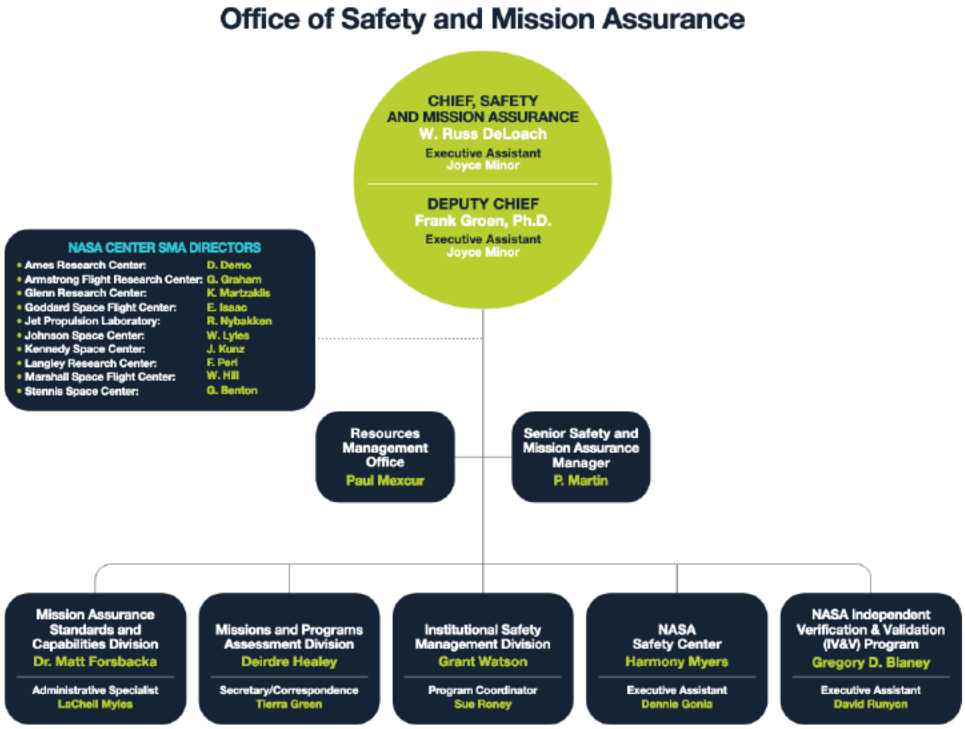
NASA Safety Center (NSC)

Safety & Mission Assurance, Engineering and Technical Support (SETS) Services

DRAFT Statement of Work (SOW)

Appendices A through G

APPENDIX A – OSMA Organizational Structure



The Mission Assurance Standards and Capabilities Division (MASCD) ensures that:

- Directives, standards and related guidance are clear, current and consistent across disciplines.
- Adequate knowledge, tools, methods and facilities are available to address current and future test, experiment and analysis needs.
- Resources exist to ensure the competence and promote technical excellence of personnel
- Stakeholders are properly informed about matters related to the discipline.
- Effective insight, oversight and assurance of center-level activities are in place.
- Effective support of institution and program-level activities and cross-center collaborations are in place.
- Technical objectives and requirements are routinely satisfied by programs and institutions.
- MASCD works hard to maintain NASA's Safety and Mission Assurance (SMA) capabilities as the agency moves toward new missions (e.g., deep space exploration, small spacecraft technology development and unmanned aerial vehicles), new acquisition models (e.g., increased use of Space Act Agreements and reduced oversight), new engineering practices (e.g., agile software development, use of commercial-grade parts, model-based systems engineering) and new technological advances (e.g., additive manufacturing/3-D printing).

The Missions and Programs Assessment Division (MPAD)

- Evaluates and informs Office of Safety and Mission Assurance (OSMA) leadership about the implementation of Safety and Mission Assurance (SMA) functions by mission and programs.
- Assures the definition, application and implementation of SMA policies and standards for agency programs and missions throughout the program/mission life cycle.
- Assists in the development of agency and OSMA policy, including updates to the National Space Policy.
- Maintains and coordinates Safety and Mission Success Reviews and the NASA Safety Reporting System.
- Assesses and positively influences agency Safety Culture.

The Institutional Safety Management Division (ISMD)

- Develops and maintains NASA-wide Institutional Safety policies, standards and practices.
- Participates in the development of national and international industry Voluntary Consensus Standards.
- Performs audits and assessments of center and Federally Funded Research and Development Centers Institutional Safety policies and programs.
- Evaluates center Institutional Safety performance self-assessments and risks, including development of Office of Safety and Mission Assurance (OSMA) Center Safety and Mission Assurance (SMA) Heath Assessments.
- Investigates and coordinates with centers and the Mission Support Directorate on the resolution of conditions that significantly affect Institutional Safety.
- Identifies, analyzes, tracks and communicates risks and concerns related to Institutional Safety across the agency.
- Provides expert advice to the chief, SMA; center SMA directors; other senior officials; and agency committees.
- Ensures agency wide availability of relevant guidance and training.
- Leads agency wide working groups and task forces of Subject Matter Experts and center representatives.
- Conducts technical assessments and studies to mitigate risks or advance the state-of-the-art.
- Evaluates requests for relief from requirements on behalf of the chief, SMA.
- Represents OSMA towards Occupational Safety and Health Administration and other federal/state agencies.
- Enhances awareness of relevant policies, events, risks and capabilities by sharing information with the agency's senior leaders and the workforce.

