DCMA Manual 2303-01, Volume 6
Surveillance: National Aeronautics and Space Administration

Office of Primary Responsibility:	**Contractor Effectiveness Capability Board**
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Approved by:	G. L. Masiello, Lieutenant General, U.S. Marine Corps, Director

Purpose: This manual is composed of several volumes, each containing guidance and requirements for surveillance. In accordance with the authority in DoD Directive 5105.65 and DCMA Instruction 2303, "Surveillance," this functional volume assigns responsibilities and provides procedures for the planning and execution of surveillance for National Aeronautics and Space Administration (NASA).

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SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA Manual (DCMA-MAN) 2303-01.

a. This is a NASA-specific volume that provides detailed guidance to execute and document surveillance as delegated by NASA. It applies to the following functional areas and organizational elements providing support to NASA: aircraft operations, DCMA NASA Product Operations (DCMA-NPO), earned value, engineering, government property, manufacturing, quality assurance, and software unless other regulations, policy, guidance, or agreements take precedence as prescribed in Paragraph 1.1.b. Specific examples include DCMA Aircraft Operations, DCMA International, Special Programs, or other governmental memorandums of agreement.

b. This functional volume supplements and will be used in conjunction with Volume 1 of DCMA-MAN 3101-03, "National Aeronautics and Space Administration Process Support," Volume 2 of DCMA-MAN 3101-03, "National Aeronautics and Space Administration Functional Support," and the NASA prime letters of delegation (LOD). If there is a discrepancy in guidance, Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, and the NASA prime LODs have precedence over other DCMA policies, manuals, guidebooks, and other agency level directives. In the event of conflict between this functional volume and Volumes 1 and 2 of DCMA-MAN 3101-03, the policy with the latest effective date will take precedence for requirements specifically related to surveillance. Please see Volumes 1 and 2 of DCMA-MAN 3101-03 for additional information on the order of precedence.

c. Property Support to NASA surveillance requirements are specifically identified in Paragraph 6.1.d.

1.2. POLICY.

This section requires no additional details beyond the requirements, information, and guidance contained in Volume 1 of DCMA-MAN 2303-01.

1.3. SPECIALIZED FORMS AND INFORMATION COLLECTION.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. NASA Delegation Review (NDR).

(1) The purpose of this form is to capture the requirements and document the results after receiving and reviewing a delegation from NASA or a redelegation from a contract management office (CMO) or functional center.

(2) Complete in accordance with Volume 1 of DCMA-MAN 3101-03 and Section 4 of this functional volume.

b. NASA Training Repository.

(1) The purpose of the repository is to document completion of delegated NASA training and visual acuity examinations.

(2) The types of training in the repository include:

- DCMA NASA Defense Acquisition University Familiarization training
- Electrostatic Discharge Control training
- Lithium Battery training
- NASA Workmanship Standards Training (WST)
- Nondestructive test (NDT) or nondestructive evaluation (NDE) training
- Torque and Safety Wire training

(3) Complete entries in the NASA Training Repository in accordance with Volume 2 of DCMA-MAN 3101-03.

c. Quality Leading Indicators (QLI).

(1) If delegated in a NASA Form (NF) 1430, "Appendix B Quality Assurance Letter of Delegation for NASA Contracts," (NF 1430B) the functional specialist (FS) must document QLIs in accordance with Volume 2 of DCMA-MAN 3101-03.

(2) The results of data collection and analysis (DC&A) must be used when entering QLI information.

d. Customer Notification of Unaccomplished Mandatory Surveillance.

(1) This form must be completed when any delegated surveillance activity was not accomplished and the planned opportunity to accomplish the surveillance has passed, or the surveillance activity was completed but the objective quality evidence is not readily available.

(2) Complete in accordance with Volume 1 of DCMA-MAN 3101-03.

e. Additional Forms, Links, Functional Templates, and Tools

These can be accessed via the resource pages for DCMA-MAN 2303-01 and DCMA-MAN 3101-03.

1.4. SUMMARY OF CHANGES.

This functional volume is a new issuance and must be reviewed in its entirety.

SECTION 2: RESPONSIBILITIES

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

2.1. COMPONENT HEADS AND CAPABILITY BOARD MANAGERS.

Component heads and capability board managers must align surveillance related issuances, agency training, guidance, and tools with Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, NASA prime LODs, and other related issuances.

2.2. OPERATIONAL UNIT (OU) COMMANDERS, DIRECTORS, AND CENTER DIRECTORS.

This paragraph requires no additional details beyond the requirements, information, and guidance contained in Volume 1 of DCMA-MAN 2303-01.

2.3. CMO COMMANDERS AND DIRECTORS.

CMO commanders and directors must ensure surveillance activities and results of surveillance are coordinated across the award management team (AMT) and communicated and coordinated with individuals performing Contractor Business System reviews and Contractor Management System Evaluations (CMSE). NASA refers to a CMSE or Quality Management System (QMS) audit as a "Quality System Evaluation (QSE)."

2.4. FUNCTIONAL DIRECTORS, DEPUTIES, AND GROUP LEADERS.

Functional directors, deputies, and group leaders must:

a. Facilitate communication amongst all stakeholders regarding the results of surveillance activities in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, NASA prime LODs, and other related issuances.

b. Ensure counterfeit risk is addressed in accordance with DCMA-MAN 2301-06, "Discrepancy Processing," Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, and other related issuances.

2.5. SUPERVISORS.

Supervisors must:

a. Ensure locally developed training, guidance, and tools align with DCMA-MAN 2303-01, Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, NASA prime LODs, and other related issuances.

b. Review status reports and resolve issues with internal and external customers pertaining to surveillance results and other written reports in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, NASA prime LODs, and other related issuances.

c. Ensure QSEs, QMS audits, or CMSEs are completed in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, and the applicable NASA prime LODs.

(1) Determine if the QSE will be performed by a team or an independent FS with support from other technical specialists, as applicable. When a single assessor is used, all process steps apply, except for team collaboration requirements.

(2) Develop and maintain an effective process for developing qualified FS to perform an effective QSE.

(3) Assign qualified FS as lead assessor(s) (LA) and team members. Ensure qualified FS meet the requisite training requirements, as applicable, to perform the specific task in accordance with the NF 1430B, DCMA-MAN 2101-01, "Acceptance of Supplies and Services," and DCMA-MAN 4201-17, "Training, Tuition Assistance, Conferences, and Leadership Development."

(4) Coordinate with the LA to determine the type, risk, scope, depth, and duration of specific assessments.

(5) Ensure the LA develops effective methods to determine adequacy and compliance, developing or tailoring system checklists, and when delegated, scheduling, and finalizing reports in support of the QSEs.

(6) Ensure the FS develops and executes an assessment plan defining the scope of the assessment.

(7) Ensure contractor responses are appropriate and adequately address the root cause. Follow-up actions may be required to ensure corrective actions are implemented and effective.

(8) Encourage the technical community to conduct peer reviews of completed QSEs to promote a consistent approach.

d. Quality Assurance Supervisor only: ensure only qualified personnel are tasked to identify Government Mandatory Inspection Points (GMIPs) in accordance with the NF 1430B, DCMA-MAN 2101-01, and DCMA-MAN 4201-17.

2.6. FS.

a. The FS must:

(1) Plan, schedule, execute, and document surveillance pursuant to the requirements of Volumes 1 and 2 of DCMA-MAN 3101-03, NASA prime LODs, and other related issuances.

(2) Accurately document the results of surveillance in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03, NASA prime LODs, and other related issuances.

(3) Maintain communications with internal and external customers, ensuring major nonconformances, significant delays, or other support issues are elevated through the chain of command pursuant to Volumes 1 and 2 of DCMA-MAN 3101-03.

b. Quality Assurance LA must:

(1) Ensure delegated QSEs, or CMSEs, performed on assigned contractors are completed in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, NASA prime LODs, and other related issuances.

