalent level of information. Reference templates can be provided by Buyer upon request.

The reasons for new PPAP package requests are:

- Initial Submission
- Engineering Change(s)
- Tooling: Transfer, Replacement, Refurbishment, or Additional Units
- Correction of Discrepancy
- Production Break to Forterra > 1 year
- Change to Optional Construction or Material
- Sub-Seller or Material Source Change
- Change in Part Processing
- Parts Produced at Additional Location
- Corrective Action
- Other – as directed by Forterra

The Seller must meet all specified PPAP requirements as defined in the table below. The default PPAP submission level is Level 2, unless otherwise specified by Forterra. If a Level 3 PPAP is required, process will be discussed and agreed upon at that time.

Level 3 PPAP packages must be submitted to Forterra seven (7) business days prior to the first article ships to Forterra to allow for proper package review. All other PPAP package levels (1, 2, and 4) must be submitted prior to first article arrival at Forterra. Package approval will be provided upon arrival of the first article.

If any part specifications cannot be met, the Seller must document its problem-solving efforts and contact Buyer to engage Buyer's Quality and Engineering for concurrence in determination of appropriate corrective actions.

PPAP Submission Requirements	Submission Level			
	1	2	3	4
1. Part Submission Warrant (PSW)	S	S	S	S
2. Photo Documentation	S	S	S	S
3. Engineering Change Documentation (<i>if applicable</i>)	S	S	S	S
4. Design Record (<i>Bubble Print</i>)	N/R	S	S	S
5. Dimensional Results	N/R	S	S	S
6. Material, Performance Test Results	N/R	S	S	*
7. Qualified Laboratory Documentation	N/R	S	S	*
8. PPAP Sample Product	N/R	S	S	S
9. Checking Aids	N/R	S	S	*
10. Tooling Documentation (<i>if applicable</i>)	N/R	S	S	*
11. Design Failure Mode Effects Analysis (FMEA)	N/R	N/R	S	*
12. Process Flow Diagram(s)	N/R	N/R	S	*
13. Process FMEA	N/R	N/R	S	*
14. Quality Control Plan	N/R	N/R	S	*
15. Measurement System Analysis (MSA) Studies	N/R	N/R	S	*
16. Initial Process Capability Studies	N/R	N/R	S	*
17. Records of Compliance with Customer- Specific Requirements (<i>if applicable</i>)	N/R	N/R	S	*

Unless otherwise contractually-specified by Forterra:
S – Required Items to be submitted to Forterra for Approval
*** – Seller developed and maintained, but only submitted upon request*
N/R – Not required for development or submission

402. Corrective Action Requirements for Sellers

Forterra quality representative will notify the Seller of problems regarding quality, delivery, packaging and services in writing via a Seller Corrective Action Request (SCAR) form (QMFM0006 *Seller Corrective Action Request Form*). The Seller must meet the associated timelines for corrective actions. In the event timelines cannot be met, the Seller must provide written notice to Forterra no less than 24 hours prior to the deadlines.

a. The Levels of Severity are defined as:

i. Level 1:

1. Failure of safety-critical part(s) during testing or deployment
2. Failure of part resulting in:
 - a. Injury of personnel
 - b. Death of any persons
 - c. Complete loss of vehicle
 - d. Destruction of Forterra autonomy hardware

3. Repeat nonconformances:
 - a. Fifth documented occurrence of non-conformance on the same part from the same vendor
- ii. Level 2:
 1. Significant non-conforming material:
 - a. Parts failed in the field due to poor execution of Forterra-supplied engineering documentation
 - b. Parts delivered to a downstream customer not in accordance with engineering documentation and associated engineering standards, purchase order requirements, or testing requirements
 - c. Third documented occurrence of non-conformance on the same part from the same vendor
 2. Repeat offenses of:
 - a. Failure to meet required On-Time Delivery (OTD) timelines (initial)
 - b. Slow or no responsiveness to inquiries
 3. Failure of part resulting in:
 - a. Damage to vehicle, facilities, or equipment
 - b. Damage to other Forterra autonomy hardware
- iii. Level 3:
 1. Failure to meet required On-Time Delivery (OTD) timelines (initial)
 2. Slow or no responsiveness to inquiries
 3. Non-compliance with ISO 9001:2015 OR this Seller Quality Requirements Manual

Timeline After SCAR Issued	Actions	Level of Severity		
		1	2	3
Within 24 hours	Problem Description	S	S	S
	Assigned Personnel and Contact Information	S	S	S
	Immediate Containment Action (Taken or In-Process)	S	S	S
	Containment of all in-transit material	S	S	S
Within 5 Working Days	Initial Corrective Actions and intended verification method	S	S	S
	Initial Root Cause Analysis for Review	S	*	N/R
Within 10 Calendar Days	Preventive Actions implemented and verification method(s)	S	S	S
	Final Root Cause Analysis for Review	S	*	N/R
Within 20 Calendar Days	Initial Corrective Action Report submitted for review	S	*	N/R
Within 30 Calendar Days	Final Corrective Action Report (at a minimum, completion of the initial SCAR form)	S	S	S
	Problem-solving Tool Documentation (ex. Pareto analysis, 5 Whys, fishbone diagram, DOE)	S	S	N/R
	New/updated Process Flow Diagram(s)	S	*	N/R
	New/updated PFMEA	S	*	N/R
	New/updated Quality Control Plan	S	*	N/R
	On-site Forterra inspection	S	N/R	N/R
	Virtual/on-site debrief	S	S	N/R
<i>Unless otherwise contractually-specified by Forterra:</i> <i>S – Required Items to be submitted to Forterra for Approval</i> <i>** – Seller developed and maintained, but only submitted upon request</i> <i>N/R - Not required</i>				

b. The Seller is expected to address rejects and failures regardless of whether Forterra requires submission of a corrective action, to prevent recurrence of the problems.

