



STANDARD PURCHASE ORDER QUALITY ASSURANCE PROVISIONS

SCOPE

This document delineates the specific supplier quality requirements that apply when one or more of the following Quality clauses are specified by a numeric quality assurance provision (QAP) code on OECO Subcontract/Purchase Orders. These requirements are supplemental to those set forth in any other contracted document. The provisions indicated herein are an integral part of the applicable Purchase Order.

The inclusion of a product on a Government Qualified Products List, Approved Vendor List or the requirements of these clauses does not relieve the Seller of his responsibility for furnishing materials/services that meet all specification requirements or for performing specified inspection and tests for such materials/services. In the event that materials and/or services are found to be non-conforming, OECO and its customers shall have the right to reject them.

MPRC-10 Meggitt Supplier Quality Requirements Document (SQRD) applies to all suppliers who furnish product, material, processes, or services to OECO. This document along with other OECO documents can be found at oeco.com. Where a conflict arises between SQRD and a specific QAP Code, the latter shall take precedence.

REQUIREMENTS

QAP code	Description
	Packaging Requirements
	Unless otherwise specified on the purchase order, material shall be packaged in accordance with ASTM-(D3951) Standard Practices for Commercial Packaging.
	Each shipping container shall be identified with, or include a packing slip that includes:
2	<ol style="list-style-type: none"> 1) Purchase Order Number. 2) Part Number. 3) Quantity. 4) Serial Number (when applicable). 5) Lot Number (when applicable). 6) Cure Date and/or Shelf Life (when applicable). 7) Static Sensitive Warning (when applicable). 8) Orders having a government contract number shall meet applicable military packaging requirements.



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DFARS 252.225-7008, DFARS 252.225-7009, DFARS 252.225-7010 – Specialty Metals

4 Any specialty metal as defined In the DFAR included in any articles delivered under this purchase order must comply with these clauses and you must flow down these clauses to all of your vendors supplying any articles delivered under this purchase order that include specialty metals. Specialty Metals must be melted in qualifying countries per the current DFAR definition, the USA is one of these countries. Objective evidence of this requirement shall be available at the supplier's facility and shall be furnished to OECO upon request.

Workmanship

5 The materials and workmanship shall conform to the latest revision of MIL-HBBK-454A or ANSI J-STD-001 and IPC-610 class 3. Workmanship requirements not normally covered in MIL-STD-454 or ANSI J-STD-001 and IPC-610 shall conform to workmanship standards supplied by OECO, or equivalent. Supplier proposed workmanship standards must first be approved by OECO.

First Article Inspection

Inspection and acceptance by seller of a first article manufactured against this purchase order is a requirement if one of the following conditions apply:

- 8
1. First time producer of this item.
 2. A two years lapse in production.
 3. A change in manufacturing process(s), inspection method(s), location of manufacture, tooling or materials.
 4. A change in numerical control program or translation to another media that can potentially affect fit, form or function.
 5. A natural or man-made event, which may adversely affect the manufacturing process.
 6. A drawing revision since last acceptable first article, or previous first article was rejected.

Supplier shall perform First Article inspection in accordance with AS9102.

Radiographic Inspection

10 A radiographic inspection of the components listed on the purchase order is required. A certified report and radiographic film of the components must accompany the shipment.



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Acceptance Tests

11 The components listed on the purchase order are subject to acceptance tests conducted by OECO on an AQL sample basis. The acceptance test shall be conducted in accordance with the specifications listed on the purchase order. The acceptance test may include but is not limited to one or more of the following: solderability, destructive physical analysis, radiographic inspection, electrical test measurements, and hermetic seal testing. OECO agrees to pay the supplier only for those components subjected to tests listed as destructive in MIL-M-38510 or MIL-S-19500. Lots which fail the acceptance test shall be returned to the supplier for replacement at the supplier's expense.

