



Job Aid

For

***Interim Alternative Contract
Insight for Technical
Functional Specialists***

Revision 0

DCMA TDM

POC:
Joseph Tessier
Quality Assurance
DCMA-TDM

Craig Bennett
Quality Assurance
DCMA-TDM

Approved by:

Michael E. Shields Jr. (SES)
Executive Director
Technical Directorate (acting)

REVISIONS AND REVIEWS

Rev	Date	Reason(s)	Name
0	03/26/2019	Initial Issuance. Current manuals do not cover alternative contract oversight concepts and procedures	Joseph Tessier / Craig Bennett

1. AUTHORITIES

INTERIM RAPID ACTION DOCUMENT FOR ALTERNATIVE CONTRACT INSIGHT

1.1. Background. A collaborative industry and DCMA team was established to explore the development of guidelines for the usage of virtual technologies for the purpose of remote product conformity verification and support. As technology matures and improve by industry, these capabilities can then be leveraged by DCMA for surveillance verification. The Joint Strategic Quality Council (JSQC) developed alternative contract oversight concepts and the Executive Quality Council (EQC) validated the concepts at piloted ACAT locations on multiple weapon platforms and DoD/NASA spacecraft. Virtual/Remote, In-Line Post RFV Review, Post RFV Review Sampling, OASIS Process Flow, and leveraging new technologies/methods may be used to supplement and ideally offset the need for in-person verification. These activities have a potential of significant reduction on the product line, with possible increase in data driven decisions. The early measureable pilot results indicate improvements in cost, schedule, and performance. Success is founded with collaborative partnership and open communication between DCMA, industry, and suppliers. Alternative contract insight concepts within this document, may be utilized for all DCMA contract oversight requirements (space, aircraft, ammo, explosives, software, contractor system oversight, etc...) as applicable.

1.2. Purpose. The purpose of this Alternative Contract Insight document is to provide a rapid action guidance to all Contract Management Team (CMT) Members and Technical Functional Specialists to implement new methods established/validated from piloted projects in partnership between DCMA and ACAT contractors supporting Agency JSQC and EQC. CMT members can develop executional procedures based on the contracts received within their environment or CMO. Follow-on guidance will follow as required and adapted to Agency Strategy and acquisition environment.

1.3. Goals:

- a. Create joint-use data sharing and data source structured with a common data taxonomy and architecture.
- b. Implement a robust process management practice that eliminates non-value added activities & reduces cycle time and mitigates risks to the processes and outcomes.
- c. Foster development of a highly successful digital workforce that leverages emerging technologies and adopts best practices that drive culture changes to improve customer support, force readiness, and lethality.
- d. Leverage interrelationship association with defense partners on data sharing to maximize oversight effectiveness while reducing industry cost of compliance.
- e. Ensuring product quality and risk mitigation with a reduction of Government oversight footprint.

2. RESPONSIBILITIES

2.1. DCMA HEADQUARTERS (HQ)

a. Will provide guidance as necessary to eliminate process gaps reported in support of overall objectives. Maturity of the processes and procedures mentioned within this document vary but, are deployable/scalable.

b. Will adjudicate all functionally specific requests for deviations or waivers from agency policies.

c. Evaluate relevant alternative contract oversight measures or metrics for trends and overall process performance for effectiveness and efficiencies.

d. Will adopt process changes into manuals and instructions as they become common across the business enterprise.

2.2. CONUS OUs, SP and INTERNATIONAL:

a. Will provide local operational execution direction or assist in developing operational procedures were deemed necessary.

b. Serves as focal point for collection, feedback and or adjudication for CMO level issues or process improvement suggestions prior to elevating them to the HQ.

c. Will aggregate and report any relevant measures or metrics as requested by the HQ.

2.3. CMOs: Collaborate with the contractor to review contractual processes to support alternative contract insight methods. Will aggregate and report any relevant measures or metrics as requested by the OU.

3. PROCESS

3.1 Typical Contractual Requirements: Typical contractual requirements that support alternative contract insight.

a. Federal Acquisition Regulation (FAR) / Defense Federal Acquisition Regulation Supplement (DFARS):

FAR Part 4, Administrative Matters, prescribes policies and procedures relating to the administrative aspects of contract execution, contractor-submitted paper documents, distribution, reporting, retention, and files.

