Version: 4.0

Doc ID: 4UM6C6R4W6J5-1200057217-15

GQ SQ - Supplier and Subcontractor Change Management Policy

Document ID: 4UM6C6R4W6J5-1200057217-15

ECN Facility: Micron Doc Type: Procedure

ECN Area: GQ SQ Version: 4.0

Current ECN: 301086872 Last Modified Date: 3/18/2021

ECN History Request Document Update

Content revisions are indicated with blue highlighting. New documents and documents with extensive revisions will not be marked.

For the Table of Contents, click the View tab and select Navigation Pane

1.0 General

1.1 Purpose

1.1.1 This policy explains when and how a supplier is expected to submit and request approval for changes to approved products that are supplied to Micron and its subsidiaries. It serves as the basis for how supplier change management notifications are made.

1.2 Scope

1.2.1 This document applies to all materials, equipment, manufacturing services, services that Micron procures for all qualified Micron products.

1.3 Reference Documents

1.3.1 Unless specified as "External Link:", documents below are Micron references and not relevant to suppliers or subcontractors.

Table 1. Internal References

Document Name	EDM Number or URL
Micron Supplier Requirements Standard	Internal Link:
	Micron Supplier Requirements Standard
	External Link:
	Micron Supplier Requirements Standard

Document Name	EDM Number or URL
Micron's Subcontractors Quality Requirements	Internal Link:
Document	Global Subcon Manufacturing Quality
	Requirements Specification
	External Link:
	Global Subcon Manufacturing Quality
	Requirements Specification
Global Quality - Automotive Material Protocol	Internal Link:
	DD5WXP66J5KH-1134295223-1742
Ship-to-Control Policy	D6KPQSD6SP6M-627862001-14144

Table 2. External References

Document Name	EDM Number or URL
Production Part Approval Process (PPAP) 4th Edition	AIAG PPAP Blue Book 4th Edition
Advance Product Quality Planning and Control Plan (APQP) 2nd Edition	AIAG APQP and Control Plan Blue Book 2nd Edition
AIAG FMEA "Blue Book" 4th Edition	AIAG FMEA Blue Book 4th Edition
J-STD-046	<u>J-STD-046</u>
J-STD-048	<u>J-STD-048</u>
ISO 9001:2015	<u>ISO9001:2015 Version</u>
ISO/TS 16949: 2009	ISO/TS 16949:2009 Requirements for the Automotive Industry
Statistical Process Control (SPC) 2nd edition	AIAG SPC Blue Book 2nd Edition

1.4 Definitions and Acronyms

Control Plan Documented description of the systems and processes required for

controlling products.

Document Information and its supporting medium.

DFMEA/PFMEA Design Failure and Process Mode and Effect Analysis, an analytical

methodology used to ensure that potential problems have been considered and addressed throughout the entire product and process life-cycle stages.

Fit The external dimensions and associated tolerances of the product, as

specified by the supplier and/or customer.

Force Change	Changes declared by Supplier to MICRON whereby failure to qualify will result in discontinuation / termination of supply of any MICRON material part ID.
Global Material Partner Spec System (GMPSS)	Track and manage Front-end Material specification change and creation request and storage of approved material specification.
Form	The visual appearance including shape, color, marking, and surface finish of the product, as specified by the supplier and/or customer.
Function	The electrical, mechanical, thermal, and performance characteristics of the product, as specified by the supplier and/or customer.
GQ SQ	Global Quality Supplier Quality.
Major Change	Change that may affect the form, fit, or function of the product, or adversely affect the quality or reliability of the product.
Minor Change	Change that does not affect the form, fit, function, quality, or reliability of the product.
Objective Evidence	Data supporting the existence or verification of a process, product or the test conditions.
Quality	Degree to which a set of inherent characteristics fulfills requirements. Results of a process (services, software, hardware or processed materials).
Process	A combination of people, procedures, methods, machines, materials, measurement equipment, and/or environment for specific work activities to produce a given product or service.
Procedure	Specified way to carry out an activity or a process.
Qualification process	Process to demonstrate the ability to fulfill specified requirements.
Reliability	The ability of a product to perform a required function at or below a stated failure rate for a given period of time.
Special Characteristics	Product characteristic or manufacturing process parameter which can affect safety or compliance with regulations, fit, function, performance or subsequent processing of product. (Characteristic is a distinguishing feature that can be inherent, assigned, qualitative, quantitative, physical, sensory, behavioral, temporal, ergonomic or functional).
Supplier/Subcon Change Management (SCM)	Process used by Micron to provide Suppliers and Subcontractors a systematic process and approach for communicating change requests.
Supplier Organization	An organization or person that provides a product or service.

Doc ID: 4UM6C6R4W6J5-1200057217-15 Version: 4.0

Specification Document stating requirements for a product or service.

SPC Statistical Process Control – The use of statistical techniques such as control charts to analyze a process or its output so as to take appropriate actions to

achieve capability.