OECO Self-Release

12A The supplies on this order are subject to supplier Self-Release. Compliance with the requirements found in OP-1100.06, OECO Supplier Self-Release Requirements (OSSRR), is mandatory. Only an inspector who is authorized by OECO can perform final inspection prior to shipment. Parts may not be shipped to OECO without evidence of Self-Release inspection or a Waiver from OECO Supplier Quality.

Self-Release does not relieve the supplier of any of the requirements of this purchase order nor the responsibility of rework or replacement of material found to be defective during normal acceptance procedures upon receipt at OECO.

Chemical/Physical Test Reports

14 All material delivered under this purchase order shall be accompanied by chemical and/or metallurgical test reports which substantiate conformance of the material to the specification requirements. Certifications shall accompany each shipment of material to OECO and be identified as to OECO purchase order number, part number and revision, specification number and revision, serial numbers (if applicable) and quantity represented. An incomplete or inadequate statement of conformance or certification is cause for rejection. The supplier shall also maintain on file for a period of ten (10) years, a copy of this test report.



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Limited Shelf Life Materials

15 The supplier shall identify all materials and articles which have definite characteristics of quality degradation with age and/or environment. The supplier shall supply this information on the container or accompanying documentation. This identification shall indicate the date useful life was initiated and the date and/or cycle at which the useful life will be expended. When environment is a factor in determining useful life, the identification shall include the storage conditions (i.e., temperature, humidity, etc.) required to achieve the stated life. A minimum of 75% (or as specified on the PO) of the applicable material/article shelf life shall remain upon receipt of the material by OECO or the material is subject to rejection and return to the supplier. The shelf life start date shall be the date of shipment (DOS) from the manufacturer or as otherwise specified by the manufacturer.

Certificate of Conformance (C of C)

The supplier shall provide written certification that the article(s) delivered under this purchase order have been inspected and are in compliance with all requirements, applicable drawings, specifications, and terms and conditions of the purchase order. The certificate shall contain:

- 1) OECO part number and revision (COTS parts may not have a revision)
 - a. Plus OECO Final assembly part number when required by customer.
- 2) OECO Purchase Order number and Revision.
- 3) Indication of applicable specification(s), when noted on the purchase order. Seller shall assure the latest revision of applicable drawings and specifications are followed, unless otherwise agreed upon and documented.

16 Multiple Lots may be included in a shipment, but each manufacturing lot or batch of parts shall have its own C of C and be packaged and identified separately by labeling with Supplier name, lot/batch number, PO, OECO part number and revision. Manufacturing lot numbers or traceability references shall not be mixed on the same label or Certificate of Conformance.

In addition, the supplier must include a statement on the certificate that says in effect, that objective evidence sufficient to substantiate the Certificate of Conformance is on file and is available for OECO review. The Certificate of Conformance must be signed by a duly authorized representative of the supplier's quality function. One (1) reproducible copy of the Certificate of Conformance shall be supplied to OECO concurrent with each delivery of article(s). Certificate of Conformance from distributors shall comply with all of the above requirements, and shall include the name of the original manufacturer.



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Raw Material Certifications (Certs) for Metals

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The vendor shall furnish original manufacturer raw material certifications to applicable specifications and revisions, including chemical analysis and test results. Independent laboratory reports are acceptable. Laminations also require Minimum Magnetic Flux Density kG, (T) for Magnetic Field Strengths data.

Raw Material Certification (Certs)

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The vendor shall furnish original manufacturer raw material certifications to applicable specifications and revisions.

Original Manufacturer Certifications (Certs)

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The vendor shall furnish original manufacturer material certifications to applicable specifications and revisions.