(2) Assume responsibility for the overall management of the assigned QSE team and ensure QSEs performed by the team are compliant to system requirements.

(3) Coordinate with the first line supervisor when assigned an assessment to determine the type, risk, scope, depth, and duration of the assessment.

(4) Assist the first line supervisor with developing effective methods to determine adequacy and compliance, developing or tailoring system checklists, scheduling, conducting the QSEs, and finalizing reports.

(5) Prepare an assessment plan defining the scope of the assessment.

(6) Notify the contractor, in writing, of the pending QSE and its scope.

(7) Follow the Online Aerospace Supplier Information System (OASIS) guidance within Volumes 1 and 2 of DCMA-MAN 3101-03, this functional volume, NASA prime LODs, "OASIS Guidebook for Technical Specialists," and other related issuances.

SECTION 3: SURVEILLANCE OVERVIEW

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

3.1. SURVEILLANCE OVERVIEW.

a. This section provides detailed guidance to execute and document surveillance as delegated by NASA.

b. The FS must communicate surveillance activities across other delegated functional areas to coordinate risk assessments, enhance multifunctional oversight, and align resources for maximum efficiency.

3.2. SURVEILLANCE GUIDANCE.

In accordance with Subpart 1846.4 of the NASA FAR Supplement (NFS), DCMA may conduct surveillance and other quality requirements through "insight" or "oversight." FS will plan and perform risk-based surveillance on NASA administered contracts 100 percent and exactly as delegated in the NF 1430B or letter of redelegation (LOR). Unapproved deviations are not authorized.

a. Surveillance activities for NASA delegations that use what would be considered traditional government contract quality assurance methods are commonly referred to as "oversight." Oversight occurs in line with the contractor's processes. When delegated, the government retains and exercises the right to concur or non-concur with the contractor's decisions affecting product conformity. Non-concurrence must be resolved before the contractor can proceed. Oversight is a continuum that can range from low intensity, such as quality system audits, or government concurrence in reviews, to high intensity oversight in which the government has day-to-day involvement in the contractor's decision-making process.

b. NASA is the technical authority on surveillance strategies to include risk and related surveillance requirements, unless specifically delegated to DCMA. The FS will not implement any surveillance changes without documented approval received from the NASA point of contact (POC), Safety Mission Assurance Representative (SMAR), chief safety and mission assurance officer (CSO), designated resident management office Representative, or delegator.

c. **This paragraph is applicable to Quality Assurance only**.

(1) For additional information related to NASA Delegated Oversight Surveillance, refer to Volumes 1 and 2 of DCMA-MAN 3101-03 and NASA Procedural Requirements (NPR) 8735.2C, "Hardware Quality Assurance Program Requirements for Programs and Projects."

(2) Pursuant to NFS Subpart 1846.4, "insight requires the monitoring of contractor quality data and Government identified metrics and contracted milestones and may also involve the review of contractor work procedures and records. Insight is a continuum that can range

from low intensity, such as reviewing quarterly reports, to high intensity, such as performing surveys and reviews."

(3) FS must implement remote or virtual surveillance, whether oversight or insight, only with documented approval from NASA POC, SMAR, CSO, the resident management office, or delegator.

SECTION 4: RISK ASSESSMENT

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01. For this paragraph, follow Volume 1 of DCMA-MAN 2303-01, this functional volume, Volumes 1 and 2 of DCMA-MAN 3101-03, and the NASA prime LODs.

4.1. PREPARING FOR RISK ASSESSMENT.

The purpose of risk assessment is to rate system(s), process(es), or sub-process(es) associated with requirements identified and validated for surveillance during the NDR process. DCMA personnel must understand risk assessment and identification is not the same for NASA as for DoD programs. The process for identifying risk is initiated by NASA and results in the issuance of a delegation to DCMA. In addition, the NASA decision to use insight or oversight surveillance is based on an assessment of the risk inherent in the activity being surveilled. If further clarification is needed, CMOs and centers must contact the delegator or the DCMA-NASA Support Desk. Contact information for the DCMA-NASA Support Desk can be found on the resource page of DCMA-MAN 3101-03.

a. If NASA surveillance was executed within the past 12 months, the FS will use the output from the respective functional area DC&A when completing the risk assessment. If no surveillance has been executed in the last 12 months, the likelihood risk rating will default to no lower than moderate. The FS may address multiple requirements by the same process(es). Additional information can be found in Volumes 1 and 2 of DCMA-MAN 3101-03.

b. Unless prohibited or explicitly dictated by the delegation, the FS must document the risk assessed contractor system(s), process(es), sub-process(es), and associated surveillance requirement(s) separately in the agency system of record. This will include addressing the risk likelihood of subcontractors producing nonconforming product and the prime contractor's management of their subcontractor(s).

c. For Quality Assurance personnel, counterfeit detection efforts are incorporated in all daily surveillance activities to ensure only authentic and conforming material is procured for the United States Government.

(1) The FS must perform counterfeit detection and mitigation risk assessment in accordance with DCMA-MAN 2301-06 and the NASA prime LOD.

(2) In the event there is both NASA and DoD work at a location, and DCMA has completed the DCMA Counterfeit Detection and Avoidance System checklist in accordance with DCMA-MAN 2301-06, the results serve as an input for DCMA support to NASA surveillance.

4.2. RISK ASSESSMENT PROCESS.

a. For NASA prime LODs documented on either the NF 1430, "Appendix A Contract Administration Letter of Delegation (LOD) for NASA Contracts" (1430A), or 1430B, the NDR

identifies the delegated and retained surveillance for the quality, technical, and business requirements of the product or service being procured and the key contract requirements (KCR). The FS should know NASA does not use the KCR term or initialism.

b. The FS must review the following when completing an NDR:

(1) All files received from the NASA POC, SMAR, CSO, resident management office, or delegator along with those uploaded in PDREP.

(2) Contract, subcontract, purchase order, purchase contract, and applicable delivery, task, or work orders.

(3) Statement of work, statement of objectives, associated contract data requirements list, data item descriptions, or data requirement documents.

(4) Delegation form or letter.

(5) List of GMIPs and other delegated surveillance activities.

c. When delegated by NASA, engineering and quality assurance FS will perform GMIP identification 100 percent as delegated in the NASA prime LOD or LOR and will use the requirements identified in the following paragraphs.

(1) GMIP identification is only possible after the critical characteristics have been identified in the contractually required Failure Mode and Effects Analysis (FMEA), Failure Mode, Effects, and Criticality Analysis, etc. DCMA personnel will not identify critical characteristics and must contact the NASA POC, CSO, SMAR, delegator, or the DCMA-NASA Support Desk if contractual documents are not provided by the contractor.

(2) When identifying GMIPs, the FS will record the contractual document that references the critical characteristic, process, or criticality of a failure. This information can be found in the FMEA, Fracture Control Plan, Hazard Analysis Report, etc. See Paragraph 4.2.e.(2) for the entire list. When searching for criticality levels that have a high-risk consequence, the FS should search for codes such as "1, 1R, or 1S."

(3) The FS will only implement GMIPs when documented approval is received from the NASA POC, CSO, SMAR, or delegator.

d. For NASA technical delegations, risk consequence is an outcome of an event affecting mission objectives such as loss of payload, loss of a national asset, or most devastating, loss of life or crew. Risk consequence or criticality can be defined differently by NASA. For example, instead of critical safety item, NASA may use the following terms:

(1) Safety-Critical.

Any condition, event, operation, process, equipment, or system that could cause or lead to severe injury, major damage, or mission failure if performed or built improperly, or allowed to remain uncorrected.

(2) Critical Item.

A critical item is one which if defective or fails, causes a catastrophic event affecting the public, NASA workforce, high-value assets, or mission success. Reliability considerations apply to determination of criticality for cases where loss of multiple units of the item in question is required for the catastrophic event to be realized, and the units are of the same design, build lot, and have a common failure mode relevant to the critical function.

(3) Safety-Critical Product.

