



NASA QUALITY ASSURANCE SURVEILLANCE PLAN

NASA RESEARCH & EDUCATION SUPPORT
SERVICES (NRESS)

FOREWORD

Under performance-based contracts, such as this one, the contractor assumes more responsibility and greater risk in exchange for more flexibility and less direct Government involvement in contract activities. However, the Government still has a responsibility to monitor the contractor's performance over the course of the contract to ensure it is acceptable. To meet this responsibility, the Government needs sufficient information on how the contractor is performing to be assured contract requirements are being satisfied. This Surveillance Plan has been prepared to address the Government's need for information under this contract

1.0. INTRODUCTION

1.1 Purpose

The purpose of this Surveillance Plan is to define the overall approach NASA intends to use to monitor contractor performance on the NASA Research and Education Support Services (NRESS) Contract. This contract is a cost plus fixed fee contract. This plan defines the process the Government expects to follow to obtain data, evaluate the contractor and determine if contract performance is acceptable. The goal is to balance the level of Government surveillance with the perceived impacts and risks of poor quality support in the NRESS contract.

1.2 Scope

This plan identifies program requirements, strategy, resources, review and control processes, surveillance activities, and metrics for continuous measurement of contractor performance. It is intended to be a "living" document from which resources and activities will evolve from one phase to another during the life of the contract. The plan will be updated as required. (The Government reserves the right to modify this Plan at any time during the contract.) The surveillance program addresses all elements of the contract, including the following:

WBS 1.0 – 3.0	Peer Review Support
WBS 4.0	Panel and Peer Review Planning, Operation, Logistics, and Close-Out
WBS 5.0	Programmatic Documentation, Analytics, and Reporting

WBS 6.0	Process or Systems Improvements and User Acceptance
WBS 7.0	Information Technology
WBS 8.0	Electronic Commerce
WBS 9.0	Electronic and Information Technology Accessibility Standards (Section 508)

1.3 Guiding Directives

The guiding documents for this surveillance effort include:

- a) Statement of Work (SOW)
- b) Task Order Performance Requirements
- c) Deliverables

2.0 SURVEILLANCE STRATEGY DEFINITIONS

2.1 Insight

Insight is an assurance process that uses product performance requirements and performance metrics to ensure process capability, product quality and end-item effectiveness. Insight relies on gathering a minimum set of product or process data that provides adequate visibility into the integrity of the product or process. The data may be acquired from contractor records, usually in a non-intrusive parallel method.

Insight as applied to NRESS support services will result in lower levels of Government surveillance and allow the contractor to assume increased responsibility and accountability for the integrity of processes. Insight will rely heavily on evaluating planned contract deliverables and existing contractor procedures and working documents.

The Government's goal is to follow an insight-driven surveillance strategy. However, the Government reserves the right to use an oversight or hybrid approach (see below) to monitor questionable areas or areas of poor contractor performance.

2.2 Oversight

Oversight is an assurance process that uses customer-imposed product specification and process controls, such as MIL-Specifications, MIL Standards and mandatory inspections, to direct the development and production of the product. Oversight is intrusive in that it requires gathering contractor product or process data through on-site, in-series involvement in the process. Oversight entails very detailed monitoring of the process itself. Oversight is an in-line involvement in an activity, principally through inspection, with review and approval authority implicit to the degree necessary to assure that process or product's key characteristics are stable and in control.

As applied to NRESS support services, the Government will limit the use of oversight to those processes for which one or more of the following apply: 1) the Government assumes the liability; 2) the Government has determined that oversight is the only method to mitigate risk; 3) the contractor has limited experience and/or 4) the contractor has not demonstrated acceptable performance.

2.3 Hybrid

A hybrid surveillance approach combines elements of insight and oversight and may be instituted at a contractor's facility when a high level of confidence does not exist regarding the contractor's ability to identify, manage and control programmatic risks. This may occur when new technology is acquired or unproven processes are employed by a contractor. In this situation, oversight surveillance is used until sufficient data exist that demonstrate the contractor has all critical processes under control. The oversight activities usually impose mandatory Government inspection points in-series with the contractor's manufacturing processes. Only after the contractor's demonstration of risk mitigation capabilities will NASA consider transitioning to insight activities that rely predominantly on internal contractor data. The transition period from oversight to insight activities is hybrid and accomplished incrementally, depending on contractor performance.

