



INSTITUTE FOR DEFENSE ANALYSES

**Ideas for Enhancing Defense Contract
Management Agency (DCMA) Support
to Diminishing Manufacturing
Sources and Material Shortages
(DMSMS) and Parts Management (PM)
(Conference Presentation)**

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About This Publication

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Ideas for Enhancing Defense Contract Management Agency (DCMA) Support to Diminishing Manufacturing Sources and Material Shortages (DMSMS) and Parts Management (PM)

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730 East Glebe Road • Alexandria, Virginia 22305

DCMA DMSMS Responsibilities per DoDI 4245.15 (when it is the CAO and authorized by contract)

2.5. DIRECTOR, DEFENSE CONTRACT MANAGEMENT AGENCY.

Under the authority, direction, and control of the USD(A&S), in addition to the responsibilities in Paragraph 2.7., the Director, Defense Contract Management Agency:

- a. Integrates DMSMS risk management processes in contract management policy, procedures, guidance, regulations, and training.
- b. Develops and implements a surveillance process to report the performance of contractors' DMSMS management activities and identify risks to DoD customers **as authorized by contract**.
- c. Coordinates communication with the affected DoD Component(s) and the DoD DMSMS Working Group **as authorized by contract** when DMSMS risks and issues are identified during surveillance of contractors' DMSMS processes.
- d. Designates a primary point of contact to serve as the organization's lead representative for the DoD DMSMS Working Group.

Impetus for asking what does DCMA do now and how might DCMA provide greater value to program offices (POs) and DMSMS/PM practitioners

* Paragraph 2.7 enumerates DMSMS responsibilities of all DoD Component Heads

- Ideas to advance potential DCMA value-added services in the DMSMS/PM domain
 - Better communication among POs and DMSMS/PM communities
 - Greater dissemination of pertinent industrial base information
 - Surveillance of emerging DMSMS/PM standards, including potentially greater use of checklists
 - Improved guidance to POs and DMSMS/PM communities about utilization of DCMA

Note: DMCA surveillance for DMSMS/PM and other activities is risk based and prime contractor focused. Usually relies on prime contractor assessments of subcontractors for surveillance of lower tiers.



- Background on DMSMS/PM roles, responsibilities, and authorities (**establishing domain for DCMA assistance**)
- DCMA surveillance of contractors' DMSMS/PM processes
- Examples of DCMA DMSMS/PM support to POs
- Ideas

Who performs DMSMS Management Work?

- When is a contractor responsible for all/most of the work?
 - Often the case for shorter-range contracts, such as development and low-rate initial production, with the contractor paying for DMSMS resolution
 - Subcontractors may perform large portions of DMSMS work
 - Need contract provisions that flow down DMSMS requirements
 - DoD ALWAYS oversees contractors' DMSMS management

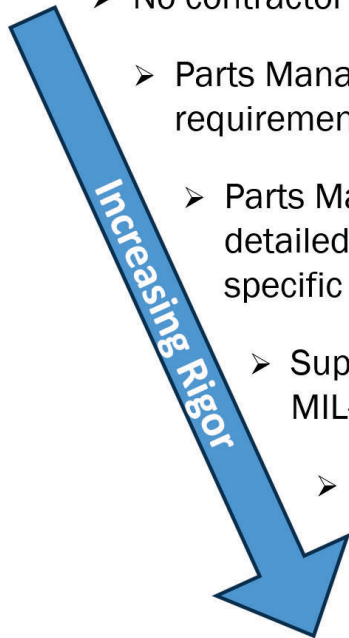
- When is the DoD responsible for all/most of the work? (Supply chain organization, PO, etc.)
 - Often the case for sustainment of long-lived systems in military depots (though a contractor may operate the depot)
 - A PO may utilize an external DMSMS expert, e.g., to determine long-term part availability, identify alternative sources, monitoring bills of materials, etc.