A product whose failure, malfunction, or absence could cause a catastrophic or safety-critical failure resulting in the loss of or serious damage to the craft, vehicle, facility, loss of mission, an unacceptable risk of personal injury, or loss of life.

e. For technical delegations, the FS must be aware of the impact of the terms identified in Table N1. "NASA Contractual or Industry Terms," when reviewing or searching contractual requirements and technical data. Any of these terms will indicate an increased possibility of extremely high-risk consequences. For additional information, the FS should refer to NPR 8705.4B, "Risk Classification for NASA Payloads," NPR 8735.1D, "Exchange of Problem Data Using NASA Advisories and the Government-Industry Data Exchange Program (GIDEP)," NASA Technical Handbook (HDBK) 8709.22, "Safety and Mission Assurance Acronyms, Abbreviations, and Definitions," or NASA Technical Standard 5019A, "Fracture Control Requirements for Spaceflight Hardware."

Table N1. NASA Contractual or Industry Terms

Critical	Fracture Critical Traceable
Criticality 1, Criticality 1R, or Criticality 1S	Human-Rated Spaceflight Hardware
Critical Attributes	Installation Critical
Critical Items	Life-limited
Critical Work	Mission Critical
Critical Process	Nondestructive Inspection (NDI)
Durability Critical	Nondestructive Testing (NDT)
Fastener Control (Fracture Critical)	Nondestructive Evaluation (NDE)
Fatigue Critical	Safety-Critical Item
Fatigue Control	Single Failure Point
Fatigue Sensitive	Single Point Failure

Table N1. NASA Contractual or Industry Terms, Continued

Fracture Control (Fracture Critical)	Single Point of Failure
Fracture Control Board	Special NDE
Fracture Critical	Structurally Significant
Fracture Critical Category I	Single Load Path
Fracture Critical Category II	Redundant Load Path

(1) The FS must perform an initial review to identify the delegated and retained activities for the quality, technical, and business requirements of the product or service being procured and upload the documented review to the agency system of record.

(2) It is important to know where to locate the criticality, critical characteristics, or processes for NASA product or services. The FS must request the following documents when contractually required for the contractor or subcontractors and not provided by NASA or the delegator:

- Critical Items List
- Data Item Description
- Data Requirement Description
- FMEA (Design, Functional, Manufacturing, Process, Software and System)
- Failure Mode, Effects, and Criticality Analysis
- Failure Reporting Analysis Corrective Action System
- Fault Tree Analysis
- Problem Reporting and Corrective Action System
- Hazard Analysis Report
- System Assessment Report
- Fracture Control Plan
- System Safety Analysis Report
- Technical Data Package (includes engineering drawings and specifications, work instructions, automated and manual test procedures and other technical data)

(3) These documents are not required when NASA has specifically withheld the risk assessment, the delegation includes the program and component criticality, and only the explicitly delegated surveillance is identified, for example "perform a counterfeit process evaluation," or "complete the following GMIPs."

(4) When performing risk assessment, the FS should review NASA Policy Directives (NPD), NPRs, handbooks, and technical and program standards, which are located in these online repositories and available to the general public:

- NASA Online Directives Information System Library
- NASA Technical Standards System

f. To ensure accuracy in risk consequence ratings and rationale, the FS should request assistance from engineers, quality assurance engineers, or clarification from the NASA POC, SMAR, CSO, delegator, or the DCMA-NASA Support Desk.

g. Risk consequence ratings based on the previously identified documents will not be altered, unless NASA provided or approved by an engineering change or other contractual document.

h. When mitigating risk that is based on a specific NASA risk score, and the risk consequence is identified in a contractually required document, NASA recommends using Table N2. "Risk Consequence," along with the following information:

Table N2. Risk Consequence

SCORE	1	2	3	4	5
IMPACT ON PERFORMANCE	Minimal impact on goals	Minor impact on goals	Unable to achieve a particular goal	Unable to achieve multiple goals	Unable to achieve the overall goal
IMPACT ON HUMAN SAFETY	Discomfort or nuisance	First aid	Minor injury or illness	Major injury or illness	Loss of life
IMPACT ON ASSET	No physical damage	Cosmetic damage	Functional damage but repairable	Substantial damage but repairable	Destroyed
IMPACT ON SCHEDULE	Minimal impact on schedule	Delay on some tasks not impacting overall schedule	Delay on some tasks minimally impacting overall schedule	Major slip in overall schedule	Critical milestones cannot be met
IMPACT ON COST	Minimal impact on cost	Minor impact on cost (variance <5%)	Medium impact on cost (5 - 10%)	Major impact on cost (10 - 15%)	Critical impact on cost (variance >15%)

(1) Highest Risk = 5.

At this level of risk, the FS and AMT may consider changing the original plan. The decision may involve significant costs in terms of schedule, performance, and budget, that may be extremely difficult or impossible to avoid.

(2) High Risk = 4.

Risks that have a high score need to be communicated to the NASA independent Verification and Validation Department. For the FS or AMT, it means high-risk situations need to be escalated internally. Communicate to all relevant stakeholders about the risk.

(3) Medium (Moderate) Risk = 3.

In addition to writing and sharing the risk mitigation plan, perform continuous risk assessments and assign adequate resources.

(4) Low Risk = 2.

Write a risk mitigation plan which captures the actions to be taken to reduce the likelihood of the risk happening. Share it with the AMT, so all functional areas are aware of the plan, should the risk occur.

(5) Lowest Risk = 1.

Put risks on the watch list and re-assess as scheduled. NASA states "there is no specific requirement to generate a mitigation plan. The only requirement is to identify and track the risk drivers to ensure the risk remains tolerable."

i. For risk likelihood, the FS must identify and clearly document a potential risk. NASA recommends personnel keep the potential risk statement factual and to stay away from trying to provide a solution. State the risk in an easy-to-understand way using the following template:

(1) Include the key circumstances around the risk, the contributing factors, and related information such as what, where, when, how, and why. NASA calls this additional information the context statement.

(2) The context statement should include only facts, not assumptions. Ensure no new risks are introduced here.

j. Once risk consequence and risk likelihood are determined, the FS determines the overall risk rating for that process based on selected risk ratings.

k. Risk-based analysis or assessment (RBA) is the NASA process used to analyze the level of risk associated with hardware characteristics and manufacturing. In 2008, NASA implemented a "Cost of Quality" reduction initiative for selected programs. The goal was to gain better insight on hardware quality with less impact to the contractor. The emphasis of this surveillance strategy is to focus more on the processes and less on end item inspection.

(1) The result of the RBA is the determination of what surveillance or method of control is appropriate for the identified risk. Method of control examples include GMIPs, in-line assessments or audits (ILA), or process evaluations (PEs).

(2) The RBA record information includes consequence, likelihood risk levels, decision to transfer or not, rationale for decision, and frequency of ILA or PE for processes related to each specific NASA Program. The output of the RBA is an ILA checklist.

(3) RBAs are typically performed by NASA and seldom involve DCMA. DCMA is primarily involved with the execution of the ILAs using the developed checklist for each specific process**.**

SECTION 5: SURVEILLANCE PLANNING

5.1. SURVEILLANCE PLANNING.

This section requires no additional details beyond the requirements, information, and guidance contained in Volume 1 of DCMA-MAN 2303-01.

5.2. PRIORITIZE SURVEILLANCE.

a. Surveillance Warranted.

In accordance with Volume 1 of DCMA-MAN 3101-03, the FS must have documented approval from NASA POC, SMAR, CSO, or delegator before not performing any surveillance due to a low-risk rating, lack of resources, or any other reason.

b. Risk.

The FS must prioritize NASA risk-rated and delegated activities or surveillance over those with lower risk.

c. Resource Allocation.

If surveillance will not occur due to resource constraints, CMOs or functional centers must contact the DCMA-NASA Support Desk to request assistance or guidance.