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Inspection Test Data

One or more of the following sets of test data must be furnished with the components, as defined on the purchase order:

- A) Attributes or variables inspection or test data demonstrating conformance to requirements listed on the purchase order.
- B) Variable test measurement data (actual readings) for static tests performed in accordance with the specification or drawing listed on the purchase order.
- C) Variable test measurement data (actual readings) for dynamic tests performed in accordance with the specification or drawing listed on the purchase order.
- D) Attributes test measurement data for functional tests performed in accordance with the specification or drawing listed on the purchase order.
- E) Variable test measurement data (actual readings) for switching time tests performed in accordance with the specification or drawing listed on the purchase order.
- F) Pre and post burn-in attributes data per the drawing or specification listed on the purchase order. The percent defective allowable shall be less than 5% unless otherwise stated on the purchase order.

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Data

Each deliverable device or lot shall be supplied with one or more of the following as specified on the purchase order:

- A) Attributes test data for all screening tests.
- B) Variable data for all pre and post burn-in and operating life tests.
- C) Final electrical parameter test data.
- D) Data specified in drawings listed on the purchase order.
- E) Objective evidence of current acceptable Group B, C, and D testing.
- F) All major dimensions shall be measured and included with each part
- G) All critical dimensions shall be measured and included with each part
- H) All critical, major, and minor dimensions shall be measured and included with each part
- I) All dimensions less than .001" total tolerance shall be measured and included with each part

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Heat Treat Report

Each shipment shall be accompanied by a reproducible copy of the detail parameters used in the heat treat cycle, with specification and revision letter.

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25 Prohibition of Pure Tin
The uses of pure Tin Plated finishes are strictly PROHIBITED! Any Tin Plating or Solder processes shall contain no less than 3 percent Lead composition, unless specifically authorized in writing by the Procuring Agency. These restrictions apply for all types and levels of procurements, with the Seller responsible for communicating these restrictions to subcontractors or sub-tier suppliers as required.

26 Special Process Certification
Special processes are defined as chemical, metallurgical, and other types of processes for which the quality and integrity of the product cannot be adequately demonstrated by other than destructive test. Included in the category of special processes are nondestructive methods of evaluating the product other than normal mechanical dimensional inspection. Special process certification defined by this clause shall be accomplished prior to use in the production of items to be delivered under this purchase order. The supplier shall be responsible for required certification of special processes, personnel, and equipment notwithstanding any statement contained in the process specifications which indicates that OEKO is responsible for such certification. Conformance of deliverable items to all requirements of this order shall remain the responsibility of the supplier. Objective evidence of certification, qualification, and control shall be available at the supplier's facility and shall be furnished to OEKO upon request.

OEKO Approved Special Process Sources

Seller and subcontractors shall use OEKO-Approved Special Process Sources found at oeeco.com that are certified to perform the specified process(es) as stated on the drawing.

27 Or -

Seller and subcontractors may use Nadcap Special Process Sources that are certified to perform the specified process(es) as stated on the drawing. Refer to SQRD section 8.5.1.2 for a list of Nadcap processes.

Note: When a special process source is specified on the drawing, that source must be used unless written authorization to use another approved source is provided by OEKO.



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Traceability Documentation

Traceability of JAN marked devices shall be certified to MIL-S-19500 or MIL-M-38510 to OECO by the supplier, whether the supplier is the manufacturer or a distributor. When the supplier is a distributor, their certification shall be in addition to and include the certification provided by the manufacturer and by any previous distributor to the supplier. The certification shall include the following information.

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- 1) Manufacturer certification.
 - a) Manufacturer's name and address.
 - b) Customer's (OECO's) or distributor's name and address.
 - c) Device type, detail specification, detail specification Rev. letter, and/or amendment number, and product assurance level (JAN, JANTX, JANTXV, JANS, and JANC).
 - d) Lot date code (including a code identifying the assembly plant).
 - e) Inspection date or latest re-inspection date.
 - f) Quantity of devices in shipment from manufacturer.
 - g) Statement certifying conformance and traceability.
 - h) Certifying signature and date of transaction.
- 2) Distributor's certification
 - a) Copy of manufacturer's certification
 - b) Distributor's name and address.
 - c) Name and address of customer (OECO).
 - d) Latest re-inspection date, if applicable.
 - e) Certification that this shipment is a part of the shipment covered by the manufacturer's certification.
 - f) Certifying signature and date of transaction. During the performance of this order, control of device lot traceability documentation and inventory control for MIL-S-19500F JAN branded devices are subject to review, validation and verification by an Authorized Government Representative, Government release of shipment is not required unless you are otherwise notified.
 - g) Statement certifying conformance and traceability.