Subpart 4.7 - ...contractors shall make available records, which includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer

data, or in any other form, and other supporting evidence to satisfy contract negotiation, administration, and audit requirements...

FAR Part 46, Quality Assurance, prescribes policies and procedures to ensure that supplies and services acquired under Government contract conform to requirements.

Subpart 46.1, Subtopic 46.105(a)(4), Contractor Responsibilities - Maintaining substantiating evidence, when required by the contract, that the supplies or services conform to contract quality requirements, and furnishing such information to the Government as required.

Subpart 46.4 - Government Contract Quality Assurance - Government contract quality assurance shall be performed at such times (including any stage of manufacture or performance of services) and places (including subcontractors' plants) as may be necessary to determine that the supplies or services conform to contract requirements.

FAR Part 52, Solicitation Provisions and Contract Clauses, provides definition for contractor inspection requirements as well as provisions for supporting the Government in their performance of inspections. Relevant excerpts:

Subpart 52.2, Subtopic 52.246-1, and subsequent subtopics - The Contractor shall provide and maintain an inspection system acceptable to the Government covering supplies under this contract and shall tender to the Government for acceptance only supplies that have been inspected in accordance with the inspection system and have been found by the Contractor to be in conformity with contract requirements. As part of the system, the Contractor shall prepare records evidencing all inspections made under the system and the outcome...

If the Government performs inspection or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties...

DFARS Part 246, Quality Assurance, specifies Government contract quality assurance requirements.

Departments and agencies shall...

Develop and manage a systematic, cost-effective Government contract quality assurance program to ensure that contract performance conforms to specified requirements. Apply Government quality assurance to all contracts for services and products designed, developed, purchased, produced, stored, distributed, operated, maintained, or disposed of by contractors...

Provide contractors the maximum flexibility in establishing efficient and effective quality programs to meet contractual requirements. Contractor quality programs may be modeled on military, commercial, national, or international quality standards.

b. Quality Management System (excerpts from ISO/AS9100).

Infrastructure

The organization shall determine, provide, and maintain the infrastructure necessary for the operation of its processes and to achieve conformity of products and services (e.g., equipment, including hardware and software, information and communication technology).

Monitoring and Measuring Resources

The organization shall determine and provide the resources needed to ensure valid and reliable results when monitoring or measuring is used to verify the conformity of products and services to requirements.

The organization shall ensure that the resources provided:

- a. are suitable for the specific type of monitoring and measurement activities being undertaken and*
- b. Are maintained to ensure their continuing fitness for their purpose.*

The organization shall retain appropriate documented information as evidence of fitness for purpose of the monitoring and measurement resources.

Measurement Traceability

When measurement traceability is a requirement or is considered by the organization to be an essential part of providing confidence in the validity of measurement results, measuring equipment shall be:

- a. calibrated and/or verified at specified intervals or prior to use, against measurement standards traceable to international or national measurement standards; when no such standards exist, the basis used for calibration or verification shall be retained as documented information;*
- b. identified in order to determine their status; and*
- c. safeguarded from adjustments, damage, or deterioration that would invalidate the calibration status and subsequent measurement results.*

Documented Information (records)

Section A6 (clarification): Where ISO 9001:2008 used the term “records” to denote documents needed to provide evidence of conformity with requirements, this is now expressed as a requirement to “retain documented information.” The organization is responsible for determining what documented information needs to be retained, the period of time for which it is to be retained, and the media to be used for its retention.

Identification and Traceability

The organization shall use suitable means to identify outputs when it is necessary to ensure the conformity of products and services.

The organization shall maintain the identification of the configuration of the products and services in order to identify any differences between the actual configuration and the required configuration.

The organization shall identify the status of outputs with respect to monitoring and measurement requirements throughout production and service provision.

When acceptance authority media are used (e.g., stamps, electronic signatures, passwords), the organization shall establish controls for the media.

The organization shall control the unique identification of the outputs when traceability is a requirement and shall retain the documented information necessary to enable traceability.

NOTE: *Traceability requirements can include:*

- *the identification to be maintained throughout the product life;*
- *the ability to trace all products manufactured from the same batch of raw material, or from the same manufacturing batch, to the destination (e.g., delivery, scrap);*
- *for an assembly, the ability to trace its components to the assembly and then to the next higher assembly; and*
- *for a product, a sequential record of its production (manufacture, assembly, inspection/verification) to be retrievable.*

3.2 Risk Assessment: Functional Technical Specialist must consider risk when applying alternate oversight activity. The risk assessment is a dynamic and ongoing process and is an essential part to ensure effectiveness. The contractor and Functional Specialist must collaborate on the risk assessment when applying alternative verification technique.