5.3. DETERMINE TYPE OF SURVEILLANCE.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. Surveillance Approach.

The FS will implement facility surveillance only with documented approval from NASA POC, SMAR, CSO, or delegator.

b. Surveillance Category.

NASA delegates surveillance categories using factors such as risk, schedule, resourcing constraints, and available contractor objective evidence. Additional guidance can be found in Volumes 1 and 2 of DCMA-MAN 3101-03 and the respective resource pages. The four surveillance categories are:

(1) System Evaluations and PEs.

(a) System Evaluation.

This paragraph is applicable to Quality Assurance only. When individual NASA centers perform QSEs, DCMA may receive a request to support the evaluation team. CMOs and functional centers will ensure QMS or system elements with high likelihood risk ratings are prioritized for a QSE early in the contract performance period, but under no circumstances should the contract expire prior to the QSE being completed. Contracts awarded with a performance duration of less than 2 years with no continuing higher-level quality requirements imposed on the contractor pursuant to FAR 52.246-11 must have a completed a QSE only when delegated on the NF 1430B. When planning a QSE, the supervisor must:

1. Determine if the QSE will be performed by a team or an independent FS, with support from other technical specialists, as applicable. This decision is based on the assessment scope and the assessor's competency. When a single assessor is used, all process steps apply except for team collaboration requirements.

2. Develop and maintain an effective process for developing qualified FS to perform an effective QSE. A qualified FS has completed and is current to the competencies required by this process in accordance with the applicable agency system of record learning map(s), workshops, on the job training, etc.

3. Assign qualified FSs as assessment team members or LAs. No formal letter is required to assign the FS or LA. Ensure qualified FSs meet the requisite training requirements, as applicable, to perform the specific task. Specific training includes the Aerospace Standards identified in Paragraph 5.3.b.(1)(b) and similar International Organization for Standardization (ISO) standards such as ISO 9000:2015, "Quality management systems – Fundamentals and vocabulary," and ISO 9001:2015, "Quality management systems – Requirements."

4. Coordinate with the LA to determine the type, risk, scope, depth, and duration of specific assessments.

5. Ensure the LA develops effective methods to determine adequacy and compliance, developing or tailoring system checklists, where applicable, scheduling, and finalizing reports in support of the QSEs.

6. Ensure an assessment plan defining the scope of the assessment is developed. Assess, plan, schedule, and document the risk of the QMS or system elements. Document the frequency and scope of system QSEs. Develop or tailor system checklists, scheduling, scope, and the finalization of reports in support of the QSEs. The LA must notify the contractor, in writing, of the pending QSE and its scope. It is recommended the notification is provided 30 days prior to the assessment, at a minimum.

(b) OASIS.

This paragraph is applicable to Quality Assurance only. When contracts require compliance to the International Aerospace Quality Group (IAQG) Quality Advanced Quality Management System (AQMS) and the Aerospace Standards (AS), and the contractor is certified to an IAQG AQMS, the QMS baseline is considered to be met. The list of certifications includes the following standards:

- AS9100, "Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations"
- AS9110 "Quality Management Systems - Requirements for Aviation Maintenance Organizations"
- AS9120, "Quality Management Systems - Requirements for Aviation, Space, and Defense Distributors"

1. For contracts requiring FAR 52.246-11 and the contractor is certified to an International Aerospace Quality Management System standard, the certification is considered a higher-level QMS meeting the spirit and intent of the FAR 52.246-11. The certification also satisfies the AQMS requirement for the Initial Baseline QSE and initial risk assessment (baseline).

2. Contractors certified by a non-IAQG authorized certified body are not recognized by the organization and, when delegated, the FS will perform a QSE initial baseline to identify QMS risk and schedule for risk-based auditing when the contract requires QMS compliance and FAR 52.246-11. The FS should utilize the OASIS feedback ticket to report issues as follows (see the AQMS organization's website for additional information):

TO: IAQG Executive Leadership
Recipient: IAQG President
Reason: Awareness Notification

3. For contracts certified by an authorized IAQG certified body, the FS should use the AS9101 definition of QMS major and minor nonconformance.

4. Evaluating the third-party QMS certification audit results enable the FS to make appropriate adjustment(s) to surveillance to eliminate duplicative government contract quality assurance (or oversight).

(c) PE.

ILAs are similar to PEs but with much greater detail. [Who NASA?] identifies the type of PE, ILA or traditional, in the delegation. Some NASA centers have switched surveillance strategy category from GMIPs (oversight) to insight activities like ILAs and as well as conventional PEs. The FS should know ILA surveillance categories for each of the different NASA centers or programs are not standardized. ILA checklist training and orientation is

provided as necessary by the delegating CMO and as requested by the receiving CMO as part of delegation acceptance process. Please refer to the issued LOD or LOR for specific information.

1. ILA checklists are developed by NASA during the RBA process and are planned by DCMA with a frequency identified in the delegation.

2. The predeveloped ILA checklist will contain each step of the process and associated key inputs, risks, control information, and verification methods information.

3. When delegated, the FS must upload the completed ILA checklist to the agency system of record and provide copies as required by the delegation.

4. When delegated, FS will perform ILAs without causing unwarranted delays to the contractor and must include a product examination or deliverable product evaluation (DPE).

5. ILAs are surveillance activities and therefore the FS must identify them in the surveillance plan as a PE and document the results in the agency system of record.

6. Depending on which program ILA is performed, the quality assurance specialist may issue a corrective action request (CAR) in accordance with DCMA-MAN 2303-05, "Addressing Contractor Noncompliances and Corrective Action Requests," and Volume 1 of DCMA-MAN 3101-03.

(2) Progress Evaluation.

FS must use progress evaluations to evaluate interrelated or interacting elements or activities of a process as stated in NASA delegations and must execute progress evaluations as a single, recurring, or incremental event(s) in accordance with risk and documented. Progress evaluations must also be used to evaluate unknown risks, consistent with accepted delegations.

(3) Product Examination or DPE.

Use of product examination is normally identified in the delegation and is mandated by NASA. NASA does not use the DPE term or initialism. The FS:

(a) Will perform 100 percent of all assigned GMIPs in strict accordance with the prescribed technical criteria.

(b) Must use DPEs in accordance with customer requirements in applicable phases of the development or production of a product.

(c) Must use NASA delegated requirements for assignment of the appropriate KCR(s) with risk assessment and scheduling module of system of record.

(d) When identifying KCRs, must utilize NASA KCRs first. If a NASA KCR does not describe the delegated activity, select from the remaining lists of functional KCRs.

(e) When delegated, must document all surveillance with closed loop methodology for applicable requirements pursuant to Volume 1 of DCMA-MAN 3101-03, which includes specific guidance on GMIP Assignment and Closed Loop requirements.

(f) When delegated, must document DPEs in the NASA GMIP Assignment and Closed Loop Tracking Tool in accordance with Volume 1 of DCMA-MAN 3101-03.

(4) Deliverable Service Evaluation.

No additional information.

5.4. DEVELOP SCHEDULE.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. Frequency and Intensity.

This paragraph is applicable to Quality Assurance only. The FS traditionally receives direction from NASA for intensity, or the extent, of delegated surveillance. Examples of intensity include 100 percent, partial or acceptable quality level (AQL) to determine sample size. NASA delegations traditionally require 100 percent inspection. The FS will only implement inspection sampling with documented approval from NASA POC, SMAR, CSO, or delegator.

(1) Full or partial are intensities associated with a system, process, or progress evaluations, and AQL intensities are associated with DPE. The FS should know NASA delegations normally require 100 percent inspection or testing. AQLs are used only when specified by NASA. A common example would be: "Use an AQL of 10 percent when reviewing outgoing purchase orders."

(a) Full refers to assessing the entire system or process.

(b) Partial refers to assessing portion of the system or process evaluated during multiple events.