Serialization

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The supplier is required to identify each individual unit/item of material delivered to OECO with a unique identifying number (serial number). This number shall be sequential and shall not be repeated within a part number grouping. When the serial numbers are provided on the Purchase Order, only those numbers are to be used.



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Piece Marking — Manufactured Parts

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Manufactured parts shall be permanently and legibly marked per MIL-STD-130 with the appropriate manufacturer's name or symbol, part number and any other marking information called out on the attached drawings. For small parts, to be supplied separately, where space is insufficient to mark, per the above, bagging or tagging will be accepted.

Compliance to ASQR-01

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The seller must comply with UTC Aerospace Systems ASQR-01 latest revision. The seller is responsible for compliance with all specifications referenced on the purchase order and/or drawings and shall maintain, subject to OECO Quality Assurance review, adequate quality control records to indicate objective evidence of his compliance as well as traceability through lot identification and inspection/test records. Records providing evidence that product meets the requirements must be maintained a minimum of ten (10) years or as specified in ASQR-01. Furthermore, the seller is responsible for specification compliance by all of his subcontractors and must contractually require that such subcontractors maintain evidence of their compliance for a period of ten (10) years or as specified in ASQR-01.

Drawing/Specification Compliance

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Specifications listed on the purchase order shall be the latest revision level in effect on the date of the purchase order, unless otherwise specified by the purchase order. Supplier is responsible to ensure they are working to the latest specification listed on the purchase order. Any changes that may affect quality (form, fit, function and/or deviations from specifications) must receive authorization from OECO prior to shipping parts.

Buyer Furnished Material — Certification

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Specific material, furnished by OECO, shall be utilized in the production of items required by this purchase order. Additional quantities of such material, if required, shall be obtained only from OECO. No such material other than that furnished by OECO shall be used.



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Special Provisions:

Any special provisions will be listed on the Purchase Order. The letter designation indicates the applicable details:

- A) Circuit Card Assemblies shall be manufactured to J-STD-001 Class 3 requirements.
- B) Supplier is responsible for compliance with the Fastener Quality Act.
- C) Supplier is required to perform solderability tests in accordance with the applicable specification. The solderability samples must be segregated from the remainder of the lot and clearly identified.
- 40_ D) Supplier certifies that all product manufactured in accordance with this purchase order was processed in a mercury-free environment.
- E) Items supplied on this purchase order shall have a single lot date code.
- F) Items supplied on this purchase order must come from a single wafer diffusion lot.
- G) Item must be procured from a QPL/QML source identified on the QPL/QML list for the referenced specification.
- H) Approved Boeing inspection sampling plan is required.
- I) Other provisions apply as specified on the PO

Customer Flow Down

Any special customer quality requirements will be listed on the Purchase Order. The letter designation indicates the applicable details.

- A) Boeing. The Boeing Quality Management System Requirements for Suppliers is in document number D6-82479. These requirements are mandatory for this PO.
 - 43_ B) Rockwell Collins. The Rockwell Collins Supplier Quality Requirements are in document number RC-9000. These requirements are mandatory for this PO.
 - C) Aero Engine Controls. The AEC ES31-603 Supplier Quality Assurance Requirements apply to this order.
 - D) SNEMCA & TURBOMECA. SAFRAN Procedure Number GRP-0087, Requirements Applicable to Suppliers, applies to this order (note: An English translation is in the rear of the document).
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Counterfeit and Fraudulent Material Prevention