3.0 RESOURCES

3.1 General

All surveillance activities will be implemented using Government personnel and resources at NASA Headquarters, Goddard Space Flight Center (GSFC) and peer/event reviewers used by NASA. The multi-disciplinary surveillance Board will be composed of:

- Office of Headquarters Operations/COTR
- Customer Performance Monitors
- Contracting Officer
- Other Headquarters or GSFC personnel, as required
- Peer/Event Reviewers

3.2 Surveillance Board/NASA Consolidated NRESS Steering Committee

The Surveillance Board will be composed of key NASA Government personnel. The Board has been constituted as the NASA Consolidated NRESS Committee. One of its responsibilities is to provide direction for contract surveillance activities and to serve as the Government's focal point in reviewing and evaluating overall contractor performance under the NRESS contract. The NRESS Steering Committee will obtain information from various sources, including deliverable contractor documents, communications with the contractor, and reports by other personnel or representatives (e.g., NASA Solicitation Managers, Peer Reviewers, Event managers, conference/event attendees) who interact with the contractor. Based on the information it receives, the NRESS Steering Committee will provide information as to the level of performance of the contractor to higher NASA management as needed.

In general, the NRESS Steering Committee will review the contractor performance in accordance with the monitoring plan. Surveillance of contractor performance on the NRESS contract will primarily be controlled by the COTR with help from other Customer Performance Monitors.

The NRESS Steering Committee will meet as often as necessary to evaluate problems, concerns, and issues, and review metrics for trends and performance indicators. The COTR will formally notify the Contracting Officer of situations where it is perceived that the Contractor has failed to take prudent corrective or preventive action, of situations perceived to increase risk, or of findings of continued contractual non-compliance.

4.0 MANAGEMENT REVIEW AND CONTROL PROCESSES

The following management review processes are used to formulate policy and to guide and direct surveillance activities:

- NRESS Steering Committee Meetings
- Financial Reviews (533s)
- Voucher Analysis
- Task Order Plan Review and Approval
- Status Meetings
- Sampling of Peer/Event Reviewer Surveys

5.0 SURVEILLANCE STRATEGY AND APPROACH

5.1 General

NASA will strive to use an insight-driven surveillance approach. However, during the contract transition period, an oversight or hybrid approach (see Section 3) may be necessary until the Government is confident that the transition of required services has been completed successfully. The surveillance approach selected will also be influenced by the contractor's experience and past performance and the results of applicable offeror site visits conducted by the Government.

The overall surveillance goal will be to obtain objective evidence and data that enable the Government to determine whether the contractor's program and processes are functioning as intended in accordance with the terms of the contract. The focus will be on prevention rather than detection, i.e., emphasizing controlled processes and methods of operation, as opposed to relying solely upon inspection and test to identify problems.

Surveillance team members will have access to all areas in which NRESS support is being performed and will interface directly with their Contractor counterparts. They will document problems, concerns and issues, and take note of contractor accomplishments. They will collect performance metric data, where applicable and will participate in contractor review meetings. Information gained from these formal and informal exchanges and collection of data will be compiled and evaluated as a continuous measure of contract performance.

5.2 Forms of Surveillance

Peer Review contract surveillance will take two primary forms:

5.2.1 Communications

- Teleconferences
- Informal Discussions
- Electronic mail
- Surveillance Board meetings
- Progress Reviews
- Customer surveys
- Other communication methods, as needed

5.2.2 Evaluation and Reporting

- Review of Deliverables
- Review of Task Order-unique products/documentation
- Documentation of problems, issues and concerns
- Data collection
- Metrics evaluations
- Reporting

5.3 **Typical Surveillance Methods (Some surveillance methods are provided below)**

5.3.1 Customer feedback

The contractor is required to conduct and receive customer surveys from: 1) the NASA official(s) responsible for the NRA/AO and the associated peer review process (WBS 4.13); 2) the peer reviewers (after WBS 4.5) and 3) conference/workshop event reviewers (after WBS 4.14). The NASA official survey shall evaluate the contractor's performance relative to the peer review/conference/event support in terms of quality, timeliness and overall support to the process. A copy of the evaluation is also sent to the Customer Performance Monitor. The peer/conference/workshop reviewer survey shall evaluate the contractor's performance relative to the logistics support given to each peer reviewer (travel, accommodation, meeting support, etc.) and will offer the opportunity for suggestions for process improvement. A customer survey is required from all participants described above. The customer surveys will be assessed every six months.

This surveillance tool is utilized by the Government to avoid active insight activities in order to assure that a contractual requirement is met. Its primary purpose is to assess contractor performance.

Information attained from NASA program managers in relation to program management activities will be assessed (refer to 5.2.1).

5.3.2 Management Information Systems (MIS)

This is the surveillance tool where insight into contractor performance is achieved through assessment of contractor or Government-generated data. In most cases, the contractor will be generating data in order to manage his processes. This data can be in electronic or hard copy media. Use of this contractor-generated data by the Government represents an efficient means of gaining insight. In some cases the Government may also be required to generate its own data to be used to evaluate the contractor. For the Government to accept and rely on MIS, the data and output of the MIS must be validated by the Government to ensure that it is factual and accurately reflects the contractor's performance. This validation should not occur until the Government achieves confidence in contractor generated data.