403. Containment and Short-Term Corrective Action

- a. Seller must provide Buyer an initial response concerning containment measures within 24 hours after Buyer notifies the Seller of a nonconformance. The Seller must contain all affected materials at Forterra's facilities, off-site warehouses, and any material in transit and implement a short-term corrective action plan. Upon request, the Seller must provide immediate containment at Forterra's facilities to prevent production stoppages for Buyer or its customers. The Seller is responsible for submitting a detailed report outlining containment actions, short-term corrective measures, and disposition activity upon request. If parts are to be returned, the Seller must provide a Returned Material Authorization (RMA) at that time.
- b. The 8D Corrective Action initiator may require the Seller to implement Containment Level 1 if the nature of the Quality incident is of the following category:
 - i. Repeat Non-conformances
 - ii. Major Disruptions
 - iii. Field Campaign
 - iv. Production Downtime
 - v. Production Shortage
- c. Containment Level 1 (CL1): A Forterra-designated level placed on a Seller that requires the Seller implement a redundant inspection process at the supplying location. The redundant inspection is, in addition to normal controls, is executed by the Seller's employees and is in addition to the normal production process controls.

The Seller must:

- i. Perform an 8D corrective action methodology analysis
- ii. Prevent Forterra and/or Forterra's customer from the receipt of nonconforming parts or material.
- iii. If Containment Level 1 actions are not properly executed and Forterra continues to receive nonconforming material, the Seller will be placed on Containment Level 2.
- d. Containment Level 2 (CL2): A Forterra-designated level that includes the same processes as Containment Level 1, with an additional inspection process conducted by a third party representing the customer's interests specific to the containment activity. The third party is selected by the Seller, approved by Forterra, and paid for by the Seller.
- e. If Containment Levels 1 and 2 actions are not executed properly and Forterra continues to receive nonconforming material, further action will be taken to include potential impact on future business considerations, removal from Buyer's approved Seller list, and current business hold.

500 Change Management

501. Seller Change Request

- a. Sellers may propose design changes or modifications to help reduce costs, improve quality, and increase reliability and process capability of the product. Any change that affects the technical and/or cost provisions or that affects interchangeability (form, fit,

function as defined in GEIA-HB-649) or an interface (mechanical, electrical, hydraulic/pneumatic, test, etc.) is considered a Major Change.

- b. If a Seller intends to change manufacturing locations, the Seller must notify Forterra. At Buyer's discretion, the new manufacturing location may be qualified by an audit, material/parts validated, and a PPAP will be required.
- c. The Seller must communicate all required change requests utilizing the Seller Change Request form. This form should be submitted at least 6 weeks prior to the planned change implementation.
 - i. **Buyer review** – Buyer will have 1 week to review all change requests. After the review period, the buyer will document and communicate the decision to Seller.
- d. There are three types of Change Requests:
 - i. **Temporary Change Request**
 - a. Process: Change to the PPAP approved process, tooling move, plant move, improved/new tooling, etc., that is functionally acceptable on temporary basis
 - b. Product: Change to the product such the design intent, a change in material or material change, etc. however, it may be functionally acceptable temporarily
 - ii. **Permanent Change Request**
 - 1. Process: Change to the PPAP-approved process, tooling move, plant move, improved/new tooling etc., on a permanent basis
 - 2. Product: Change to the product such that it meets the current design intent and requires a design change
 - iii. **Cost Reduction Change Request:** A change to the product, process or design, generated and proposed by the Seller to reduce product cost

600 Auditing

601. Seller Audit Overview-

Forterra will determine when an audit is required based on factors such as Seller evaluations, historical performance, and other relevant considerations. When an audit is deemed necessary, Buyer will coordinate scheduling with the Seller and provide any required pre-audit materials. Buyer will also define the audit scope and identify the necessary participants. The audit process consists of 4 steps:

- a. **Audit Preparation:** The Seller must provide all requested pre-audit materials, questionnaires, and supporting documentation within the timelines communicated by the Buyer.
- b. **Audit Execution:** The Buyer will conduct the audit either on-site or virtually, as determined by Buyer's Lead Auditor. During the audit, the Seller must provide timely access to facilities, personnel and records needed to complete the assessment.
- c. **Audit report:** At the conclusion of the audit, the Buyer's Lead Auditor will hold a closing meeting and issue a closing report summarizing the audit results, including any findings, nonconformities, or requested corrective actions.

- d. **Corrective and preventive actions:** The Seller must respond to findings and implement corrective actions within the timeframes specified by the Buyer. If an extension is needed, the Seller must request it at least seven (7) days prior to the applicable due date.

700 Packaging and Shipping

- 701. **Package Handling and Preservation:** The Seller must ensure that the products are adequately protected from damage throughout production, inspection, packing, packaging, and shipping. The Seller is responsible for ensuring that product is packaged so that it is free from damage or defect when delivered to Buyer. Any products received by the Buyer in damaged condition may be rejected. All shipments must comply with the packaging requirements specified in the applicable drawing, specification, and/or purchase order. The Seller is responsible for ensuring that packaging methods and materials meet all stated requirements.
- 702. **Special Packaging Requirements.** Packaging must also address any special protection needs, including but not limited to: electrostatic discharge protection (ESD), moisture sensitive components, and corrosion protection. Hazardous Material packaging must be clearly labeled with required UN labels or other warning labels in compliance with applicable laws and regulations. The Seller must monitor governmental and industry regulations to ensure their packaging conforms to all applicable requirements and ship all production intent parts in production intent packaging.