(2) Frequency and intensity may also be influenced by contractor availability.

b. Allocated Hours vs. Calculating Reimbursable Hours Estimate

Calculating the reimbursable hours estimate is similar to calculating allocated hours. The FS must initially forecast the amount of time needed to complete all delegated activities for the life of the delegation in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03. Guidance on calculating the hours estimate is pursuant to the NASA Reimbursable Hours Estimate Aid on the DCMA-MAN 3101-03 resource page. Along with the time needed to support specific delegated activities, as applicable to the delegation, the reimbursable estimate will include, but is not limited to, direct charging activities such as:

- Delegation acceptance and closure tasks
- Surveillance planning and implementation
- Completion of delegated surveillance
- DC&A
- Status reporting
- Annual delegation reviews
- Review of out-going purchase orders
- CARs
- Participaction in mandatory program and acquisition reviews
- Mandatory customer meetings
- WST
- NDT or NDE training
- Travel time for WST and NDT or NDE training
- Temporary duty (TDY) travel time to contractor facilities
- Non-TDY (also known as "windshield") travel time to contractor facilities

5.5. SURVEILLANCE PLAN MODIFICATIONS.

a. Contract Modifications.

When contract modifications and delegations are received containing new system(s)/process(es)/sub-process(es) associated with requirements and/or changes to the requirements, the FS will reassess and adjust surveillance, as appropriate. The FS will also address potential changes with the delegator for current surveillance strategies and prioritize surveillance events or activities based on risk.

b. Scheduling Surveillance with Unknown Dates.

Surveillance may not have a known start date. Examples include inventory verification, post-GMIP, or post-Material Review Board (MRB) surveillance.

c. Scheduling Complete.

Scheduling is complete when all delegated surveillance has been scheduled, or the NASA POC, SMAR, CSO, or delegator has provided written documentation to revise, remove, or rescind requirements from the delegation.

d. Surveillance Planning Summary.

Surveillance planning may be repeated during any stage of the plan-do-check-act framework of surveillance. In addition, adjustments to surveillance planning may be necessary upon completion of DC&A and with written approval from the NASA POC, SMAR, CSO, or delegator.

5.6. DELEGATE SURVEILLANCE DECISION.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. The decision to delegate involves the consideration of the NFS and other NASA contractual requirements. When NASA LODs and LORs include the authorization to delegate, CMOs and functional centers must delegate in accordance with Volume 1 of DCMA-MAN 3101-03, this functional volume, or DCMA-MAN 2101-04, "Delegate Surveillance."

(1) Risk.

LORs will only be issued with requirements delegated from the NASA prime LOD.

(2) Other Delegation Considerations.

The following areas must also be reviewed prior to issuing delegations for subcontract support:

(a) Place of performance (POP), place of manufacture (POM), or place of responsibility (POR).

NASA redelegations must be issued when POP, POM, or POR occurs at other locations and surveillance is required by the NASA prime LOD or LOR. As applicable, the POP, POM, or POR delegation surveillance will be documented on the prime, POP, POM, or POR surveillance plans.

(b) Corporation Inter or Intra-Divisional Work Transfer.

A delegation must be issued if there is no purchase order or contract for workload performed within different divisions of the same contractor at different locations.

(c) Memorandum of agreement, memorandum of understanding, or quality assurance letter of instruction.

DCMA has accepted a memorandum of agreement, memorandum of understanding, or quality assurance letter of instruction from another United States Government entity requiring surveillance to be performed at the subcontractor level.

(d) If one or more of the following specific cases has been identified:

1. Product or service conformity can only be determined at the subcontractor level.

2. Safety surveillance.

3. Inadequate prime control of subcontractors.

(3) Delegate Surveillance.

When redelegation is authorized and evaluation of the subcontractor management systems surveillance is delegated, the surveillance plan must include a process for reviewing outgoing purchase orders and the make or buy decisions of contractors or subcontractors. This ensures the contractors or subcontractors are sharing the applicable contractual requirement information with approved subcontractors and reduces the potential for unknown or not accomplished mandatory surveillance. Additional letter of instruction (LOI) guidance can be found in Volume 1 of DCMA-MAN 3101-03 and the required template can be found on the manual resource page. The FS must review appropriate flow down of critical requirements such as:

- Counterfeit detection and avoidance
- Electrical, electronic, and electromechanical parts screening
- WST and NDT training, competency, and Visual Acuity processes
- Government Right of Access in accordance with FAR 52.246-2
- Identification of flight hardware and software
- Identification of Human Space product and services

b. In accordance with Volume 1 of DCMA-MAN 3101-03, CMOs must have a tracking tool to document reviews of outgoing purchase orders, and an example is uploaded to the resource page for DCMA-MAN 3101-03. The FS must record the following items when completing the review of outgoing work:

- Program name
- Purchase order, purchase contract, and subcontract number and applicable revision
- Supplier on approved supplier list; indicate Yes or No
- Item or service description
- Part number
- Date reviewed
- FS name
- Government source inspection (GSI) required; indicate Yes or No
- Government Right of Access; indicate Yes or No
- Delegate surveillance decision; LOR is required
- Incoming inspection required; indicate Yes or No

c. When the review of outgoing purchase orders is delegated and incoming inspection is identified as a GMIP by DCMA, the FS must have a method to track when the items are received by the contractor and the inspection was performed and upload the method or tool in agency system of record. See the resource page for DCMA-MAN 3101-03 for an example.

SECTION 6: EXECUTE SURVEILLANCE

6.1. PREPARE FOR SURVEILLANCE.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. Determine Surveillance Logistics.

It is imperative for FSs to coordinate with the contractor and stay well informed of all manufacturing production activities to ensure surveillance opportunities are captured and documented. FSs must:

(1) Coordinate any necessary joint audits, evaluations, or inspections performed as a team with any of the NASA centers, support contractors, contractors, other government entities, like the Department of the Navy, or DCMA multifunctional team. Establish team member roles, responsibilities, and availability, as applicable.

(2) For surveillance at military bases, posts, camps, station locations, U.S. or foreign, NASA facilities, or foreign contractor sites, determine the access requirements to where the contract work is performed.

(3) Understand the importance of creating a hold point letter or LOI as it is critical to reducing the potential for unknown or not accomplished mandatory surveillance. FSs must only add requirements from the applicable contract and remember the LOI is not a contractual document. Refer to Volume 1 of DCMA-MAN 3101-03 for additional LOI guidance and the manual resource page for the required template.

(a) When the contract provides for the performance of government quality assurance at source, in accordance with FAR Part 52.246-2 (i) (1) and (2), the FS must:

1. Ensure an LOI is provided to the contractor, specifying the period and method of the advance notification and the government representative to whom it must be furnished.

2. Perform the required surveillance activities within 2 workdays from the date of the contractor's request for GSI for resident facilities or no more than 7 workdays for non-resident facilities. These times may be reduced in the NASA prime LOD by the POC, CSO, SMAR, or delegator.

(b) After the FS completes the NDR and the identification of delegated activities is documented, the most critical step of the LOI is to coordinate with the contractor as soon as possible. The FS must request a list of contractor-identified operations and then compare it to the delegated GMIPs or hold points, activities, and other surveillance to ensure both the DCMA and contractor terms are aligned.

(c) When redelegation is authorized in the LOD or LOR, the LOI must include a hold point for reviewing outgoing purchase orders, purchase contracts, and sub-contracts. The requirement to submit GSI requests for purchase order review reduces the potential for unknown or not accomplished mandatory surveillance.

(d) After the draft version is created, the FS should forward the draft to the contractor for a preliminary review and then schedule a final review before both organizations sign the LOI.

(e) The FS must retain objective evidence of the verification method used to ensure delegated mandatory surveillance requirements are incorporated into the contractor's planning documentation.

b. Determine Surveillance Techniques.

DCMA may perform the following surveillance techniques when delegated by NASA:

- Examine
- Analyze
- Forecast
- Inspect
- Interview
- Measure
- Monitor
- Observe
- Reconcile
- Test
- Trend
- Validate
- Verify
- Witness

c. Insight Surveillance Techniques.