NASA's Independent Verification and Validation (IV&V) Program was established in 1993 as part of an agency wide strategy to provide the highest achievable levels of safety and cost-effectiveness for mission critical software.

The NASA Safety Center (NSC) provides SMA expertise, information, verification and analysis to enable collaboration and learning while promoting a safe workplace and successful programs and projects.

The Technical Excellence Office (TEO) is charged with bolstering technical excellence in NASA's SMA community primarily through the professional development products and services. TEO is responsible for assessing, developing, managing, and evaluating SMA training and development which includes the established SMA Technical Excellence Program. TEO also provides discipline expertise and is focusing on building discipline while expanding and maturing STEP to ensure NASA's SMA workforce readiness for NASA's Moon to Mars ambitions and beyond.

The Knowledge Sharing and Analysis Office (KSAO) serves as a strategic partner in the development and implementation of NSC initiatives by providing relevant, timely, and high-quality products and services tailored to the unique needs of NASA's SMA professionals. KSAO provides the infrastructure and support necessary for effective knowledge capture, management and use through information dissemination, custom software application development, data analysis, technology and automation support, and reporting.

The Assessments and Investigations Office (AIO) performs SMA audits, reviews and assessments, Institutional/Facility/Operational Safety Audits (IFOSA), Quality Audit, Assessments and Interim Center Assessments are conducted. In addition, AIO promotes the highest levels of safety and reliability by facilitating the mishap investigation process.

APPENDIX B – Policies and Requirements (assume latest revision)

A sampling of reference documents that OSMA adheres to are as follows:

29 CFR 1904

29 CFR 1960

Section 508 of the Rehabilitation Act

Federal Information Processing Standards (FIPS)

National Institute of Standards and Technology (NIST) Special Publications (SPs) 800 Series

Federal Information Security Management Act (FISMA) of 2002

NASA Policy Directive 1000.0, NASA Governance and Strategic Management Handbook

NASA Policy Directive 1000.3, The NASA Organization

NASA Policy Directive 1400.1

NASA Policy Directive 1450

NASA Policy Directive 2521.1, Communications and Material Review

NASA Policy Directive 2800.1, Managing Information Technology

NASA Policy Directive 2810.1, NASA Information Security Policy

NASA Policy Directive 9501.1, NASA Contractor Financial Management Reporting System

NASA Policy Requirement 1600.1, NASA Security Program Procedural Requirements

NASA Policy Requirement 2800.1, Managing Information Technology

NASA Policy Requirement 2810.1, Security of Information Technology

NASA Policy Requirements 7150.2, NASA Software Engineering Requirements

NASA Policy Requirement 7900.3, NASA Aircraft Operations Management Manual

NASA Policy Requirement 8621.1, NASA Procedural Requirements for Mishap and

Close Call Reporting, Investigating, and Recordkeeping

NASA Policy Directive 8700.1, NASA Policy for Safety and Mission Success

NASA Policy Requirement 8705.6, Safety and Mission Assurance (SMA) Audits, Reviews, and Assessments

NASA Policy Requirement 8715.1, NASA Safety and Health Programs

NASA Policy Requirement 8715.3, NASA General Safety Program Requirements

Policy Requirement 9501.2, NASA Contractor Financial Management Reporting NASA

OSMA managed Agency directives and standards are as follows:

NPD 8020.7, Biological Contamination Control for Outbound and Inbound Planetary Spacecraft

NPD 8700.1, NASA Policy for Safety and Mission Success

NPD 8720.1, NASA Reliability and Maintainability (R&M) Program Policy

NPD 8730.2, NASA Parts Policy

NPD 8730.5, NASA Quality Assurance Program Policy

NPR 8000.4, Agency Risk Management Procedural Requirements

NPR 8020.12, Planetary Protection Provisions for Robotic Extraterrestrial Missions

NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping

NPR 8705.2, Human-Rating Requirements for Space Systems

NPR 8705.4, Risk Classification for NASA Payloads

NPR 8705.5, Technical Probabilistic Risk Assessment (PRA) Procedures for Safety and Mission Success for NASA Programs and Projects

NPR 8705.6, Safety and Mission Assurance (SMA) Audits, Reviews, and Assessments

NPR 8715.1, NASA Safety and Health Programs

NPR 8715.3, NASA General Safety Program Requirements

NPR 8715.5, Range Flight Safety Program

NPR 8715.6, NASA Procedural Requirements for Limiting Orbital Debris and Evaluating the Meteoroid and Orbital Debris Environments

NPR 8715.7, Payload Safety

NPR 8735.1, Exchange of Problem Data Using NASA Advisories and the Government-Industry Data Exchange Program (GIDEP)

NPR 8735.2, Hardware Quality Assurance Program Requirements for Programs and Projects

NPR TBD, Nuclear Flight Safety

NASA-STD-8709.20, Management of Safety and Mission Assurance Technical Authority (SMA TA) Requirements

NASA-STD-8719.9, Lifting Standard

NASA-STD-8719.11, NASA Fastener Procurement, Receiving Inspection, and Storage Practices for NASA Mission Hardware

NASA-STD-8719.12, Safety Standard for Explosives, Propellants, and Pyrotechnics

NASA-STD-8719.14, Process for Limiting Orbital Debris

NASA-STD-8719.17, NASA Requirements for Ground-Based Pressure Vessels and Pressurized Systems (PVS)