5.3.3 Sampling

This is a quantitative approach to validating contractor performance. It involves statistically-based random checks of the contractor's data (performance and/or insight) or work performance. The purpose of these random checks is to validate that data is factual and that work performance meets requirements. Sampling will also provide an indication of the capability and stability of the contractor's processes (However, a stable process does not necessarily indicate that its products meet the requirements.). Process capability is the ability of a process to produce results that fall within defined customer specification or contractual requirement. A stable process is a process in which variation in outcomes results from inherent system limitations.

5.3.4 In-depth Observation

This entails Government personnel directly observing the contractor during performance of work. This tool may be used when Government witnessing of each occurrence of a specific activity due to the Government's need to ensure that contractor performance is demonstrated. It is often used where the work

involves tasks which present high risk to program assets; however, use of the tool is not limited to such critical activities.

5.3.5 Inspection

This is an in-line function in which the Government reviews and approves a specific contractor product or service. The Government observes a test or process to verify use of correct procedures and processes for specific activities. This in-line involvement represents a constraint to the contractor's authority to proceed further with the work. Inspection indicates approval and acceptance of a contractor requirement by the Government and is performed for each occurrence of the requirement. The Government may choose to use this surveillance technique due to high risk to program assets and a need to ensure performance is demonstrated.

6.0 SELECTED SURVEILLANCE ACTIVITIES

The following selected activities will be performed by various Surveillance Team members during applicable stages of contract performance:

- Project Planning and Management Review
- Surveillance Team technical and business members will review schedules, resource plans and Risk Management Plans to obtain insight into the planning and execution of Task Orders. If the contractor consistently fails to meet performance metrics, either over a period of time or due to severe technical issues, the Government may adopt an oversight surveillance approach until the problems are effectively addressed.

7.0 DATA AND METRICS

The NRESS Steering Committee members will be responsible for collecting data and for facilitating overall surveillance activities. The majority of data will be readily available through established data documentation processes, including contract deliverables, contractor self-assessment programs and Government monitoring. Direct access to contractor data, through electronic means, is also required. FAR 42.1104(c) states the Government shall make maximum use of any reliable contractor data. The Government must determine that the data is reliable by some validation process. A typical validation includes the following: 1) A periodic audit to verify the data collection and reporting systems have adequate processes to reliably produce accurate data and

metrics; 2) Data sampling to validate data stored accurately reflects reality; and 3) Verification that the metric formulation (i.e.; transformation of raw data into graphical elements) captures all data, uses appropriate transformations and displays it accurately.

The NRESS COTR will screen the data, as appropriate, and in consultation with the Surveillance Board, select a limited scope of key activities for continuous surveillance, development of metrics and make presentations to management as needed. Metrics have and will continue to be developed to provide a continuous measure of contractor performance. Utilization of metric data requires understanding of the performance as well as the sources and types of errors. Most of the time it is beneficial to compare current activity with historical information. Metrics provide maximum understanding if the information is interpreted by the subject matter expert. Different sets of data may be developed for monitoring as the program matures. Below are actual or potential performance metrics which may be monitored. Task Orders may also include metrics which are directly linked to contractor performance on Task Order-specific tasks and deliverables. These metrics shall be defined by NASA or by the contractor (subject to NASA approval). These Task Order-specific metrics will help the NRESS COR assess contractor progress and will be considered in evaluating overall contractor performance.

7.1 Problems/Concerns/Issues

- Statement of Problem/Concern/Issue
- Programmatic impact (cost, schedule, scope changes/impacts)
- Root cause identified
- Action taken
- Date established
- Current status
- Date resolved/closed

7.2 Program Costs (As applicable)

- Actual vs. planned
- Percent completed under budget
- Cost to complete

- Fixed Fee payments

7.3 Program Milestone Schedule

- Milestone elements
- Actual vs. planned completion dates
- Percent completed early/on-time/late
- Quality Completeness

7.4 Hardware/Software Development Schedule

- Element
- Date start/finish (actual vs. planned)
- Percent completed early/on-time/late
- Major delays/problems/concerns

7.5 Contract Deliverables

- Percent completed early/on-time/late
- Percent approved/rejected
- Percent requirements satisfied

7.6 Resources

- Person-loading (actual vs. planned)
- Variances in staffing over/under plan
- Skill mix (all disciplines covered/not covered)
- Workforce health indicator (percent of leave used by type and month)

8.0 SUMMARY

This Surveillance Plan describes the approach NASA intends to use to monitor the NRESS contract and assure that the Contractor performs in accordance with terms and conditions of the Contract. NASA anticipates using an insight driven surveillance approach. The goal is to balance the level of Government surveillance with the perceived impacts and risks of mission failure.

NASA plans to utilize the NRESS Steering Committee to evaluate Contractor performance and direct surveillance activities. The Committee serves as the Surveillance Team to obtain data and provide information on Contractor activities. The Committee will establish and rely on specific performance metrics and assess Contractor performance against metric requirements/expectations.

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