The techniques used with insight surveillance include:

- Analyze
- Forecast
- Interview
- Monitor
- Observe
- Reconcile
- Validate
- Verify

(1) FS will perform surveillance on a "non-interference" basis. A common practice to obtain knowledge of upcoming manufacturing events is to attend the contractor's daily or shift "stand-up" meetings.

(2) The quality assurance FS will document anomalies per the delegation and can provide to the customer or delegator in the applicable status reports.

d. Property Support to NASA.

Only this section is applicable for NASA Government Property delegations. NASA centers delegate off-center subcontract awards to DCMA property to perform technical evaluations. NASA centers retain property administrative and surveillance responsibilities, such as system level determinations, CARs, pre-defined risk identification, and final loss adjudication. All property workload is delegated using a NF 1430, "Appendix C Property Administration Letter of Delegation (LOD for NASA Contracts" (1430C). Each individual NF 1430C LOD identifies general and specific supporting activities according to a NASA center's award. Pursuant to Volumes 1 and 2 of DCMA-MAN 3101-03, the DCMA-NPO Director reviews all NASA requests to conduct property administration support on NASA centers and contractor facilities to determine appropriateness and is the accepting authority for all NASA Property LODs. The DCMA Government Contract Property Group's (GCPG) NASA Property Support team (NPST) is the dedicated team that supports NASA with property administration for all delegated award recipients. Support is provided in accordance with Volumes 1 and 2 of DCMA-MAN 3101-03.

(1) Each NF 1430C LOD identifies general and specific requirements of support, to include:

(a) Maintain access and use of the NASA Electronic Submission System (NESS), NASA's Accountable Property System of Record.

(b) Review all reports documented on the delegated NF1018, "NASA Property in the Custody of Contractors," to include adjustment of records in NESS.

(c) Validate contractor's property records prior to approving the NF1018 in NESS.

(d) Assess control, utilization, preservation, protection, repair and maintenance of government property in the possession of award recipients.

(e) Investigate and adjudicate losses of NASA Government Property and relieve the contractor of stewardship and liability.

(f) Follow any specific support activities identified within a specific NF 1430C LOD.

(2) The NPST charges reimbursable hours to specific document control numbers, based on the identified support activities of a NF 1430C LOD. Additionally:

(a) The NPST follows this section of this functional volume, Volumes 1 and 2 of DCMA-MAN 3101-03, the "GCPG NASA Guidebook" posted on the resource page of the manual, and the applicable NF 1430C uploaded in the agency system of record.

(b) The GCPG and NPST collaborates with DCMA-NPO for administrative support; communication with NASA HQ on new and on-going work; management and oversight of GCPG reimbursable hours charged; and creation and closeout of document control number, receipt, processing, and approval of NF 1430C LODs.

(3) Pursuant to the "GCPG NASA Guidebook," the assigned DCMA regional property director will interface with the DCMA-NPO Director and center integrators to ensure resources exist to meet approved delegations; ensure accuracy in reimbursable charges; ensure correct NESS usage; forecast workload and travel requirements; provide management oversight; and support NASA's property guidance requirements.

6.2. EXECUTE SURVEILLANCE.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. In accordance with Part 52.246-2, (i) (2), of the FAR, DCMA must perform the required surveillance (or delegated) activities within 2 workdays from the date of the contractor's request for GSI for resident facilities or no more than 7 workdays for non-resident facilities. These times may be reduced in the NASA prime LOD by the POC, CSO, SMAR, or delegator.

b. DCMA will only perform surveillance on nonconforming material when specifically delegated to the engineering or quality assurance FS. This is normally identified on the NF 1430B under "Material Review Board and Failure Analysis" and is applicable for engineering, quality assurance, and software personnel. When delegated, the DCMA MRB representative will perform the following:

(1) Determine, upon receipt of nonconforming material, whether the material is that which the MRB is authorized to make final disposition, or that which requires approval by the contracting officer.

(2) Verify the accuracy and clarity of the discrepancy description on the MRB documentation.

(3) Concur or non-concur with contractor's disposition in accordance with the contractor's NASA-approved MRB procedures.

c. In accordance with the Society of Automotive Engineers (SAE) Electronic Industries Alliance's (EIA) 649-2A, "Configuration Management Acquisition Requirements for Aeronautics and Space," requests to depart from a requirement or design are called "variance requests" (VRs).

(1) Variances are also known as "deviations or waivers." See definitions in SAE EIA-649C, "Configuration Management Standard," SAE EIA-649-2, "Configuration Management Acquisition Requirements for Aeronautics and Space," or NF 1430B for additional information.

(2) VRs are classified as Minor, Major, or Critical and will have a disposition of either "repair" or "use-as-is" as defined in SAE EIA-649C.

d. DCMA will approve VRs classified as Minor in accordance with DCMA-MAN 2301-06 only when specifically delegated.

e. Personnel designated to perform delegated surveillance for MRBs and VRs are recommended, prior to assignment, to complete Defense Acquisition University training, LOG 2040, "Configuration Management" and CMQ 212, "Effective Control of Nonconforming Material (NCM)."

6.3. RESCHEDULE OR CANCEL SURVEILLANCE.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01. When planned activities cannot occur as scheduled, the FS must update the plan by rescheduling and provide rationale for the change.

a. Rescheduling.

Rescheduled surveillance must be accompanied by rationale why the surveillance was not performed as originally planned. The rationale must be recorded in the system of record.

b. Canceling.

When delegated surveillance cannot occur and will not be rescheduled, it can only be cancelled with prior and documented approval of the NASA POC, SMAR, CSO, or delegator.

(1) In accordance with Volume 1 of DCMA-MAN 3101-03, if a planned opportunity for delegated surveillance was bypassed, or the surveillance activity was completed but the objective quality evidence is not available, the FS must complete a Customer Notification of Unaccomplished Mandatory Surveillance form and upload it in the system of record.

(2) If resources are not available to accomplish surveillance, the FS must coordinate with DCMA-NPO prior to the scheduled event. Even if TDY travel is required, it may be possible for another CMO to support the event.

SECTION 7: DOCUMENT RESULTS

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

7.1. DOCUMENT SURVEILLANCE RESULTS.

The accuracy and integrity of objective evidence, from DCMA surveillance records, may contribute to the decisions NASA may make, during flight or mission readiness determinations. Refer to NPD 8610.24C, "Launch Services Program Pre-Launch Readiness Reviews."

a. For NASA delegated activities or surveillance records, at a minimum, the FS must include the elements identified in Volume 1 of DCMA-MAN 2303-01 and the delegated surveillance techniques.

b. When delegated, the FS must properly document the results of QSEs including CARs as appropriate in accordance with DCMA-MAN 2303-05 and Volume 1 of DCMA-MAN 3101-03.

c. The following is a list of the systems of record used for NASA surveillance by functional area:

- Aircraft Operations, Earned Value Management, Engineering, Manufacturing, Safety and Software must use PDREP
- Government Property must use NESS
- Unless specifically directed otherwise, Quality Assurance must use PDREP and the applicable system of record as per the NASA prime LOD
    - DCMA GMIP Assignment and Closed Loop Tracking Tool
    - Orion Multipurpose Crew Vehicle's NASA Cross Program GMIP Database
    - Any other NASA delegated database

d. Due to DoD Financial Improvement and Audit Readiness requirements, the primary system for inputting actual reimbursable hours is the Defense Agencies Initiative information system. The actual hours in PDREP are only used to assist FSs with calculating reimbursable hours estimates.

e. When GMIPs are delegated, quality assurance FS must use the DCMA GMIP Assignment and Closed Loop Tracking Tool. If the FS that completed the work is not available to close the GMIP, the name of the person who accomplished the work must be recorded in the database.

f. When included as part of delegated activities, the FS must ensure data is appropriately marked and protected to prevent unauthorized access or disclosure in accordance with DCMA-MAN 3301-08, "Information Security." When incorporated into NASA contracts, FS must also adhere to requirements in NFS 1852.237-72, "Access to Sensitive Information," and NFS 1852.237-73, "Release of Sensitive Information." If additional information is needed, CMOs and functional centers should contact the NASA POC, SMAR, CSO, delegator, or the DCMA-NASA Support Desk.

g. The FS must retain records in accordance with Volume 1 of DCMA-MAN 4501-04, "Records and Information Management Program," and Volume 2 of DCMA-MAN 4501-04, "Records Retention Schedule."

h. Compliance with Part 4.805 of the FAR is mandatory. Other applicable policies are:

(1) NPD 1440.6I, "NASA Records Management."