NASA-STD-8719.24, NASA Expendable Launch Vehicle Payload Safety Requirements

NASA-STD-8719.24 Annex, Annex to NASA-STD 8719.24 NASA Expendable Launch Vehicle Payload Safety Requirements

NASA-STD-8719.25, Range Flight Safety Requirements

NASA-STD-8719.26, Alternate/Supplemental Standard for Non-Code Metallic Pressure Vessels

NASA-STD-8729.1, NASA RELIABILITY AND MAINTAINABILITY (R&M) STANDARD FOR SPACEFLIGHT AND SUPPORT SYSTEMS

NASA-STD-8739.1, WORKMANSHIP STANDARD FOR POLYMERIC APPLICATION ON ELECTRONIC ASSEMBLIES

NASA-STD-8739.4, WORKMANSHIP STANDARD FOR CRIMPING, INTERCONNECTING CABLES, HARNESSES, AND WIRING

NASA-STD-8739.5, Workmanship Standard for Fiber Optic Terminations, Cable Assemblies, and Installation

NASA-STD-8739.6, Implementation Requirements for NASA Workmanship Standards

NASA-STD-8739.8, Software Assurance and Software Safety Standard

NASA-STD-8739.9, Software Formal Inspections Standard

NASA-STD-8739.10, Electrical, Electronic, and Electromechanical (EEE) Parts Assurance Standard

NASA-STD-8739.11, EEE Parts Selection

NASA-STD-8739.12, Metrology & Calibration

NASA-STD-8739.14, NASA Fastener Procurement, Receiving Inspection, and Storage Practices for NASA Mission Hardware

NASA-STD-87xx.PP, Planetary Protection Standard

NASA-STD-87xx.NFS, Nuclear Flight Safety Standard

APPENDIX C - BACKGROUND & DESCRIPTION OF SERVICES TO BE PROVIDED FOR NASA SAFETY REPORTING SYSTEM (NSRS) SUPPORT

C.1 NASA Safety Reporting System (NSRS)

The NASA OSMA is functionally responsible for the NSRS, an anonymous, voluntary, and responsive supplementary safety reporting system for bringing critical issues to the immediate attention of NASA's top safety management team. More detailed description of the NSRS program can be found at https://sma.nasa.gov/nsrs.

The contractor will independently administer the anonymous reporting mechanism of the NSRS, and, upon request, will independently monitor active case investigations. This administration involves receiving and analyzing received reports and communicating the reported concern substance to the Division Director, MPAD or designee in a timely fashion while ensuring protection of the anonymity of those who use the NSRS. Once an investigator has been identified by HQ OSMA, the contractor will, upon request, educate and monitor the investigators progress toward an HQ OSMA agreed upon and approved resolution. Administration of the NSRS program also involves managing the planning and implementation of an awareness program.

C.2 NASA Safety Reporting System Operations Support

The contractor will perform the following activities in the operation of the NSRS.

C.2.1 Manage and operate a single independent NSRS office and post office box

The NSRS office will not be physically located on any NASA or NASA contractor facility where the independence of the NSRS and/or the anonymity of the reporters might be questioned or jeopardized, but it must be within 50 miles of the current NSRS post office box in Bethesda, Maryland. **Under no circumstances will the Bethesda, MD NSRS post office box be moved, modified, or discontinued without the prior approval of the MPAD Director or designee.**

C.2.2 Operate the NASA Safety Reporting System

The contractor will ensure reporters' concerns will be communicated to the NASA MPAD Director or designee within one (1) government working day of receipt of report, or as directed by the MPAD Division Director or designee.

The NSRS post office (PO) box, currently located in Bethesda, Maryland, will be checked weekly during regular post office service hours by the contractor for incoming reports. The MPAD Director or designee may under special circumstances request more frequent and/or weekend post office checks during regular post office service hours if required for a designated/temporary period of time, not to exceed 45 days.

The contractor will maintain postal account(s) associated with the current (Bethesda, MD) NSRS PO Box, as directed by the MPAD Director or designee. This will include maintaining an

adequate advance deposit amounts to ensure uninterrupted service of features associated with the account, if necessary.

The contractor will process incoming NSRS reports and will ensure that NSRS reporters, and any person they identify in their report submissions, remain anonymous by redacting or minimally rewriting the description of the concern, removing from the report any information that may potentially identify the reporter or other individuals, and correct spelling, grammar, punctuation, and usage errors where these have no bearing on the technical content of the report.

The contractor will transmit de-identified NSRS reports to NASA within one (1) government working day, or as directed by the MPAD Director or designee, of receipt, via secure electronic means or by personal on-site delivery, the contractor will deliver newly de-identified reports to the MPAD Director or designee at NASA HQ.

If the MPAD Director or designee determines that there is a need for additional information or clarification about the report concerned, the contractor, at the direction of the MPAD Director or designee, will contact the reporter to obtain further additional information, provided the information needed to make such contact was included on the report received. The contractor will document the additional information provided by the reporter and append it to the original de-identified/redacted report and transmit this additional information to the MPAD Director or designee.

The contractor will notify NSRS reporters of received reports, upon direction from the MPAD Director or designee and will return to the reporter via first class mail any portion of the report form or letter that contained the reporter's name, address, and telephone number when provided.