3.3 Technology Considerations: When deploying virtual technologies for product verification and support purposes, consideration should be given to the following;

a. Data Capture and Imaging

- Image resolution for feature verification shall be per contractual requirements (e.g., technical data package, statement of work) or twice that required for manufacture of the product feature.
- Measurement resolution capability of 10x the tolerance requirement is suggested.
- Verifiable markings i.e. measuring device in the picture, date and time collected.
- Sequentially captured / recorded information should be bookmarked for direct access to required information (e.g., operation number, select features).
- Secure media should be used for data capture and storage purposes.
- Proactive measures should be taken to ensure protection of Intellectual Property and privacy of personnel (e.g., curtains to isolate the inspection area, etc.).

b. Suggested IT / Security and Information Retention Per Contractual Requirements

- Data and records are retained and delivered per contractual requirements.

- Per contractual requirements, for unclassified systems and data, the requirements of NIST SP 800.171, “Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations” are recommended.
- Per contractual requirements, Internet Service Providers used in the employment of virtual technologies may be certified by the Federal Risk and Authorization Management Program (FedRAMP), Security Assessment Framework.

3.4 Methodology Considerations: When employing the use of virtual technologies, work instructions should be developed to support consistent application of the technology. For example, product characteristics and features that are to be captured for retention and/or remote viewing should be specifically identified in the work instructions. For consideration, this list may include, but is not limited to:

- Visible connections, fittings, attachment fasteners, and reference designators.
- Plug and jack faces of an electrical interface, instrumentation, or coax connector set prior to mate, and of the mated connector set after mating (ensure identification markings are legible).
- Fluid or gas lines and electrical or data harnesses to show all visible fittings, couplings, connectors, and reference designators.
- Electro-explosive device (EED) connections, the firing line connector sockets, the initiator pins before mating and the mated connector/EED showing one of the locking pins engaged in the detent in one of the connector pin slots.
- Wire harness routing with specific emphasis on bend radius requirements.

Important measurements or features:

- Critical clearances and gaps.
- Component placement, types, values.
- Coatings.
- Materials/tools used for product build/verification such as labels for material shelf-life and tool/equipment calibration.

Closure of important operations:

- Torque striping or applied torque (via tool reading/setting)
- Selectable or adjustable hardware components (e.g., switches, valves, safe and arm).
- Clamp band separation joint prior to and after installation of the band.
- Both ends of lock wire.

- Deployment bail and lanyard rigging for pull-type umbilical after rigging.
- Closeout panels and covers to show attachment fasteners and all nomenclature (e.g., labels, placards).

As-built product configuration and traceability:

- Traceability to the part being verified.
- Application of approved design variances showing the before and after product condition.
- Serialized / uniquely identified parts.

3.5 Example Work Instructions:

a. Verify product characteristics have been designated for application of virtual technologies:

- Role(s): Personnel performing virtual product verification
- Input: Need to conduct virtual product verification
- Output: Product characteristics confirmed as “in scope”
- Confirm that conditions (e.g., lighting, equipment availability and calibration) are suitable to perform the required virtual product verification.

b. Ensure proper access restrictions are in place to protect Intellectual Property and privacy of personnel per requirements:

- Role(s): Personnel performing virtual product verification
- Input: Product characteristics confirmed as “in scope”
- Output: Area restricted per requirements
- Cordon off / limit access to the area during virtual product verification

c. Application of virtual technology:

- Role(s): Personnel performing virtual product verification
- Input: Area restricted per requirements
- Output: Application of virtual product verification complete
- Initiate capture of product characteristics using virtual technology equipment, ensuring capture of product traceability / identification information. Upon completion of virtual product verification, secure virtual technology equipment and open access to the area.

d. Verify capture of required information:

- Role(s): Technical personnel
- Input: Application of virtual product verification complete