(2) NPR 1441.1E, "NASA Records Management Program Requirements."

(3) NASA Records Retention Schedules 1441.1, "NASA Records Retention Schedules."

i. The amount of time a record is kept is called its retention period. A disposition rule is when a file begins its retention period, what that retention period is based on, and the final disposition action for a record, at the end of its retention period. Disposition has a cutoff and a final disposition phase. The cutoff, an event or date trigger, determines when a record enters its retention period. Final disposition is when a record's retention period is completed and identifies when it should be destroyed.

j. Pursuant to Volumes 1 and 2 of DCMA-MAN 4501-04, the FS must review the Records Retention Schedules to identify the records series and applicable disposition instructions before destroying and deleting any surveillance records.

7.2. MULTIFUNCTIONAL COMMUNICATION AND REPORTING.

a. Multifunctional Communication.

The technical community is encouraged to conduct peer reviews of completed QSEs to promote a consistent approach.

b. Reporting.

When delegated, all reports should be shared with the NASA POC, SMAR, CSO, or delegator.

c. NASA Readiness Reviews.

Although DCMA personnel are not typically involved with the various reviews conducted by NASA prior to a launch, all FSs must have an awareness of how the agency's communication, reporting, and records retention can impact the outcome of the reviews. The accuracy and integrity of objective evidence from DCMA records may contribute to the decisions NASA may make during flight or mission readiness determinations. Refer to NPD 8610.24C, "Launch Services Program Pre-Launch Readiness Reviews."

(1) The following list of prelaunch reviews is not inclusive and is provided for an introductory overview. The FS should request additional information from the assigned NASA POC, SMAR, CSO, or delegator.

(a) Launch Vehicle Readiness Review.

This review is held approximately 30 to 60 days prior to launch, depending on the requirements of the launch flow, to certify the readiness to proceed with spacecraft or launch vehicle integration activities, and is typically held prior to the Spacecraft Readiness Review, which is called the Mission Readiness Review or the Spacecraft Flight Readiness Review.

(b) Flight Readiness Review.

This review is held at the launch site between 3 to 12 days prior to launch, depending on the requirements of the launch flow, to update the mission status, close out actions from the previously held Launch Vehicle Readiness Review and customer Mission Readiness Review, and certify the readiness to proceed with initiation of the final launch preparation activities. The Flight Readiness Review is chaired by the NASA Launch Manager and is held approximately 3 days before launch at the launch site.

(c) Launch Readiness Review.

This review is held at the launch site no later than 1 day prior to launch to update the mission status, close out actions from the previously held Flight Readiness Review, and authorize approval to proceed into launch countdown. The Flight Certification Document or Certificate of Flight Readiness is signed at the conclusion of Launch Readiness Review.

(2) The reviews can be conducted at the NASA Headquarters or program level. Each center or program may have specifically tailored processes, procedures, and reviews.

SECTION 8: DC&A

8.1. DC&A.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01. However, the requirements, information, and guidance for data collection and analysis for contractor process controls in Volume 1 of DCMA-MAN 2303-01 are not applicable to NASA.

a. DC&A of all delegated surveillance of contractor systems or processes is required at a minimum of every 12 months, unless specifically withheld by NASA.

b. When delegated, the results of DC&A must be included in required status reports.

8.2. DATA COLLECTION.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. Some additional data collections include NASA customer emails or reports, VRs, second party audit results, and DCMA status reports.

b. The FS will coordinate with other functional areas to reduce duplicative data requests to the contractor when delegated. Data requests to the PCO should be facilitated through the prime delegator or FS(s).

8.3. DATA ANALYSIS.

This section requires no additional details beyond the requirements, information, and guidance contained in Volume 1 of DCMA-MAN 2303-01.

8.4. COMMUNICATION.

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

a. When NASA has delegated or required surveillance events, and FS data analysis concludes surveillance may be reduced, the AMT or FS must inform the customer in writing and work together to negotiate the required surveillance.

b. The FS must submit reports as delegated in the NF 1430A, B, and C.

c. When delegated in the NF 1430B, monthly status reports must report staffing and labor-hours expended by labor category and delegated functions, including sub-delegated labor-hours and explanations of man-hour expenditures greater than or less than 15 percent of the projected labor-hours.

SECTION 9: EVALUATE SURVEILLANCE PLAN

The following requirements, information, and guidance are in addition to the requirements, information, and guidance in accordance with Volume 1 of DCMA-MAN 2303-01.

9.1. FS EVALUATE SURVEILLANCE PLAN.

When data analysis indicates a change in contractor technical performance, either a positive or negative trend, the FS must only change frequency or intensity; adjustments to stop or initiate different surveillance techniques will be implemented only with documented approval from NASA POC, SMAR, CSO, or delegator.

9.2. SUPERVISOR EVALUATE SURVEILLANCE PLAN.

This section requires no additional details beyond the requirements, information, and guidance contained in Volume 1 of DCMA-MAN 2303-01.

GLOSSARY

G.1. ABBREVIATIONS AND ACRONYMS.

For additional acronyms, refer to NASA-HDBK-8709.22, "Safety and Mission Assurance Acronyms, Abbreviations, and Definitions."

ACRONYM	MEANING
AMT	award management team
AQL	acceptable quality level
AQMS	Advanced Quality Management System
AS	Aerospace Standard
CAR	corrective action request
CMO	contract management office
CMSE	Contractor Management System evaluation
CSO	Chief Safety and Mission Assurance Officer
DC&A	data collection and analysis
DCMA-MAN	DCMA Manual
DPE	deliverable product evaluation
EIA	Electronic Industries Alliance
FAR	Federal Acquisition Regulation
FMEA	Failure Mode and Effects Analysis
FS	functional specialist
GCPG	Government Contract Property Group
GMIP	Government Mandatory Inspection Point
GSI	Government Source Inspection
HDBK	handbook
HQ	headquarters
IAQG	International Aerospace Quality Group
ILA	in-line assessment or audit
ISO	International Organization for Standardization
KCR	key contract requirements
LA	lead assessor
LOD	letter of delegation
LOI	letter of instruction
LOR	letter of redelegation

MRB	Material Review Board
NASA	National Aeronautics and Space Administration
NDE	nondestructive evaluation
NDR	NASA Delegation Review
NDT	nondestructive test
NESS	NASA Electronic Submission System
NF	NASA Form
NF 1430	Letter of Contract Administration Delegation, General
NF 1430A	Appendix A Contract Administration Letter of Delegation (LOD) for NASA Contracts
NF 1430B	Appendix B Quality Assurance Letter of Delegation (LOD) for NASA Contracts
NF 1430C	Appendix C Property Administration Letter of Delegation (LOD) for NASA Contracts
NFS	NASA FAR Supplement
DCMA-NPO	DCMA NASA Product Operations
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
NPST	NASA Property Support Team
OASIS	Online Aerospace Supplier Information System
OU	operational unit
POC	point of contact
POP	place of performance
POM	place of manufacture
PE	process evaluation
QSE	Quality System Evaluation
QMS	Quality Management System
QLI	Quality Leading Indicator
RBA	Risk-based analysis or assessment
SAE	Society of Automotive Engineers
SMAR	Safety Mission Assurance Representative
TDY	temporary duty
VR	variance request
WST	Workmanship Standards Training

GLOSSARY

G.2. DEFINITIONS.