Control Limit (STC

Ship-to-Control Ship-to-Control Control Limit. Materials shall not be shipped to Micron when any control parameter is Out of Control (OOC) without a written waiver issued by the appropriate Micron Supplier Quality or IQC representative.

2.0 Policy

2.1 Micron's Supplier/Subcontractor Change Management Process

Suppliers and Subcontractors are required to notify and obtain acceptance from Micron using the SCM (Supplier/Subcon Change Management) process, before any changes are implemented to procured goods or services being supplied to Micron. The timeframe for notifications shall be as stated in 2.1.4.

Alternative requirements of notification or acceptance of changes may be captured in mutually agreed upon specifications. Micron reserves the right to reject any change that requires approval, as detailed in the SCM policy. For any changes that fall outside the above said policy, it is expected that the Supplier and Subcontractors make reasonable efforts to notify Micron of any change(s).

Compliance to the SCM policy is required after agreement or confirmation by Micron and the supplier on the specifications for the supplier's product. How the specifications are agreed upon or confirmed varies by the product being delivered. It may be Tool of Record, Material Specification, FAI (first article inspection) completion, or other documentation that identifies the agreement or confirmation. Suppliers may align with their Micron procurement category manager if there is any question as to when compliance to the SCM Policy begins for the product being supplied.

Such changes would include at least the following:

- 2.1.1 Minimum Change Notification Requirements
 - Company structure change.
 - Manufacturing Site or Location change, new manufacturing line or N of a kind manufacturing line.
 - Changes in status of registration or certifications (i.e. ISO9001, ISO/TS16949, ISO17025).

- Test/inspection/metrology change include (new equipment and/or methodology or N of a kind or location change).
- Supplier and/or sub tier supplier changes
 - This may include raw material source or supplier changes
 - This may include smelter source changes (as per Dodd Frank-Section 1502; Conflict Minerals). An updated Conflict Minerals Reporting Template (CMRT) would be required when smelter sources for Tungsten, Tin, Tantalum, or Gold are changed.
- Process flow change (such as alternating a sequence of operations, adding or deleting an operation or inspection), including any chemical, mechanical or process changes which could affect the performance, reliability, safety, serviceability, appearance, dimension, tolerances which is of Process – Manufacturing impact
- Design change driven (portions controlled by the supplier/sub supplier)
- Packaging and/or label change, packaging methodology
- Component approved vendor list, bill of materials, or change of location (AVL/BOM/COL) changes.
- Process chemical change (assembly or repair/re-work)
- Conflict Minerals related change
- Storage changes (warehouse environmental area changes)
- Fit, form, or function change
- Cost impact
- Delivery impact
- Logistical processes that change and/or alter the time and distance of shipment from the supplier including temperature recorder changes.
- Batch impact or changes
- Lot number or part number impact or changes
- Part Change impact
- Safety impact
- Environmental and regulatory hazardous content changes

- Facilitation impact
- Machine/Equipment impact
- Tooling change/addition/removal (encompasses tooling design rework or method change), including changes to fixtures, gages, consumables and test equipment
- Training impact
- Material or component impact
- Supply Chain impact
- Material Specification changes (For Front-end materials, Material Specification changes will through GMPSS (https://gmpss.micron.com/) for approval).
- End-of-life
- Any changes will impact PPAP content (for automotive parts).
- Container change including component changes that makes up the assembly of the packaging, i.e. O-ring, Diptube, Hoses, Coupler etc.

2.1.2 Supplier/Subcontractor Change Management Supporting Data

Unless already included within the SCM submission form, the following needs to accompany each Supplier/Subcontractor Change Submission:

- Detailed description of change(s)
- Reason for change(s) or impact(s)
- Method, if applicable, of identifying changed product
- Any impact on form, fit, function, appearance, quality, performance or reliability.
- Supporting objective evidence data, where applicable.
- Control Plan and DFMEA/PFMEA, where applicable.
- Expected first shipment of implementation date for change, if change would be accepted.
- Qualification process/plan schedule and/or results, if change would be accepted.

- Date, if required, when qualification samples would be available if change would be accepted.
- Date, if required, when final qualification data would be available if change would be accepted.
- Last date, if applicable, of manufacture of the unchanged product if change would be accepted.
- SCM Material Risk Assessment report (template link) which includes
 Background, Description of Change, Impact to Micron, Risk Assessment
 (5M1E), Supplier Qualification Assessment, Product Performance
 Comparison, SPC Performance Comparison, Production Flow Comparison,
 Material Stability Data, Summary of Risk and Conclusion for the material
 supplier change.
- If the change will impact STC control limit, suppliers should provide proposed STC control limit.

2.1.3 Safety Related Impact Notifications

Suppliers and Subcontractors are required to provide timely notification through the use of the Supplier/Subcon Change Management (SCM) system, of any known or potential safety impact to personnel or equipment for the goods or services provided to Micron.