The contractor will maintain anonymity of NSRS reporters by not creating any permanent records, in electronic or hard copy formats, of reporters' identities. The contractor will not divulge any information relative to reporters' identities to anyone, including NASA personnel, unless requested to do so by the MPAD Director or designee. These cases typically occur when the reported concern indicates criminal activity (fraud, waste, abuse, mismanagement, and malfeasance). If so requested, the contractor will deliver the original report intact, in its original envelope/wrappings, using a sealed overlay envelope, to the MPAD Division Director or designee and will retain and securely store photocopies of the original report and all related electronic or paper generated logs, forms, and management reports at the contractor facility for access as deemed necessary by the MPAD Director or designee.

The contractor will provide an adequate level of protection and security for the historical NSRS case files by maintaining all such materials in the secure NSRS office location with 24/7 controlled access to protect them from unauthorized use/access. This is to ensure the protection of the NSRS report author’s identity until it is returned to them. The contractor will store all such NSRS materials in secure cabinets which meet, at a minimum, Underwriters

Laboratories (UL) 350 standards for protection (one-hour protection rating from loss or damage due to fire and/or water and/or impact intrusion).

C.2.3 NSRS Investigation Assistance

Upon request by the MPAD Director or designee, the contractor will facilitate support for the NSRS investigative process as follows:

PLEASE NOTE: The contractor must ensure that their employees who had access to the original report or who were involved in the report de-identification process are prohibited from any role in investigative support assistance. This is to ensure that the report author's identity is unknown to any contractor providing investigative assistance.

Once an investigator (or team of investigators) have been established by NASA, the MPAD Director or designee will provide those investigators names to the contractor.

The contractor will be responsible for contacting the investigator(s) and providing established, government-furnished training on approved investigative techniques and will provide a template for tracking and resolving issues.

The contractor will check-in with the investigator(s) on a frequency designated by the MPAD Director or designee to ensure and track that consistent and timely progress updates are provided to the MPAD Director or designee.

Once the investigation and all corrective actions have been completed, the investigator lead provides a deliberative recommendation for consideration by OSMA management for closure of the investigative case, along with a closure rationale in writing. The contractor will receive and screen for completeness this initial "Closure Recommendation Package" and provide it when complete to the MPAD n Director or designee.

Upon direction from the MPAD Director or designee, the contractor shall prepare a draft "NSRS Closure Decision" and present it for review and signature by the MPAD Division Director or designee.

Once the "NSRS Closure Decision" is signed, the contractor will close out the NSRS investigation and purge pre-decisional materials and archive remaining materials as required.

C.2.4 Maintain and update NSRS data

The contractor will use commercially available software to ensure software portability of NSRS data and will maintain NSRS data and prepare software work instruction documentation.

The contractor will update NSRS data work instructions as required to maintain appropriate quality controls.

The contractor will permit access to NSRS data to NASA participants as directed by the NSRS Program Manager or designee.

Under direction of the MPAD Director or designee, the contractor will undertake enhancements to improve performance, security, reliability, or to enhance reporting and trending capabilities of the electronic files containing NSRS data.

The contractor will create and populate a new record for each NSRS report received. The initial entry will consist of the information known by the contractor prior to transmittal of the redacted/de-identified report to the MPAD Director or designee.

The contractor will review the received NSRS report and identify additional information consistent with the NSRS Management and Operations Plan. Any additional information identified will be included in the new record.

Once NASA has completed all actions associated with the closure of an NSRS report, and the MPAD Director or designee has concurred with closure of the record, the contractor will accept the complete closure report file.

The contractor will update NSRS data records with the closeout information (final actions and closeout date) provided and will store the hard copy and/or electronic copy closure report file in conformance with procedures detailed in the contractor NSRS Management and Operations Plan.

The contractor will retain all hard copies of NSRS reports in the secure NSRS office per NSRS program records retention requirements or until otherwise instructed by the MPAD Director or designee.

C.2.5 Prepare written status reports and conduct trend analyses for the MPAD Director, COR and CO

At NASA's request and on a monthly basis the contractor will meet with the MPAD Director, COR, CO, and/or their designees and will present for their approval a monthly written status report that will contain the following information as updated from the previous month:

- Monthly budget report.
- List of NSRS reports scheduled for destruction per NSRS program records retention requirements.
- Updated NSRS trend analysis metrics since the previous month.
- Updated NSRS exhibit participation, speaking engagements and survey results since the previous month.
- Account of contractor outreach letters mailed.
- Inventory of NSRS marketing materials currently stored by the contractor.
- The following additional information will be included only with the copy of the monthly report for the MPAD Director or designee:
- List detailing the status of all recent (reports closed within two calendar years) and open NSRS reports on the NSRS website.

- Updated, electronic back-up copies of the NSRS data on digital media, upon request.

At the end of each task order, if requested by the MPAD Director or designee, COR, or CO, the contractor will prepare and transmit a narrative report detailing all project activities and will provide ad hoc reports as required. In addition, the contractor may be requested, on an ad-hoc basis, to prepare and transmit to the MPAD Division Director or designee any trend analysis report of NSRS activity.