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- The supplier shall establish a Counterfeit and Fraudulent Parts Prevention and Control plan compliant with one of the following standards; AS6174 (mechanical) or AS5553 (electrical, electronic, electromechanical) or AS6081 (electrical, electronic, electromechanical-authorized distributor).
- The supplier shall ensure that only new and authentic materials are delivered to OECO or used in the manufacture of OECO product.
- The supplier may only purchase material directly from original manufacturers, franchised distributors, or authorized aftermarket manufacturers. Anything not provided by these sources is not authorized unless approved in advance and in writing by OECO Quality.
- The supplier shall maintain a method for material traceability that ensures tracking the supply chain back to the manufacturer. Records will be maintained for a period of 10 years. This method shall identify the name and location of the original source and all intermediaries.
- When requested, supplier shall provide documentation that authenticates traceability of the material. Supplier shall include this clause or equivalent provisions in all subcontracts for the delivery of items to be furnished to OECO or included in products furnished to OECO.
- Supplier shall immediately notify OECO Quality if they become aware or suspect that counterfeit or fraudulent material has been provided to or used in OECO product.



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Traceability

Multiple Lots may be included in a shipment, but each manufacturing lot or batch of parts shall have its own C of C and be packaged and identified separately by labeling with Supplier name, lot/batch number, PO, and OECO part number and revision. Where applicable, serial numbers must be listed on either the C of C or Packing List. Manufacturing lot numbers or traceability references shall not be mixed on the same label or Certificate of Conformance.

Additional Requirements:

- 45
1. Mechanical Parts, including any parts within an assembly, the Supplier shall maintain traceability of each Part to the raw material certification and test report that represents the raw material heat from which each of the parts were manufactured.
 2. Distributor Parts; such as adhesives or solder, Original Manufacture lot/batch number of raw material to be provided.
 3. Drawing Controlled Parts; including any parts within an assembly, the Supplier shall maintain traceability of each Part to the raw material certification from which each of the parts were manufactured.
 4. Supplier shall retain a Lot Traceability sheet containing the lot numbers for each material used for an assembly.

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- 46 **SAFRAN DVI – Customer Format FIRST ARTICLE**
SAFRAN DVI document required on 1st production part

Individual Bag/Box and Label/Tag Packaging.

Product produced shall be packaged and labeled in separate containers; smaller items may be bagged and labeled or tagged in batched quantities when approved by PS-OECO Quality. The following information shall be included on each label:

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- Supplier Name or Supplier CAGE code
 - Date of manufacture
 - OECO part number
 - Revision level
 - Manufacturing Lot code or Batch code

Additional supplier information on the label is acceptable.



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48 **SOW (Statement of Work)**
Not applicable.

REACH (Registration, Evaluation and Authorization of Chemicals)

All materials and products delivered to OECO must be in compliance to RoHS and REACH requirements unless authorized by formal concession/deviation in writing and approved by Quality. Supplier further specifically represents, warrants and covenants the following:

1. No Substance contained in any Product is intended to be released under normal and reasonably foreseeable conditions of use, as such phrase is defined and interpreted pursuant to REACH;
2. No Substance present in any Product in a concentration at or above 0.1% by weight (w/w), as such concentration is defined and interpreted pursuant to REACH, is on the Candidate List;
3. No Substance present in any Product or otherwise provided to OECO by Supplier, on its own or in a Preparation, otherwise requires registration or notification under Articles 6 or 7 of REACH (or any corresponding amended provisions); and
4. In the event that Supplier becomes aware that any representation or warranty set forth in sections 1, 2 or 3 above is not accurate, or ceases to be accurate, Supplier shall (a) promptly notify OECO, (b) ensure that such Substance is registered and/or notified to the European Chemicals Agency, as applicable, pursuant to REACH, and that such registration and/or notification includes OECO's use of such Substance and (c) use best efforts to ensure, if applicable, that authorization for OECO's use of each such Substance is granted pursuant to REACH.

