



Welcome to the Safety and Mission Assurance Engineering Contract III (SMAEC III) Industry Day

February 1, 2023
Virtual Microsoft TEAMS
9 am CST



Welcome to the Safety and Mission Assurance Engineering Contract III (SMAEC III) Industry Day

Ryan Gregory
Contracting Officer



Safety and Mission Assurance

"Safe human space exploration for the world"



Agenda

Speaker	Subject
Ryan Gregory, Contracting Officer	Welcome to Industry Day, Introductions
Shari Miller, Office of Procurement	Welcome
Robert Watts, Senior Small Business Specialist	Welcome
Willie Lyles, Director Safety and Mission Assurance Directorate	Organization Vision and Objectives
Ryan Gregory, Contracting Officer	Current Contract Overview
Gregg Baumer, Requirements Development Team (RDT) Chair	Technical Overview
Ryan Gregory, Contracting Officer	Procurement Schedule and Next Steps



Disclaimer

- These slides are for information and planning purposes only. No solicitation exists at this time.
- This presentation shall not be construed as a commitment by the Government or as a comprehensive description of any future requirements.
- If a solicitation is released, it will be synopsisized on the Government-wide point of entry (GPE), as defined by FAR 2.101.



Goals of Industry Day

- Promote competition on the proposed acquisition
- Develop Industry's understanding of the Government's current vision and objectives
- Provide Industry with the opportunity to meet with the Government early enough in the procurement process to provide input into the SMAEC III procurement strategy
- Encourage offerors to submit questions and comments electronically in order to enhance the communication regarding the Industry Day goals
 - The Government will respond officially to all questions submitted by posting them to the Governmentwide Point of Entry (GPE) and SMAEC III websites



Industry Day Logistics

- Industry Day Attendance
 - For those dialed in by phone ID only, please submit a list of names for your group via email to jsc-SMAEC3@mail.nasa.gov
- A copy of this presentation including all following correspondence will be posted on the SMAEC III procurement website and SAM.gov as follows:
 - <https://www.nasa.gov/jsc/procurement/smaec3>
 - <https://sam.gov/opp/2f47b1cd25e540b6ab8db9b516e31035/view>
- One-on-Ones from the SAM.gov RSVP registration will be held virtually beginning tomorrow at 9am CT



Responses to Questions

- Questions are encouraged, however no answers shall be provided during today's Industry Day presentation in order to provide thorough written responses.
- Question Submittal Process:
 - Questions may be submitted via email and must be submitted by 5:00 pm CT on Friday, February 3, 2023
- Questions submitted electronically will be answered and posted to Governmentwide Point of Entry (GPE) (SAM.gov) and will be considered official responses.
 - Clarifications concerning the way in which NASA conducts business today will be answered on SAM.gov
 - If a difference exists between any verbal communication and written responses to questions, the written responses shall govern



Welcome

Shari Miller,
Deputy Manager of Operations Support Procurement Office
Office of Procurement



Welcome

Robert Watts, Senior Small Business Specialist
Office of Small Business Programs



Safety and Mission Assurance

"Safe human space exploration for the world"



Office of Small Business Programs/JSC Contact Information

- Main phone number: (281) 483-4512
- Robert Watts, Senior Small Business Specialist
- Monica Craft, Small Business Specialist
- Tumarrow Romain, Small Business Specialist
- All emails should be sent to:
Jsc-smallbusiness@mail.nasa.gov
- Location: Building 1, Suite 453
- Address:
NASA Johnson Space Center,
Industry Assistance Office
Mail Code: BA
2101 NASA Parkway
Houston, TX 77058-3696



Welcome

Willie Lyles, Director Safety and Mission
Assurance Directorate



JSC Safety and Mission Assurance

VISION:

Safe human space exploration for the world

MISSION:

**Ever vigilant, advancing safe human space
exploration through Risk Management
Expertise, Service Excellence, and
Collaborative Partnerships**

CORE VALUES:

Safety, Teamwork, Integrity, Excellence, Inclusion



Safety and Mission Assurance

"Safe human space exploration for the world"



SMA Scope: We Are Everywhere





Key Challenges

- Growing Partner portfolio combined with reduced resources
- Enabling Commercial Developers SMA capabilities for LEO, while focusing the government transition towards Exploration
- Determining appropriate balance of SMA in-line (product development) vs. assurance (product review) services for emerging programs
- Developing creative, non-traditional partnerships to allow collaboration with commercial industry for providing SMA products and services
- Evolving core capabilities is essential for providing exploration leadership and integration with new commercial partners globally
- How we continue to innovate the ways we assess human spaceflight risk for new commercial industry endeavors



Current SMAEC II Overview

Ryan Gregory
Contracting Officer



Current Contract Overview

- Contract Number: 80JSC019D0008
- Prime Contractor: Science Applications International Corp
- Contract Type: Cost-Plus-Award-Fee (CPAF), with Core, Indefinite-Delivery/Indefinite-Quantity (IDIQ), and Level of Effort (LOE) elements.
- Period of Performance: June 1, 2019 - May 31, 2024 (2 year base with a 2 year option and a 1 year option)
- Skills currently provided on contract include:
 - System safety (including Probabilistic Risk Assessments), reliability, quality engineering and assurance, software safety assurance, software quality assurance, pressure system engineering, Information Technology (IT), and technical administration