C.2.6 Conduct an awareness program

The objective of the awareness program is to ensure that NASA civil servants and contractor employees are aware of the role of the NASA Safety Reporting as it relates to the NSRS and have sufficient information about how the program works to trust in its effectiveness in handling reporting concerns in a timely fashion and in protecting the anonymity of NSRS reporters. To support the NSRS awareness program, the contractor will:

- Maintain and coordinate with the NASA Safety Center (NSC) all required updates to the OSMA NSRS website located at sma.nasa.gov
- Managing the design and production of at least one (1) NSRS printed or promotional marketing item each year, or as directed by the MPAD Director or designee. The contractor will submit preliminary designs to the MPAD Director or designee for review and approval. The contractor will distribute these promotional items to NASA and contractor locations as directed by the MPAD Division Director or designee.
- Promote the NSRS Program at safety events at NASA facilities. At the request of the MPAD Director or designee, the contractor personnel will make virtual or site visits to NASA Center and Component Facility safety events. Virtual or site visit safety event activities may include:
- Staffing a virtual or physical NSRS exhibit booth.
- Provide safety reporting and NSRS specific presentation briefings, upon request
- Conducting safety reporting surveys, if feasible.
- Distributing NSRS promotional items.
- Overseeing and conducting and test mailings of NSRS report forms from local on and off-site mailboxes.
- The contractor will ship, store and maintain the condition of all NSRS virtual and physical exhibit and promotional materials. These items will be stored in the contractor provided and access controlled NSRS office.
- The contractor will maintain a list of NASA Center and Component Facility NSRS points of contact.
- The contractor will direct market the NSRS program to new NASA contract awardees which meet the following requirements: contracts of $100,000 or greater in value, as well as any contract under $100,000 which involves hazardous materials, safety critical processes, or processes in which improper handling could result in loss of life or injury.

On a quarterly basis, the contractor will coordinate the creation of a set of individually addressed, company-specific letters that will be signed by the MPAD Division Director or designee. This direct mailing will include, at a minimum, the customized letter, a sample of NSRS promotional materials, and an order form which will allow the contract awardee to order additional NSRS promotional materials at no charge to the awardee. The contractor will maintain copies of letters sent to the contract awardees on the NSRS secure on-line data repository system.

C.2.7 Maintain and update NSRS operational and policy procedures and documentation

The contractor will store NSRS procedures and documentation in a password-protected and secure online data repository to which the MPAD Director or designee, COR, and CO will have access. At the request of the MPAD Director or designee, the contractor will update and maintain the following pre-existing documents used by NASA in execution of NSRS program responsibilities:

- NSRS Management and Operations Plan.
- NSRS Continuity of Operations Plan.
- NSRS Resources Transfer Plan.
- NSRS Reports.
- NSRS Action Log.
- NSRS Handling of Suspicious Mail Procedure.
- NSRS HOWI.
- NSRS Task Plan.
- NSRS Monthly Reports.
- NSRS Exhibit Survey Results.
- NSRS Templates.
- NSRS Correspondence.
- NASA Safety Events Dates.
- NSRS Website Status Report.

C.2.8 Develop and provide training for the NSRS program

The contractor will develop and provide training for the NSRS program, if and when requested, by the MPAD Director or designee, to include the development of NSRS instructional printed materials and/or video.

C.3 SOW/Task Order Closeout

Ninety (90) days prior to the expiration date of this SOW/Task Order, and at the request of the MPAD Director or designee, COR, or CO, the contractor will update and implement a plan to turn over all NSRS system resources to a successor. The contractor will deliver three (3) updated copies of the NSRS Resources Transfer Plan to the MPAD Director or designee, COR and CO. NASA will review the plan and provide comments to the contractor within ten (10) working days. The contractor will revise the plan by incorporating the comments received from NASA and deliver revised copies within ten (10) working days of receipt of comments. The contractor will implement the plan and deliver the products specified in the plan. The contractor will deliver, at a minimum, the copies of the following documents to ensure continued uninterrupted operation of the NSRS:

- NSRS Management and Operations Plan.
- NSRS Handling of Suspicious Mail Procedure.
- NSRS Continuity of Operations Plan.
- NSRS Resources Transfer Plan.
- Data records on electronic media as specified by the MPAD Division Director or designee, COR, or CO.
- Any other documentation to facilitate the data transfer process.

All remaining NSRS electronic and printed materials, including awareness and promotional exhibit materials, and any other awareness materials not pre-printed with the incumbent's name and address.

C.4 NSRS Deliverables

The contractor shall provide the following deliverables:

	DELIVERABLE	SCHEDULE	RECIPIENT
1.	NSRS Monthly Status and Budget Report	Monthly	MPAD Director or designee, CO, and COR
2.	NSRS Website Status Report	Monthly	MPAD Director or designee
3.	Coordinate creation of a set of individually addressed, company-specific contractor letters; signed by NSRS Program Manager or designee	Quarterly	New NASA contracts of $100k or greater in value, as well as any contract under $100k involving hazardous materials, safety critical processes, or processes in which improper

			handling could result in loss of life or injury
4.	Support and Attend NSRS Exhibits/Events	As requested	OSMA
5.	Process Exhibit Survey Results	Within the following week of the exhibit (or as directed)	MPAD Director or designee
6.	Maintain Business Reply Mail (BRM) Account	As needed	OSMA
7.	Maintain PO Box Lease	As needed	OSMA
8.	Process Incoming Reports	As received, within One (1) government business day (or as directed)	MPAD Director or designee
9.	Conduct a walk-through inspection of the offsite NSRS office	As requested	OSMA
10.	NSRS Resources Transfer Plan [three (3) copies]	90 days prior to expiration of task, if requested	MPAD Director, COR and CO
11.	Closeout Document Requirements	Prior to task end date, if requested	MPAD Director, COR and CO
12.	Prepare and transmit narrative report detailing all project activities, and provide ad hoc reports, as required	At the end of each task order, if requested	MPAD Director, CO, and COR
13.	Prepare and transmit any trend analysis report of NSRS activity	At the end of each task order or by special request, if requested	MPAD Director or designee