- When do DoD and contractor split responsibilities?
 - Often the case for systems in transition from production to sustainment
 - Through the Low-Rate Initial Production phase, a contractor's limited period of performance might skew the business case toward resolutions that are cheaper in the short term (while under contractor cognizance), but more costly in the long-term Full Rate Production and Sustainment phases (when the DoD is sustaining the system)

Greater DCMA involvement as contractor role increases

DoD Relies on Contractors Following an Appropriate PM Plan

- Contractors perform nearly all parts management work; DCMA involved when on contract and risks identified
- DoD tailors requirements of MIL-STD-11991 (previously MIL-STD-3018)
- PO needs to verify that the contractor is following its processes and try to validate effectiveness *
 - No contractor Parts Management Plan required
 - Parts Management Plan in accordance with the general requirements of MIL-STD-11991 tailored to the specific situation
 - Parts Management Plan in accordance with the general and detailed requirements of MIL-STD-11991 tailored to the specific situation
 - Supplement the manufacturing process requirements of MIL-STD-11991
 - Supplement part requirements and prohibitions of MIL-STD-11991
 - Replace MIL-STD-11991 under circumstances where more rigorous requirements are necessary



MIL-STD-11991B
3 OCTOBER 2023

SUPERSEDING
MIL-STD-11991A
26 AUGUST 2015

DEPARTMENT OF DEFENSE

STANDARD PRACTICE

GENERAL STANDARD FOR PARTS, MATERIALS, AND PROCESSES

* A DoD Parts Management Plan may not be required when:

- There's minimal development activity
- Contractor's internal parts management processes meet the DoD's needs
- Judgement that reliance on contractor processes is in the DoD's best interest

What is Surveillance (Post-Award)?

- Surveillance aims to ensure that contractors are following their processes and are meeting contract requirements
- Decisions about surveillance intensity and frequency are usually based on a risk assessment by the Contract Administration Office (CAO) designated in the contract as well as DCMA resource constraints
 - About 30 programs across 40 facility locations currently have DMSMS or PM surveillance authorities on contract (according to DCMA)
 - A PO might execute a Memorandum of Understanding (MOU) or issue a Quality Assurance Letter of Instruction (QALI) specifying the level of DMSMS/PM surveillance expected from the CAO
- Surveillance won't necessarily ascertain the effectiveness of a DMSMS/PM process
 - Lack of sufficient subject matter expertise may limit what can be surveilled, forcing DoD to accept more risk
 - A DMSMS process issue may not be realized until there is an actual part unavailability problem that causes a production delay

FAR Part 42/DFARS 242 – Contract Administration Services

- Perform production support, surveillance [42.302(a)(31)], engineering surveillance [42.302(a)(40) and (41)], purchasing system [42.302(a)(50)]
- *Special surveillance*. For major system acquisitions, the contracting officer may designate certain high risk or critical subsystems or components for special surveillance [42.202(f)]
- Extent of (technical) surveillance based on criticality, schedule, performance history [42.1104(a)]
 - Make maximum use of reliable contractor production control or data management systems
 - May involve surveillance of contractor reporting system
- DoD has surveillance rights under DFARS 246.870, “Contractors Counterfeit Electronic Part Detection and Avoidance”



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DCMA Post-Award Surveillance

- DCMA typically performs surveillance, but a PO could retain those responsibilities when it:
 - Trusts contractor processes
 - Is concerned with possible delays with DCMA
 - Has internal systems engineering competencies (cheaper than DCMA)
 - Has preferred surveillance vendors

- A PO may make specific DMSMS/PM surveillance requests beyond areas deemed high risk by DCMA
 - E.g., Missile Defense Agency (MDA) has an MOU with DCMA covering all of its programs

- Requirements for effective DCMA surveillance
 - DMSMS/PM requirements on contract
 - Good data for making risk assessments
 - Well-trained DCMA field representatives
 - Good working relationship with the PO, contractor and subcontractors
 - If warranted, checklists based on relevant standards

DCMA's FY22-26 Strategic Plan includes an objective to "modernize surveillance business practices to be agile and data driven."

What Happens when DCMA Surveillance Discovers a Problem?