Proposed Contract

- Solicitation Number: TBD
- NAICS Code and Size Standard
 - The NAICS Code is 541330 (Engineering Services)
 - The size standard is \$22.5M
- Period of Performance contemplated is:
 - Phase In: ~60 days
 - Base Period: June 1, 2024 – May 31, 2029
 - Options: None
- Contract Types contemplated: Indefinite-Delivery/Indefinite-Quantity (IDIQ), Cost-Plus-Fixed-Fee (CPFF), Firm Fixed Price (FFP) and Level of Effort (LOE) elements.
- Anticipated contract requirements are the same as SMAEC II
- In accordance with FAR 16.301-3(a)(3), a cost-reimbursable contract may only be used when the contractor's accounting system is adequate for determining costs applicable to the contract or order. This requirement also extends to subcontractors performing under a cost-reimbursable subcontract.
- Offerors should review Chapter 8 of the DCAA Audit Manual to determine if they are subject to full or modified Cost Accounting Standards (CAS) coverage and if they require an adequate Disclosure Statement prior to award. The link is:
 - [https://www.dcaa.mil/Content/Documents/cam/Chapter_08 - Cost Accounting Standards.pdf](https://www.dcaa.mil/Content/Documents/cam/Chapter_08_-_Cost_Accounting_Standards.pdf).



Special Consideration

NOTE TO PROSPECTIVE OFFERORS

- Prospective offerors are reminded not to contact incumbent personnel (either directly or through electronic means) during duty hours or at their place of employment, as such contacts are disruptive to the performance of the current contract.



Technical Overview SMAEC II

Gregg Baumer, RDT Chair



Safety and Mission Assurance

"Safe human space exploration for the world"



SMA Scope

- NASA spaceflight Programs and Projects, including associated payloads, sub-systems, Government Furnished Equipment (GFE) and Commercial Furnished Equipment (CFE)
 - Includes primarily JSC led programs and projects, but also includes other NASA center led efforts
 - Primarily covers assurance work but does include in-line product development support as well
- Significant programs include:
 - Artemis Campaign: Cross Program Integration, Orion Program, Gateway Program, Human Landing System (HLS) Program, and EVA and Human Surface Mobility Program (EHP)
 - Commercial Crew Program (CCP)
 - Commercial LEO Development Program (CLDP)
 - International Space Station Program (ISSP)
 - Human Research Program (HRP)
 - Potential future exploration programs such as lunar surface systems
- Institutional support
 - JSC facilities such as flight hardware manufacturing and testing locations, including pressure systems
 - WSTF operations
 - Receiving Inspection and Testing Facility (RITF)



SMA Requirements Overview

- SMA technical requirements are rooted in robust policies, processes, and standards for spaceflight and institution activities for both LEO and lunar missions
- As the way we do business and the exploration programs evolve, so must our ability to adapt to enhance our SMA technical requirements
- For spaceflight development, SMA provides recommendations and assessments over the entire Program/Project development lifecycle with the goal to help identify and mitigate safety and mission success risks
- SMA tasks across the development lifecycle include activities such as:
 - Establishing and review of system design and operational requirements, review of design compliance, review of test plans, procedures and results, review of verification data, assessments of operations and associated products, real-time mission support, etc.
 - Review and performance of various analyses such as:
 - Quality engineering assessments for hardware and software, qualitative and quantitative risk management analyses, hazards analyses, Failure Mode and Effects Analyses (FMEA)/Failure Modes, Effects, and Criticality Analysis (FMECA), trending analyses, trade studies, and technology assurance analyses;
 - Performance of evaluations of flight worthiness and readiness and generation of flight assessment documentation to Certification of Flight Readiness (CoFR).



SMA Requirements Overview (cont.)