APPENDIX D - BACKGROUND & DESCRIPTION OF SERVICES TO BE PROVIDED FOR SAFETY AND MISSION SUCCESS REVIEW (SMSR) SUPPORT

D.1 Safety and Mission Success Review (SMSR)

The purpose of a SMSR is to provide a consistently managed and structured forum for the Office of Safety and Mission Assurance (OSMA), the Office of the Chief Engineer (OCE), and the Office of the Chief Health and Medical Officer (OCHMO) staff. The SMSR was designed to provide the Chief Safety Officer, Chief Engineer, and Chief Health and Medical Officer, hereafter the Technical Authorities, with a consistently managed and structured risk management forum of their respective communities to independently assess the readiness to proceed with a NASA mission, both crewed and expendable launch vehicle (ELV), as well as test flights for commercially-developed launch vehicles and spacecraft. The SMSR enables the Technical Authorities to make informed decisions as to readiness to proceed with the subject mission, and ultimately provide recommendations to the appropriate Associate Administrator. The contractor will continue to work very closely with the NASA OSMA, OCE, and OCHMO management and staff to ensure the SMSR addresses all safety-related technical and programmatic issues and residual risks associated with the subject mission. More information about the SMSR program can be found at https://sma.nasa.gov/smsr.

The OSMA manages the SMSR process at NASA Headquarters (HQ) for the Technical Authorities, with participation from OSMA, OCE, and OCHMO specialists at NASA Centers and component facilities. The OSMA at NASA HQ requires administrative and technical support services for the SMSR process. The scope of the SMSR process includes support for pre-SMSR Information Technology (IT) dry run events, pre-SMSR events, SMSR events, delta-SMSRs, special limited briefings, and limited support for delegated Safety and Mission Success Assessment (SMSA) events, hereafter referenced as “SMSR Events”.

The contractor shall implement the formal process baseline documentation, including work instructions, procedures, and checklists, as well as policy and planning documents. This implementation will include the following tasks:

Prepare and distribute near-term and long-term SMSR Events schedules derived from established NASA program/project scheduling sources to a distribution list that is reviewed and maintained monthly by the contractor.

Review and validate complete quality assurance of posted SMSR Events schedules to OSMA SMSR website.

Maintain and coordinate with the NASA Safety Center (NSC) all required updates to the OSMA SMSR website located at sma.nasa.gov.

Create, populate, and maintain SMSR Events files within an online data repository system (currently SharePoint).

Assist SMSR Events presenters and participants with access to the online data repository system.

Manage SMSR Events archival materials in the online data repository system.

Schedule and coordinate SMSR Events (except SMSA):

Coordinate with HQ OSMA Mission & Program Assessment Division (MPAD) staff. HQ OSMA Mission Assurance Standards and Capabilities Division (MASCD) staff, and Technical Authorities administrative staffs to schedule SMSR Events.

Identify and coordinate logistics with presenters and participants.

Maintain established participant lists for various types of SMSR Events, including crewed and science missions.

Prepare agendas.

Coordinate with OSMA MPAD and MASCD the preparation of the "HQ OSMA Review Summary" Briefing Charts for SMSR Events as applicable.

Screen presentations for completeness, appropriateness, and compliance with NASA and Federal standards.

Provide assistance during and after SMSR Events (except SMSAs):

Prepare on-site conference rooms and/or virtual meetings.

Operate WebEx (or related program).

Monitor and ensure that only approved participants are accessing the event.

Compile event "minutes", which includes the capture of the meeting audio (if applicable), a list of participants, the final agenda, final SMSR Event polling (if applicable), and tracking of any action items (if applicable).

Provide assistance to participants with any issues they may experience during the SMSR Event.

Track and closeout of SMSR Event action items.

Record and track SMSR Events conducted.

Archive SMSR Event presentation materials and meeting recordings in a NASA designated repository (currently SharePoint).

Provide limited support for delegated SMSAs, to include:

Creating a repository for SMSA presentation materials in the SMSR online data repository system (currently SharePoint).

Record and track SMSR Events conducted.

Archive SMSR Event presentation materials and meeting recordings in the NASA designated repository (currently SharePoint).

Participate in periodic (usually monthly) program progress reviews with the OSMA MPAD Staff, Contracting Officer Representative (COR), and/or Contracting Officer (CO), to include:

Execute/track budget.

Monitor open action items.

Perform program trend analysis (upon request).

D.2 Maintain and update SMSR operational and policy procedures and documentation

The contractor will store SMSR procedures and documentation in a password-protected and secure online data repository to which the MPAD Director or designee, COR, and CO will have access. At the request of the MPAD Division Director or designee, the contractor will update and maintain the following pre-existing documents used by NASA in execution of NSRS program responsibilities:

SMSR Resources Transfer Plan

SMSR Action Log

SMSR HOWI

General SMSR Correspondence

D.3 SOW/Task Order Closeout

Ninety (90) days prior to the expiration date of this SOW/Task Order, and at the request of the MPAD Director or designee, COR, or CO, the contractor will update and implement a plan to turn over all SMSR program resources to a successor. The contractor will deliver three (3) updated copies of the SMSR Resources Transfer Plan to the MPAD Director or designee, COR and CO. NASA will review the plan and provide comments to the contractor within ten (10) working days. The contractor will revise the plan by incorporating the comments received from NASA and deliver revised copies within ten (10) working days of receipt of comments. The contractor will implement the plan and deliver the products specified in the plan. The contractor will deliver, at a minimum, the following to ensure continued uninterrupted operation of the SMSR process:

Data records on electronic media as specified by the MPAD Director or designee, COR, or CO.