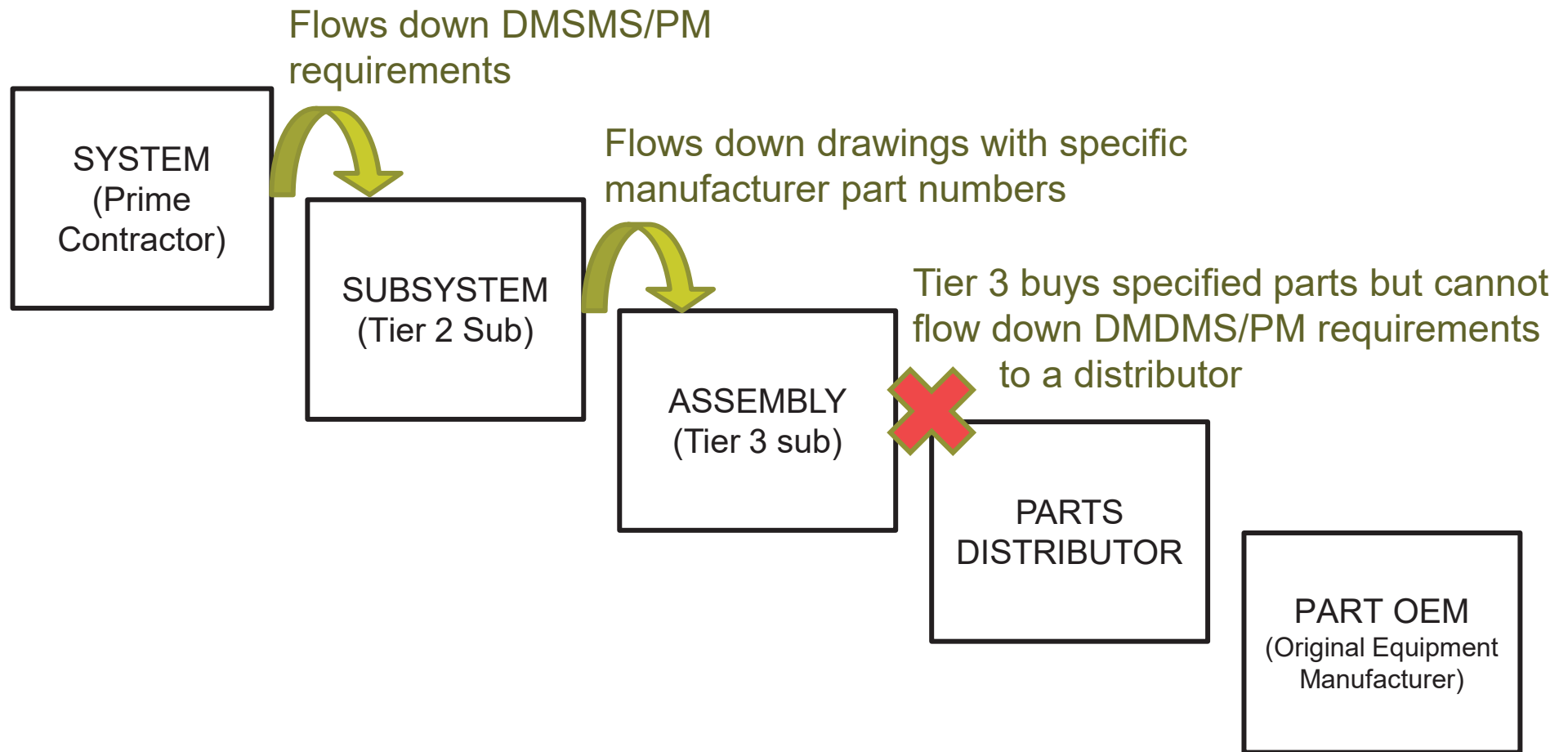
- Ask for clarification, information/data from the contractor
- If contractor response deemed insufficient, DCMA enters a Corrective Action Request (CAR) into the Product Data Reporting and Evaluation Program–Automated Information System (PDREP-AIS)
- PDREP sends a letter of notification to the PO
- Once accepted by the PO, a Corrective Action Plan (CAP) is developed with the contractor
 - DCMA may refuse to accept a part until the CAP is successfully implemented
- CAR closes when DCMA verifies that CAP actions are completed satisfactorily