- Output: Captured virtual product verification information verified
 - Verify virtual information meets requirements for validation and/or verification of product characteristics.
- e. Quality Assurance (QA) / Technical personnel Manager acceptance of virtual product verification
- Role(s): QA / Technical personnel
 - Input: Captured virtual product verification information verified
 - Output: QA / Technical personnel acceptance of captured virtual product verification information
 - QA / Technical personnel will review virtual product verification information to confirm all aspects of the virtual verification are acceptable per requirements.
- f. Present virtual product verification information (as required, with prior agreement between DCMA and the contractor)
- Role(s): Contractor QA / Technical personnel
 - Input: Contractor QA / Technical personnel acceptance of captured virtual product verification information
 - Output: DCMA Virtual product verification for acceptance.
- g. DCMA acceptance/rejection of the product using virtual product verification information
- Role(s): DCMA Functional Specialist
 - Input: Virtual product verification information presented to DCMA
 - Output: DCMA acceptance/rejection of the product using virtual product verification information
 - DCMA reviews the virtual product verification information to determine product conformance. Disposition is documented and is the record of inspection status, per requirements.
 - Upon DCMA disposition, virtual product verification information is retained per contractual requirement.
 - The inability to determine product conformance via virtual product verification information will result in a required physical verification by the customer.

4. ALTERNATE INSIGHT OPPORTUNITIES

4.1 Virtual Technologies: Virtual technologies have matured and are destined to be a presence in all industry workspaces augmenting product conformity verification throughout the supply chain and remote product support. Deployment of new technology offers the opportunity to significantly reduce the time and travel burden on our workforce and eliminate response time for field support and workflow holds for product conformity verification. **In many cases, the return on investment for leveraging new technology may be achieved through a single deployment!**

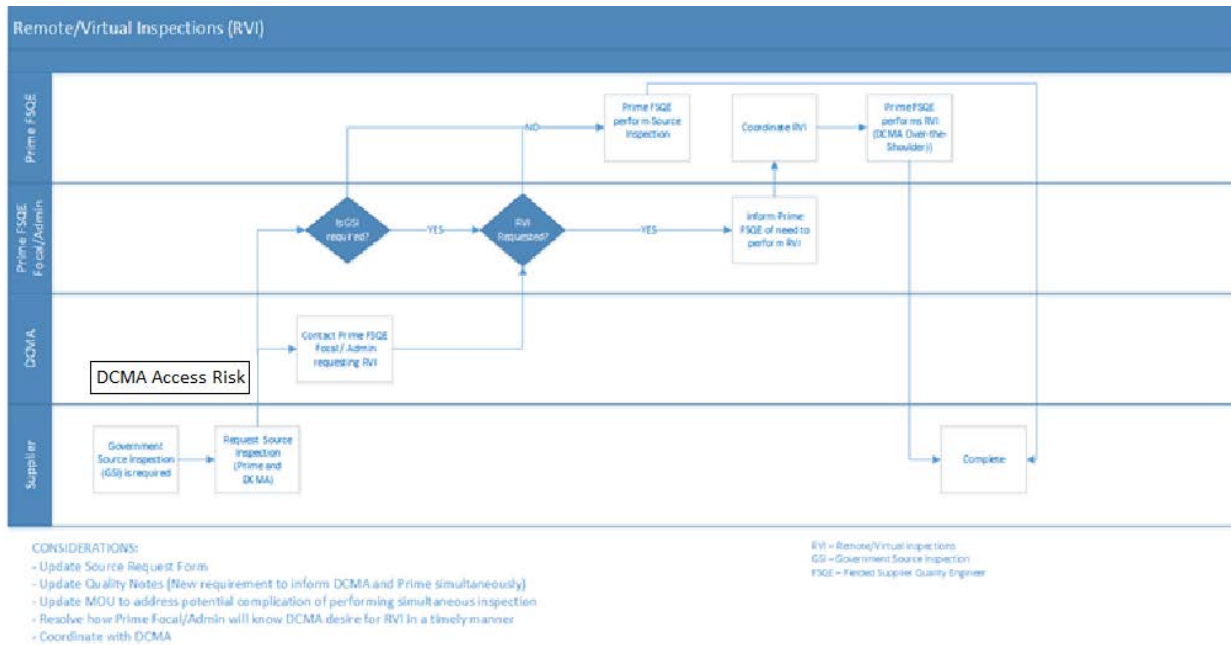
The contractor is required to provide and maintain an inspection system acceptable to the Government. Applicable Agency policies, FAR/DFARS and ISO/AS9100 requirements provide flexibility for the contractor to implement an inspection system that is cost effective while assuring conformance to specified requirements. Regulations further require that the contractor/sub-contractor provide all reasonable facilities and assistance for the performance of government inspections/tests on contractor/sub-contractor premises.