Any other documentation to facilitate the data transfer process.

All remaining SMSR electronic and printed materials, including awareness and promotional exhibit materials, and any other awareness materials not pre-printed with the incumbent's name and address.

D.4 SMSR Deliverables

The contractor shall provide the following deliverables:

	DELIVERABLE	SCHEDULE	RECIPIENT	QUANTITY
1.	SMSR Schedules	Monthly, at a minimum, or as required	Designated MPAD Staff	As required
2.	SMSR Archival Records	Within 30 days following completion of all open SMSR Action Items	Designated MPAD Staff	Media posted online, as required
3.	NASA Account Status Matrix	Monthly, at a minimum, or as required	COR, and CO	As required
4.	SMSR Program Monthly Progress and Budget Report	Monthly, at a minimum, or as required	Designated MPAD Staff, COR, and CO	As required
5.	List of Completed SMSRs, etc.	Monthly, at a minimum, or as required	Designated MPAD Staff	As required
6.	Open Contractor Action SMSR Tracking Log	Monthly, at a minimum, or as required	Designated MPAD Staff	As required

All deliverable documentation and/or reports the contractor is required or requested to deliver will be provided in electronic format compatible with Microsoft Word, Excel, and/or PowerPoint software as appropriate, in addition to paper format (original to CO or OSMA Designated Representative, as applicable). Both formats shall be clearly labeled.

APPENDIX E – APPLICATIONS AND TOOLS

Office of Safety and Mission Assurance Website Public	**Public facing website for all things Office of Safety and Mission Assurance (OSMA). Built on Sitefinity CMS.**
NASA Mishap Investigation System (NMIS)	The NASA Mishap Information System, or NMIS, is the agency's system for capturing safety and mishap data. Custom-designed to meet NASA and Occupational Safety and Health Administration (OSHA) requirements, NMIS provides streamlined reporting and tracking of mishaps (including property damage, injuries and illnesses) close calls and hazards.
NASA Safety Center Website	To provide services for the SMA Community, the NASA Management Team and NASA employees that foster Mission Success through Technical Excellence for the SMA Community, Knowledge Capture and Dissemination, Coordinated Audits and Assessments, and Mishap Investigation Support. Built on Sitefinity CMS.
NASA Safety Center entry on NASA portal	To provide a public facing website for the NSC as part of NASAs portal. CMS is currently Drupal.
NASA Safety Center FileMaker WebDirect Production*	This FileMaker Server software application will be used for internal NSC workflows and tracking of tasks. This is the production implementation. *being discontinued
NSC Mediasite	Mediasite application hosts presentations created by the NSC for SATERN courses. SATERN leverages the software to play presentations embedded in courses – COTS product used by NSC
NMIS Mobile Dashboard	NMIS Mobile Dashboard gives a big-picture look at NASA mishaps, including NASA safety event statistics including injury, illness and property damage metrics.
MySTEP	MySTEP provides curriculum and qualification information and tracks progress in completing NASA's SMA Technical Excellence Program (STEP). The Safety and Mission Assurance (SMA) Technical Excellence Program (STEP) is a program established to provide NASA with a means to measure and continuously advance the proficiency of its SMA Workforce. MySTEP outlines all aspects of the STEP training process, including the purpose of the program, curriculum details equivalence application, and qualification.
Portfolio Web	Media Asset Management System for the NSC
Professional Development Services (PDS)	The NSC's Safety and Mission Assurance (SMA) Professional Development Services (PDS) helps SMA community members achieve their short- and long-term goals, with an emphasis on continual learning.

Mishap Preparedness & Contingency Plan (MPCP)	The Mishap Preparedness and Contingency Plan (MPCP) software is designed to assist NASA centers, programs and projects in developing Contingency Plans required under NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping. The software captures inputs relating to MPCP requirements and puts the data into a structured format with the final product converted to Microsoft Word document.
SMA Toolbox	The SMA Toolbox is designed to help strengthen key SMA disciplines, complement SMA Technical Excellence Program training resources and mentor the next generation of SMA engineering professionals. You can browse the toolbox using key-word search or selecting from the dropdowns in navigation.
System for Tracking Audits/Assessments and Reviews (STAR)	STAR (System for Tracking Audits/Assessments and Reviews) manages audit and assessment data to meet agency audit reporting requirements.
NSC DevMaster	Content management system for NSC applications.
NSC Wrike	Wrike is online project management and collaboration software that will provide the NSC the flexibility and intuitive features necessary to improve communication and increase productivity on a daily basis. Although similar to Microsoft Project, the online tools are much easier to use in a cross-office, cross-platform environment such as the NSC. It features projects, folders, tags, tasks, subtasks, dependencies, resource and time tracking, milestones, interactive Gantt charts, interactive card views, customizable workflows, and robust reporting options. The application will only be used for very low data such as routine tasks, draft working designs and concepts, and associated project/task comments. No confidential information will be housed on the system, and while not as efficient or capable, the NSC has backup internal systems available to continue operations if this system were compromised. COTS product
NASA Audit Calendar	The NASA Audit Calendar is a tool to use when planning and preparing for NASA audit activities. NASA center and component facility personnel can assist agency audit planners by inputting known audits, assessments and reviews occurring at their respective locations. Audit planners can then check the Audit Calendar before scheduling an audit, assessment, review or other similar activity to identify potential conflicts.
Agency SMA Requirements Database	All OSMA managed directives and standards are maintained in Cradle to facilitate queries, tracking changes, etc.