A DCMA CMO's DMSMS/PM Surveillance Experience

- Oversees multiple programs—some development, some production—focusing on higher-risk areas (as assessed by DCMA) and customer priorities (with customer backing), such as:
 - MOU requirements (which don't go lower than ACAT II)
 - Contract Data Requirements Lists (CDRLs) for obsolescence
 - Critical Safety Items (CSI) parts
 - Trouble with Commercial Off-the-Shelf (COTS) parts
 - Contractor with poor DMSMS/PM performance history
- Deeper process reviews/resolutions require contractor concurrence
 - In one case, the contractor denied DCMA surveillance of a non-CSI part
 - In another case, 3 DCMA engineers are on site working problems cooperatively
- Usually no surveillance of subcontractors unless known problems or a history of problems; primarily rely on prime's supplier selection and surveillance processes
 - DMSMS/PM requirements must have flowed down to the subcontractor
 - A Letter of Delegation may be required

Contracts with the Prime Contractor may not include Sub-tier Surveillance

Unless sub-tier surveillance is contractually required, prime contractors may have limited visibility into the origin of parts or changes that impact DMSMS/PM



May have no visibility into end users or feel it necessary to issue a Parts Discontinuance or Parts Change Notices.



- Background on DMSMS/PM roles, responsibilities, and authorities (establishing domain for DCMA assistance)
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- Surveillance plan based on Key Contract Requirement (KCR) clauses in the original contract (2002)
 - DCMA did risk assessment of KCRs, which may be modified
 - Only prime contractor processes surveilled, not sub-tiers
(except indirectly via Prime Control of Subcontractor Assessment (PCSA))
 - Also look at prime contractor's supplier selection process
 - Checklists might or might not be used (individual choice)
- Occasional contractor DMSMS process reviews (deeper dive)
- Bi-weekly meeting where DMSMS is covered
 - Contractor discloses new issues and possible resolutions (e.g., change of supplier)
 - DCMA identifies risks with resolutions; if high, then "Risk, Issue, Opportunity or Observation" (RIO) documented*

* RIO document includes: What is the RIO? Why does DCMA believe it is a RIO? Why does it matter? (Cost, schedule, or performance impacts?) DCMA assessment of the contractor's root cause, corrective action, and mitigation plan.

- DCMA surveillance in MDA MOU, updated regularly
 - DCMA Program Integrator (PI) coordinates with THAAD PO
 - Changes requested via PI memo (or a PO engineer asks directly)
 - CMO decides how to staff the request—usually won't say no, but frequency of surveillance could be staffing-limited
 - If request goes beyond the MOA, or if DCMA doesn't have the resources/expertise, then may request additional staff via the PI
 - Use some checklists; e.g., ones associated with RIOs

- Attend weekly Integrated Product Team (IPT) meeting on obsolescence
 - Sub-tier surveillance discussed (under the PCSA)
 - Subs present from time to time
 - Ask questions about resolutions; if problems, may issue an RIO
 - Coordinate with DCMA offices that may oversee particular subs

DCMA PM Support to the Navy Strategic Systems Program (Trident Missile)

- Narrow categories of allowed parts
 - Government asks manufacturers about parts that meet program needs
 - Tests these parts against requirements
(Often performed by Naval Surface Warfare Center, Crane Division)
 - If pass, then added to allowed parts list
 - Try to avoid sole source but may do Life-of-Need Buy if that's not possible
- DoD audits include parts testing
 - Verification is documented, so it is clear whether PM plan is being followed
- Electronics Working Group teams regularly ask questions of suppliers (e.g., where are materials sourced?)
- Monitoring continues through production
 - Might have someone onsite at a fab
 - Would do full requalification if the manufacturing line moves
 - Keep tabs on the overall electronic parts market

DCMA PM Support to the Space and Missile Center (SMC)

- Parts management plans required, tailored as necessary
 - If plan is a CDRL, then government must approve
 - Includes lists of prohibited items