Thoughtful deployment of virtual technologies aligns well with the FAR/DFARS and ISO/AS9100 requirements, as presented within this document. Further, as demonstrated through numerous joint projects, the Government is embracing new techniques and support of industry pursuit and deployment of appropriate virtual technologies for product conformity verification. Application of virtual technologies has the potential to be a competitive differentiator and advantage throughout the supply chain.

Continued pursuit and deployment of virtual technologies for product conformity verification by industry and Government is recommended. Adopting and integrating technologies affords the opportunity to influence industry “norms” and to partner with our customers and suppliers, further enabling our collective ability to provide affordable solutions.

Other potential applications for remote/virtual technologies includes workspaces that are not easily or safely accessible by humans. This technology can also be applied where Government source inspection is required (example process illustrated below). In these instances, the industry and Government should partner to appropriately identify the process to the application.

Example Remote/Virtual Inspection (RVI) Guidance



4.2 In-Line to Post Review of Requests for Variance (RFVs). Providing a standardized process for progression of ‘In-Line’ to ‘Post’ RFV review. See Post Review of Requests for Variance Guidebook.

Objectives. Improve production efficiency and reduce contractor time delays by reducing MRB engineering review requirements of low risk activity.

4.3 Post Review RFV Sampling. Utilizing sampling of minor RFVs is the next step in streamlining the NCM process for those suppliers who meet the criteria for and are successfully performing Post Sampling of RFVs. This will allow DCMA resources to be deployed to more value-added activities (i.e., prevention rather than detection).

Objectives. Reduce DCMA resource hours and cycle time for low risk processes and improve supplier schedule efficiencies. Incentivize Contractors to improve their NCM process performance by streamlining DCMA RFV reviews where appropriate.

Method. Contractor’s must be successfully performing Post RFV Review with no open CARs or findings related to the NCM or RFV process(es) by either DCMA or a certifying board. DCMA will utilize MIL STD 1916 to determine the sampling plan. Lot size will be determined locally and includes all Use-As-Is and Repair dispositions. Continuation of sampling will be reconsidered in the event of any escapes and/or any deviations from these criteria.

Scope. Contractor sites with RFV requirements. Expand throughout the Agency and contractor business sectors. Monthly data collection from pilot sites. Quarterly status report to the JSQC.

4.4 OASIS Process Flow. OASIS Process Flow (Registrant responsibilities with OASIS) Clearly define Collaboration with DCMA, Prime Contractors and Certification Bodies.

Objectives. There are 3 primary objectives to leveraging the existing ICOP/OASIS process:

1. Query and analyze the results of 3rd Party ICOP data obtained from OASIS (Tier 1 & 2) to help evaluate contractor risk and develop follow-on Quality Management System (QMS) surveillance activities and schedules.
2. Management of Quality Management System nonconformance.
3. Utilize OASIS Feedback to communicate and/or request action.

Scope.

- a. Establish a collaborative process to share audit results between DCMA, contractor, and Certification Body.
- b. Establish a collaborative process to manage Major, Quality Management System Non-conformances written by DCMA against a Prime contractor.
- c. Establish requirements for access to OASIS Tier 2 data with the Prime Contractor.
- d. Establish a clear methodology to provide input to the Certification Body (CB) for pre-audit planning of a Prime Contractor or their subcontractor.
- e. Establish a method to measure the effectiveness of the processes.

Glossary and References

- United States Government, “FAR Part 4 , Administrative Matters,” Federal Acquisition Regulation (FAR), Current
- United States Government, “FAR Part 46 , Quality Assurance,” Federal Acquisition Regulation (FAR), Current
- United States Government, “FAR Part 52 , Solicitation Provisions and Contract Clauses,” Federal Acquisition Regulation (FAR), Current
- United States Government, “DFARS Part 246 , Quality Assurance,” Defense Federal Acquisition Regulation Supplement (DFARS), Current
- SAE International, “Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations,” Revision D, 20 September 2016

References:



WR QA Guidance
during COVID-19 (v1)



Post Review RFV
Guidebook - Final - 16



DCMA OASIS Job Aid
Rev 0.pdf