Flight Projects Database	An OSMA managed database used to archive and to manage the flow of reviewing flight project data products such as orbital debris assessment reports, waiver requests, planetary protection categorization, etc.
OSMA Policy and Requirements Management	This site was designed to support the creation and long-term archival of important documents. Within this site there are resources that assist with the creation or modification of policy and requirements documentation, as well as information about in-work documentation and the OSMA policy and requirements documentation library. It is also used to manage the flow of the formal update and review of OSMA managed directives and standards.
Office 365	NASA provided tool. Includes full suite of provided applications including Teams and SharePoint. SharePoint instances are located at multiple centers as well as a Agency-wide instance.

APPENDIX F – Example Events

The **Chief Safety and Mission Assurance Officer (CSO) Summit** is a multi-day event held every couple of years to focus on the role of the CSO, how it varies center to center and program to program, requirements that define and guide the position, and ways to develop future CSOs. The goal is to be an important technical exchange and networking opportunity. Has been traditionally held in Cleveland, Ohio when in-person.

The **STEP Cohort Program** is designed to progress cohort participants through STEP Level 2 and 3 training within 12- and 24-month period. This is a mix of virtual and in-person events at various Centers.

The **Executive Safety Leadership Program (ESLP)** is a two-day program designed to ensure safety is incorporated into the values, policies and practices of NASA's leaders and thereby address requirements in 29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters. Safety has long been a core value for NASA, and it is through constant attention to it that the agency is able to build mission success. Has traditionally been held at the Kennedy Space Center.

The **Trilateral Safety and Mission Assurance Conference (TRISMAC)** is jointly organized by the European Space Agency, Japan Aerospace Exploration Agency and NASA. Location is rotated with NASA hosting every 3 years. The objectives of TRISMAC are to strengthen cooperation among international partners and industry, reinforce the impact of Safety and Mission Assurance (SMA) on cost reduction and effectiveness, enable information exchange at the international level, share new developments, innovations and lessons learned, attract and focus the space community's attention to SMA challenges and opportunities and identify opportunities for the advancement of SMA policies and standards.

The **Trilateral Summit**, held every year and a half: The meeting, consisting of representatives from NASA, European Space Agency, and Japan Aerospace Exploration Agency, provides an opportunity for leading spacefaring nations to share best practices, lessons learned, and current concerns relative to completing missions safely and successfully.

The **Audit and Assessment Operational Meeting** is a three-day event held biennially to allow members of the NASA SMA community to share audit data, trends and best practices and discuss policy requirement changes and implementation challenges. Location is varies among Centers.

Safety Day events are held at various centers throughout the year to promote and engage NASA personnel about OSMA topics.

APPENDIX G – Guide to Step located as an attachment in Section J

ACRONYMS

AIO	Audits and Investigations Office
AP	Associated Press
BPR	Baseline Performance Review
CIS	Center for Internet Security
CKO	Chief Knowledge Officer
CMS	Content Management System
CO	Contracting Officer
COR	Contracting Officer's Representative
COTs	Commercial Off-The-Shelf
CSO	Chief Safety and Mission Assurance Officer
CUI	Controlled Unclassified Information
FIPS	Federal Information Processing Standards
FISMA	Federal Information Security Management Act
FTSDB	Flight Test Safety Database
GFE	Government Furnished Equipment
GOTS	Government Off-The-Shelf
GPO	Government Printing Office
GRC	Glenn Research Center
IACET	International Association for Continuing Education and Training
IFOSA	Institutional/ Facility/ Operational Safety Audits
IPT	In-Person Training
ISD	Instructional System Design
ISMD	Institutional Safety Management Division
IT	Information Technology
ITAR	International Traffic in Arms Regulation
IV&V	Independent Verification & Validation
LMS	Learning Management System
MASCD	Mission Assurance Standards and Capabilities Division
MIB	Mishap Investigation Board
MPAD	Missions and Programs Assessment Division
MWAR	Mishap Warning Action Response
NIST	National Institute of Standards and Technology
NMIS	NASA Mishap Information System
NPR	NASA Procedural Requirement
NSC	NASA Safety Center
NSCKN	NSC Knowledge Now
NSRS	NASA Safety Reporting System
OIICS	Occupational Injury/Illness Classification System

OSMA	Office of Safety and Mission Assurance
POA&M	Plan of Action & Milestones
POC	Point of Contact
QAAR	Quality Audit, Assessment and Review
RCAT	Root Cause Analysis Tool
RMO	Resource Management Office
SAAR	Surveys, Audits, Assessments, and Reviews
SATERN	System for Administration Training and Education Resources for NASA
SBU	Sensitive But Unclassified
SHLA	Safety and Health Learning Alliance
SMA	Safety and Mission Assurance
SME	Subject Matter Expert
SMSR	Safety and Mission Success Review
SMSA	Safety and Mission Success Assessment
SOW	Statement of Work
STEP	SMA Technical Excellence Program
TEO	Technical Excellence Office
TMS	Task Management System
VM	Virtual Machine
WBT	Web-Based Training