- Review of contractors varies in rigor by program and mission class of parts
 - Class A programs required to deliver the contractor's preferred parts list to government for approval (goes all the way down to parts OEM)
 - Government may have fewer rights for Class C and Class D programs than Class A; maybe only 2nd or 3rd tier suppliers
 - Might also be requirements for the contractor to do certain types of tests and then document those tests; the government would review those documents
 - Discovery of nonconformities bring in a Product Review Board

- DCMA involved, esp. on SSC contracts, where DCMA plant rep has specified parts inspection authorities (DCMA's onsite access is key)

DCMA PM Support to the National Reconnaissance Office (NRO)

- Typically require PM plan based on Aerospace standards
 - Subordinate to the Systems Engineering Plan of the overall Program Management Plan
 - Some programs use NASA Goddard Parts, Materials and Processes Program documents
 - Government review/approval on cost plus contracts; if firm fixed price contract, then typically less oversight, since the contract specifies deliverables
- Some DCMA audits but more typically NRO embedded to track acquisition and work with prime contractor to fix issues as identified
 - Enables some access to lower-tier suppliers but use Federally Funded Research and Development Centers to make an independent assessment of lower tiers. Typically do not have contractually mandated access.
 - DMSMS less of an issue due to small production runs → all parts on hand at the start
 - Inability to analyze parts that are on orbit → keep spares on the ground for testing/assessment
- Parts Control Boards will have contractor and PO reps, but the power of the PO varies with the type of contract and level of criticality of a part
- Use the Government-Industry Data Exchange Program (GIDEP) when they can, but some info may be Controlled Unclassified Information (CUI)
- Monitor corporate changes (e.g., a merger or acquisition) for possible sole source issue



- Background on DMSMS/PM roles, responsibilities, and authorities (establishing domain for DCMA assistance)
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To maximize the value of DCMA surveillance:

- There must be communication mechanisms back to DMSMS/PM practitioners of DCMA findings, even in cases where no or minor corrective actions are needed
- Such communication does not always need to be highly formal and involve detailed reporting

Idea 1: When a PO requests DCMA DMSMS/PM surveillance, they could specify non-burdensome mechanisms for communication of DCMA's findings to the DMSMS/PM practitioner community, not just the contracting community.

Ideas 2 and 3 are examples of potentially useful communication beyond PO contracting officers.

Government-Industry Data Exchange Program (GIDEP) Support

- FAR 52.246-26 requires contractors to review GIDEP notices and issue them if they become aware of suspected counterfeits (unless there is a criminal investigation in process or no other users of the part)
- If not contractually required, manufacturers face disincentives to report (cost, potentially competition-sensitive information)
- Contractors may not be reporting pertinent DMSMS/PM information to GIDEP, if not contractually required to do so

Idea 2: DCMA could examine the feasibility of verifying whether contractors submit required GIDEP reports and encourage DMSMS/PM reporting (or submit such information themselves).

DCMA may gather information about industrial base issues useful to both DMSMS/PM practitioners in POs and in organizations that support multiple POs in those areas

- For example, DCMA surveillance might uncover product discontinuations or changes, impending mergers and acquisitions, supply chain disruptions, etc.
- DCMA's Industrial Analysis Division disseminates notices of production line closures
 - Notices indicate DoD programs that use the line's products (at the CUI level)
 - Would require some effort to identify specific part number affected
- **Idea 3:** The DoD DMSMS/PM lead could work with DCMA to ensure distribution of pertinent industrial base information to all practitioners; e.g.,—
 - Through GIDEP (at the non-CUI level)
 - Emails to Component DMSMS/PM leads

Developing checklists for DMSMS process surveillance* is not currently a DCMA priority

- Use of such checklists is not mandated by DCMA
- Except for standards, there are no published requirements on many DMSMS/PM processes
 - Different contractors use different processes to perform DMSMS/PM
- Without published requirements, DCMA field reps may not have the expertise necessary to assess the adequacy of the processes

Idea 4: POs could ask DCMA to surveil DMSMS compliance when either International Electrotechnical Commission (IEC) 62402 or Society of Automotive Engineers (SAE) 0016 standards are on contract, and DCMA could develop mandatory checklists covering the latest versions of those standards.