A safety impact change notification would include, but not be limited to the following examples:

- Product safety bulletins.
- Safety related training requirements.
- Safety related procedural updates
- Product safety enhancements.
- Safety related corrective or preventative actions.
- Environmental, Health, Hazard related issues or updates.
- 2.1.4 Supplier Change Notification Timeline Requirement.
 - MAJOR CHANGES: Minimum 270 days in advance.
 - MINOR CHANGES: Minimum 90 days in advance.
 - FORCED CHANGE: Minimum 270 days in advance.

 TERMINATION / OBSOLESCENCE of materials: Minimum 365 days in advance.

The notification period shall exclude lead time for qualification sample delivery and the lead time for the Risk Assessment to be submitted to Micron to justify the risk of changes, and be accepted by Micron.

 For automotive parts, unless agreed upon, suppliers are required to notify Micron 365 days prior to implementation of a change. Approval shall be obtained from Micron, utilizing the Supplier Change Management ("SCM") process prior to any changes being implemented to procured goods or services being supplied to Micron. For Product Termination Notice (PTN), suppliers shall notify Micron at least 18 months before EOL.

2.1.5 Notification on SCM samples and 1st batch

- Suppliers should paste of Identification label on SCM samples and the indication on Packing list / PO.
- Suppliers shall fill in the first Batch ID with the change implemented (manufacture) date in SCM confirm stage.
- Suppliers shall notify Site IQC and procurement the 1st batch arrival data at least 7 days in advance according to inventory status and roll out plan.

2.2 Supplier/Subcontractor Process Change Control Requirements

Unless agreed to and documented elsewhere between Micron and the Supplier/Subcontractor, the Supplier/Subcontractor shall be able to provide evidence of the controls, processes, and procedures stated in section 2.1 when requested by Micron. Suppliers/Subcontractors are required to have documented processes or systems implemented for managing internal change and for managing change notifications from their sub-suppliers. Further details are embedded within the Micron Supplier Quality Requirements Document.

2.2.1 Micron's Supplier Quality Requirements Document

Supplier and Subcontractor shall retain a current version of Micron's Supplier Quality Requirements Document, which is located on Micron's corporate website. Micron's Supplier Quality Requirements Document.

2.2.2 Control of Parts

The Supplier and Subcontractor shall have documentation and a process to control parts (example: revisions, returned parts, inventory control methodology).

2.2.3 Change Control Process

The Supplier and Subcontractor shall have documented internal and external change processes that include; record retention schedules, effective date of change, definition and proposed change content with supporting objective evidence such as qualification process data or results.

2.2.4 Supplier/Subcontractor Engineering Change Process Control Requirements

Supplier and Subcontractor Engineering change process must be documented and provided to Micron upon request.

2.2.5 Micron Supplier/Subcontractor Change Management Policy

Supplier and Subcontractor shall retain a current version of Micron's Supplier/Subcontractor Change Management Policy (this document).

2.2.6 Incoming Quality

The Supplier and Subcontractor shall have documentation and processes to control the inspection and verification of incoming product to ensure conformance to specified requirements.

2.2.7 Final Inspection Process

The Supplier and Subcontractor shall have documentation and processes to ensure final inspections are documented and results are recorded.

2.2.8 Document Control

The supplier shall have a document control and retention program for, but not limited to:

Production Manufacturing

Supplier: Retained for a minimum of 2 years. (Production records related to production, including quality control, testing, and manufacturing activities that are not identified in another record series. Include scribe data, travelers, machine logs, image data logs, and lab analysis).

- Design and Development Records Permanent (related to the design and development of products for manufacturing).
- Design ID Specific Production End-of-Life plus 5 years (related to documentation required for the entire life of product. Include qualification data, material evaluations, specifications, recipes, experiment data, and test jobs).

 The Subcontractor shall have a document control and retention program in reference to the <u>Global Subcon Manufacturing Quality Requirements</u> Specification.

3.0 Document Control

The Supplier/Subcon Change Management Policy document control is managed in accordance with the Micron Global Quality Control of Documents Procedure.

3.1 Approval

This procedure shall be approved by the following approvers and the appropriate stakeholders.

	T
SCM ECN APPR BE CHANGE	SCM ECN APPR PUR FECAP
SCM_ECN_APPR_BEEQ	SCM ECN APPR SQ STD
SCM_ECN_APPR_FECPEE	SCM_ECN_APPR_PUR_BEMAR
SCM ECN APPR SILICON	SCM ECN APPR PUR FEMAR
SCM ECN APPR SUBCON	SCM ECN APPR PURCOM
SCM ECN APPR SQ SYS	SCM ECN APPR AMHS
SCM ECN APPR SQ BESQE	SCM ECN APPR SQ SQC
SCM ECN APPR SQ FESQE	

3.2 Notification

Once a new revision of the procedure is effective, notification will go out to SCM_NOTIFY_ALL.

3.3 Review

Review will be done on a minimum 1-year basis with input coming from site SCM Administrators, Global Procurement, Global Quality Standards group, Global Quality Supplier Quality Group and Micron External Manufacturing Quality Group whenever changes impact QMS, or when requests are made by internal organizations.