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Definitions:

- (i) Candidate List means the list of identified Substances referred to in Article 59(1) of REACH (or any corresponding amended provisions); as such list may be updated from time to time.
 - (ii) Preparation has the meaning ascribed to that term pursuant to REACH.
 - (iii) Product means any component, part, sub-assembly, assembly or other commodity provided to OECO by Supplier, including any packaging materials or containers.
 - (iv) REACH means Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals, 2006 O.J. (L 396) 1, as amended from time to time, any similar laws in Switzerland or the European Economic Area or similar or related substance restriction, disclosure, registration, notification or authorization laws and interpretive guidance (including European Chemicals Agency guidance documents), national or local implementation and enforcement policies relating to any of the foregoing.
 - (v) Substance has the meaning ascribed to that term pursuant to REACH.
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50A **RoHS**
Product shall be compliant to RoHS 1 Directive or RoHS 2 Directive.

Revision	Date	Description
01	6/17/2013	<ul style="list-style-type: none"> • Added Revision Control and Quality Tools to QAP 18 as requested by H.S. • Updated QAP 12 to add two weeks’ notice for source • Clarified QAP 47 by adding batched quantities
02	1/10/2014	<ul style="list-style-type: none"> • Added codes 23F and 23G



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03	10/10/2014	<ul style="list-style-type: none"> • Changed Pacificscientific.com to OECO.com • Added QAP 50 REACH compliance
04	3/9/2015	<ul style="list-style-type: none"> • QAP code 23H was added • Changed Pacificscietific.com to oeco.com • Changed verbiage to how our Meggitt Supplier Quality requirements apply to all orders
05	5/20/2015	<ul style="list-style-type: none"> • Modified QAP 16, ,19, 36, 39 to reference MPRC-10 • QAP code 23I was added • Modified QAP 27 to allow suppliers to use either OECO's Special Process suppliers or any Nadcap supplier • Added QAP code 50A RoHS compliance
06	7/27/2015	<ul style="list-style-type: none"> • Added Revision Block
07	11/9/2015	<ul style="list-style-type: none"> • Modified QAP 4 to require objective evidence to be available at the supplier • Modified QAP 16 with a note that COTS parts may not have a revision • Modified QAP 17 to require distributor C of C with OEM and OECO part number
08	04/20/2017	<p>QAP 8: changed "blueprint" to "drawing"</p> <p>QAP 8: removed detail description of AS9102 requirements</p> <p>QAP 12A: corrected number and name of Self-Release procedure</p> <p>QAP 16: added description for shipping multiple lots and clarified C of C objective evidence statement</p> <p>QAP 19: changed "actual values recorded" to "test results"</p> <p>QAP 21: Added, "Upon request"</p> <p>QAP 27, 27A: revised for clarification and added drawing required source statement</p> <p>QAP 45: added description for shipping multiple lots.</p> <p>QAP 47: added option to list Supplier Name or CAGE Code</p> <p>QAP 48: removed this requirement and made it, "not applicable"</p>
09	05/03/2017	<p>QAP 1A thru 1E: Added "MPRC-10 Meggitt Supplier Quality Requirements Document (SQRD) applies to this order".</p> <p>QAP45: Added statement to list Serial Numbers on C of C or Packing List for each Lot or Batch.</p>
10	2/9/2018	<p>Added requirement for Calibration personnel to have eye exams in QAP 3 per Customer request.</p>



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11	3/2/2018	Re-write of QAP 44, Counterfeit and Fraudulent Material Prevention as requested by Customer. Re-named PRC_10 to MPRC-10 in accordance with Corporate naming convention.
12	5/29/2020	Remove QAP(S) 1A, 1B, 1C, 1D, 1E, 3, 6, 7, 8A, 9, 12, 13, 17, 18, 21, 26, 27A, 32, 34, 35, 36, 38, 39, 41, 42 and 49. Reason for removal is duplicated and/or conflicting requirements under newly released MPRC-10 SQRD document.

OECO Approvals:

Quality Director