For additional definitions, refer to NASA-HDBK-8709.22, "Safety and Mission Assurance Acronyms, Abbreviations, and Definitions."

TERM	DEFINITION
AQL	A sampling method designed to decide whether to accept a group of units of manufactured goods. Specifically, it allows a determination to be made if a group of units meets the quality standards necessary for acceptance, without having to test or inspect 100 percent of the units. Considered an intensity.
acceptance	This is an inherently government act, performed by a government employee, to accept goods or services on behalf of the government. The act of an authorized representative of the government by which the government, for itself or as agent of another, assumes ownership of existing identified supplies tendered, or approves specific services rendered, as partial or complete performance of the contract.
actual hours	Total number of hours to assess risk, plan, execute and document completed surveillance event or activity.
adequacy evaluation	Address whether the contractors' procedures are current, accurate, complete, and capable to satisfy a requirement or meet the intent of a requirement.
agency system of record	Generic description of any documentation storage that is approved for use by the Agency. A common example would be the PDREP Automated Information System.
NASA allocated hours	Also known as an "hours estimate." The actual amount of time calculated to complete activities, tasks, or surveillance for the entire LOD or LOR life cycle. A life estimate is normally input into the system of record when a delegation is accepted, and a fiscal year estimate is provided to DCMA-NPO on an annual basis.
surveillance allocated hours	The planned time in hours to start and complete one occurrence of a scheduled item in the surveillance schedule. Allocated hours should include preparation, execution, and documentation. If multiple FS plan to execute a joint occurrence of a surveillance event, the hours would be the total hours for the execution, not per the FS.

CAR	A request for a contractor to take action to eliminate the cause of a detected deficiency or other undesirable condition. CARs are issued to the contractor management level responsible for correcting the cited deficiency.
catastrophic event	Loss of life, disabling injury, or loss of a major national asset.
catastrophic failure	A failure directly resulting in a catastrophic event.
catastrophic hazard	Presence of a risk situation that could directly result in a catastrophic event.
Certificate of Flight Readiness	The formal authorization granted by NASA certifying the flight readiness of a vehicle to conduct a flight test or mission.
consequence	An outcome of an event affecting objectives. An event can lead to a range of consequences. A consequence can be certain or uncertain and can have positive or negative effects on objectives. Consequences can be expressed qualitatively or quantitatively. This is sometimes called "impact and severity."
critical item	A critical item is one which if defective or fails, causes a catastrophic event affecting the public, NASA workforce, high-value assets, or mission success. Reliability considerations apply to determination of criticality for cases where loss of multiple units of the item in question is required for the catastrophic event to be realized, and the units are of the same design and build lot and have a common failure mode relevant to the critical function.
criticality of a failure	A measure of the severity of a failure in relation to mission performance, hazards to material or personnel, and maintenance cost. Programs or projects typically establish specific criticality definitions and classifications.
Criticality 1	The condition where failure to comply with prescribed contract requirements can potentially result in loss of life, serious personal injury, loss of mission, or loss of a significant mission resource. Common uses of the term include critical work, critical processes, critical attributes, and critical items.
Criticality 1R	Redundant hardware, if all failed, could cause loss of life or vehicle. A number is used to indicate the number of failures

	required for complete system failure. For example, 1R2, one failure tolerant system; 1R3, two failure tolerant system.
Criticality 1S	Failure in a safety or hazard monitoring subsystem that could cause the system to fail to detect, combat, or operate when needed during a hazardous condition, potentially resulting in loss of life or vehicle.
Criticality 2	A condition that may cause severe injury or occupational illness, or major property damage to facilities, systems, or flight hardware.
Criticality 3	Failure that would not result in loss of life, vehicle, or mission.
fracture critical	Fracture control classification identifies a part whose individual failure, caused by the presence of a crack, is a catastrophic hazard and requires safe-life analysis or other fracture control assessment to be shown acceptable for flight. A part is fracture critical, unless it can be shown there is no credible possibility for a flaw to cause failure during its lifetime, or the part failure does not result in a credible catastrophic hazard. Assessments for fracture critical parts include damage tolerance analysis, damage tolerance test, or defined approaches for specific categories. Parts under this classification receive flaw screening by NDE, proof test, or process control, and are subjected to traceability, materials selection and usage, documentation, and engineering drawing requirements.
GMIP	A mandatory activity created by NASA and provided to DCMA. GMIPs can also be identified by DCMA when delegated by NASA.
insight surveillance	Delegated surveillance performed on a "non-interference" basis. It requires monitoring of contractor quality data, Government-identified metrics, or contracted milestones, and may also involve the review of contractor work procedures and records. Insight is a continuum that can range from low intensity, such as reviewing quarterly reports, to high intensity, such as performing surveys and reviews.
LOD	NF 1430 with applicable appendix, such as a 1430A or 1430B. Instructions include requirements regarding the respective responsibilities and authority of the delegated agency and NASA personnel and requirements are identified as either mandatory or discretionary. Discretionary requirements are

	assigned on a case-by-case basis and will vary from contract to contract, due to projected program or project risk.
LOR	NASA refers to sub-delegations as "redelegations." Redelegation is the formal action taken by a delegated agency when a portion of the required Safety and Mission Assurance functions cannot be performed because of geographical location, facility cognizance, technical or administrative capability limitations, or inter-governmental agency agreements. The NASA center may choose to withhold redelegation authority, provide complete redelegation authority, or provide the delegated agency with specific directions on functions to be redelegated. Redelegation is performed by the cognizant contracting officer in accordance with FAR and NFS procedures.
multifunctional team	(1) Group composed of members from two or more departments or functional areas working together to solve a problem, handle a situation, or perform surveillance that requires capabilities, knowledge, and training not available from any one source. (2) A group composed of members with varied but complimentary experience, qualifications, and skills that contribute to the achievement of the organization's specific objectives.
POM	The place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.
OASIS	An online system maintaining a list of suppliers, certified and registered under the IAQG rules, to be in compliance with the aerospace quality management system requirements, such as the 9100 series of standards.
POP	The location or facility where product realization happens or the geographic area where most of the work is performed under the award or contract.
POC	The NASA individual identified on the NF 1430A, B, or C, responsible for and assigned to provide leadership to DCMA for delegated tasks, including establishing, negotiating, tasking, and changes to, agreements or instructions.

remote surveillance	Using an alternative surveillance technique for verification of objective evidence via electronic means rather than in person and which is at a remote location using a virtual connection. It may entail gaining access to the contractor's internal enterprise systems using our own DCMA IT equipment.
safety-critical	Any condition, event, operation, process, equipment, or system that could cause or lead to severe injury, major damage, or mission failure, if performed or built improperly, or allowed to remain uncorrected.
safety-critical product	A product whose failure, malfunction, or absence could cause a catastrophic or safety-critical failure resulting in the loss of or serious damage to the craft, vehicle, facility, loss of mission, an unacceptable risk of personal injury, or loss of life.
task	Is an action. One of the more common work activities with a clearly defined beginning and ending is the task. A task is "a piece of work to be done." Task descriptions are often referred to as procedures.
travel time	Time spent traveling to and from the location to perform surveillance, also known as "windshield time."
Unknown or Not Accomplished Mandatory Surveillance	When supporting NASA work, and if a mandatory government surveillance activity is not executed per the delegation, the contractor's records and DCMA records must indicate this omission with the appropriate written notation. The difference between unknown or not accomplished is outlined below: (1) Unknown mandatory surveillance is any surveillance activity whose accomplishment status is in doubt or the applicability of that surveillance activity to a particular piece of hardware or NASA mission is unclear. (2) Not accomplished mandatory surveillance is any surveillance activity that has not been accomplished and the planned opportunity to accomplish the surveillance has passed, or the surveillance activity was completed but the objective quality evidence is not readily available to document completion for activity closure.

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