* Surveillance of contractual reporting requirements is not value-added since compliance will be visible to the PO.

Surveillance of PM Standards Implementation

Most POs appear to perform minimal PM oversight and do not ask DCMA to do anything in this area, but there are things of value that DCMA could perform under the emerging PM oversight paradigm

- DCMA could surveil compliance with MIL-STD-11991B or verify compliance with the contractor Parts Management Plan
- Organizations conducting rigorous, disciplined PM oversight provide detailed instructions (and in some cases training) to DCMA on what DCMA surveillance should accomplish
 - Additional traceability rigor may be warranted for parts purchased during the COVID-19 pandemic, when suppliers scrambled to obtain parts after some factories shut down or experienced supply chain issues

Idea 5: As MIL-STD-11991B is put on contracts, POs could ask DCMA to surveil PM compliance, and DCMA could develop mandatory checklists – one for general 11991B requirements and one for detailed 11991B requirements.

There is a general lack of knowledge and experience in the DMSMS/PM community about ways in which DCMA can contribute to DMSMS/PM oversight by the PO

- DMSMS management and logistics practitioners interviewed for this study had little contact with DCMA in performing their duties and did not express ideas on potential DCMA contributions
- Only POs applying the most rigorous PM oversight utilized DCMA to help perform their duties

Idea 6: The DoD DMSMS/PM lead could add material to the SD-19 and SD-22 guidance documents to suggest potential value-added contributions by DCMA to DMSMS/PM and explain how to request/obtain DCMA support in those areas.

Idea 7 is one example of the type of material to be included in guidance.

Observation of Contractor DMSMS Management Meetings

By attending contractor DMSMS management meetings, DCMA can learn about and provide valuable information to PO DMSMS practitioners about emergent issues and how they are being resolved (or risks being reduced).

Idea 7: The DoD DMSMS/PM lead could develop standard MOU/QALI for DCMA to attend contractor DMSMS management meetings and/or surveil contractor processes for qualifying and monitoring sub-tiers and report its findings back to practitioners in the PO.

- **Idea 1:** Non-burdensome mechanisms for communication of DCMA's findings to the DMSMS/PM practitioner community
 - **Idea 2:** Verifying whether contractors submit required GIDEP reports and encourage DMSMS/PM reporting (or submit such information themselves)
 - **Idea 3:** Ensure distribution of pertinent industrial base information to all practitioners
- Surveil compliance with emerging standards, with mandatory checklists
 - **Idea 4:** DMSMS compliance with IEC 62402 or SAE 0016
 - **Idea 5:** PM compliance with MIL-STD-11991B
- **Idea 6:** Enhance DMSMS/PM guidance to better utilize DCMA
 - **Idea 7:** Develop standard MOU/QALI for DCMA to attend contractor DMSMS management meetings and report its findings

CAO: Contract Administration Office (The organization designated to administer a DoD contract)

CAP: Corrective Action Plan

CAR: Corrective Action Request

CMO: Contract Management Office (DCMA field office responsible for surveillance in a particular region)

CDRL: Contract Data Requirements List

COTS: Commercial Off-the-Shelf (product)

CSI: Critical Safety Item

CUI: Controlled Unclassified Information

DCMA: Defense Contract Management Agency

DMSMS: Diminishing Manufacturing Sources and Material Shortages

DFARS: Defense Federal Acquisition Regulation Supplement (and DFARS-PGI: Procedures, Guidance, and Information)

FAR: Federal Acquisition Regulation

GIDEP: Government-Industry Data Exchange Program

KCR: Key Contract Requirement

MDA: Missile Defense Agency

MOU: Memorandum of Understanding

NRO: National Reconnaissance Office

PCSA: Prime Control of Subcontractor Assessment

PDREP-AIS: Product Data Reporting and Evaluation Program—Automated Information System

PM: Parts Management

PO: Program Office

QA: Quality Assurance

QALI: Quality Assurance Letter of Instruction

RIO: Risk, Issue, Opportunity or Observation (document)

USD(A&S): Undersecretary of Defense for Acquisition and Sustainment

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