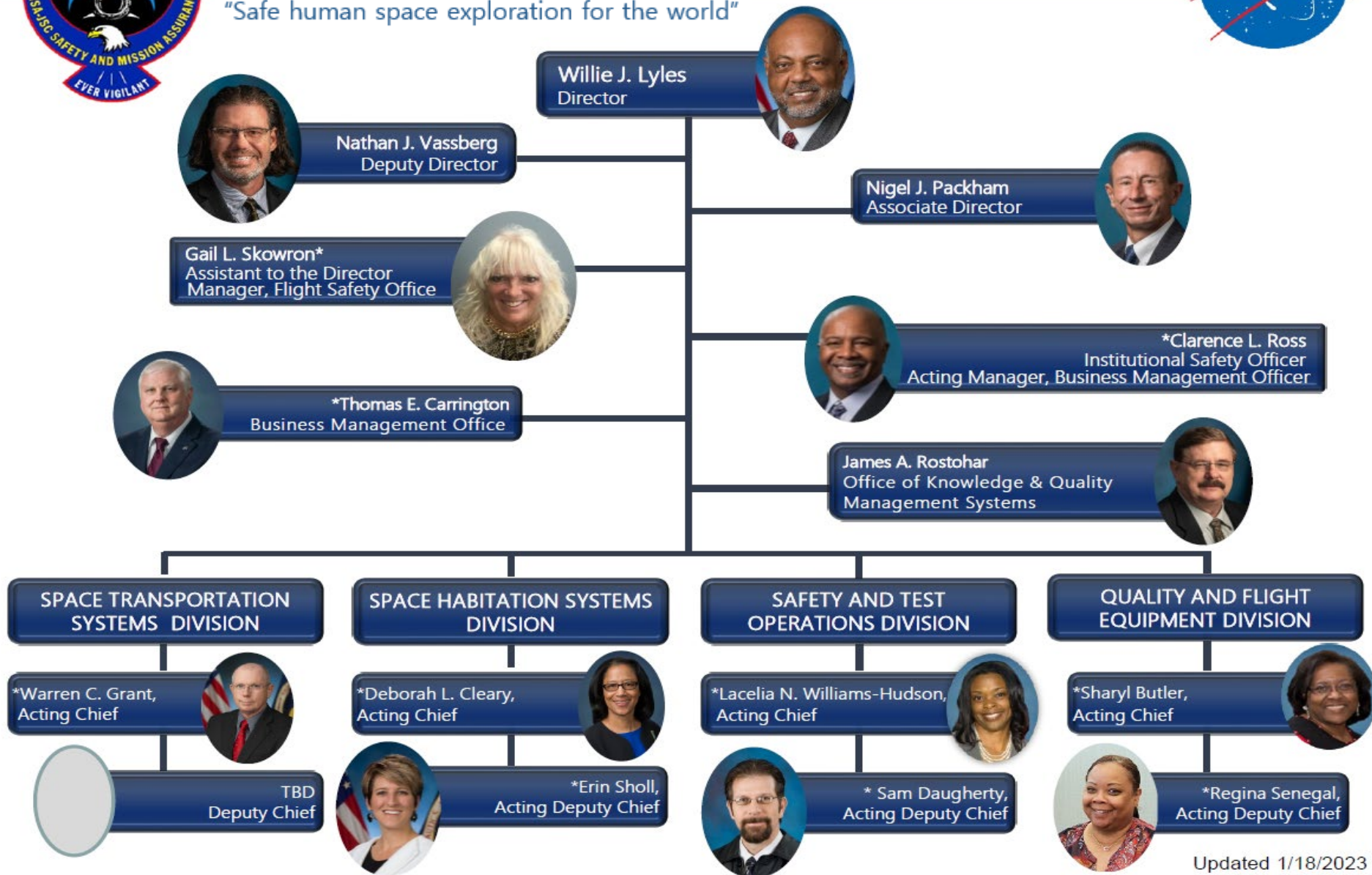
- SMA requirements also cover support for the ground activities/institution and technical services for the NA Directorate
- Institutional Support:
 - Quality assurance support to various activities across the center
 - JSC Pressure Systems assurance
 - WSTF Operational Support to include pressure systems assurance, Quality Engineering, and Quality Management System (QMS) Support
 - RITF Operational Support
- Technical Services:
 - Risk Management Support and Knowledge Management
 - Information Technology support to include: SMA-Managed Server Administration, IT Security, SMA-Unique User Hardware and Software Support, IT Planning and Tools, Technologies and Data Systems
 - QMS, Records Management and Information Management support
 - SMA Technical Administrative Meeting Support
 - SMA Training and Education development



JSC SAFETY & MISSION ASSURANCE DIRECTORATE



"Safe human space exploration for the world"



Updated 1/18/2023



NA Functional Overview

JSC Safety and Mission Assurance

Office of the Director

Business Management Office

- IT, Risk and CM management
- Budgets and contracts
- Strategic Planning process

Flight Safety Office

- Chief Safety & Mission Assurance Officers, Artemis Campaign SMA Management

Office of Knowledge and Quality Management Systems

- Knowledge Mgmt for all Programs, Projects and JSC Organizations
- Manage JSC's Quality Mgmt Systems to ISO9000 and AS9100

Space Transportation Systems Division

- Orion SMA Management and Discipline Leadership – System Safety; Reliability; PRA; Software Safety and support (safety panels, operations)
- Artemis Functional Aera SMA Leadership - Integrated PRA, Hazard and Crew Survival Analysis Development
- Orion, HLS, LTV System Safety & Reliability Engineering – Assurance and Integrated Hazard Analysis (IHA)
- Gateway, HLS, and EHP PRA Development

Space Habitation Systems Division

- ISSP system safety, reliability, software assurance, operations safety, Safety Review Panel support
- Gateway SMA discipline leadership (SE&I, R&M, Software Assurance, Operations), Safety Review Panel Chair/support, IHA Development
- Commercial LEO Free Flyer SMA discipline leadership (SE&I, software assurance, operations, safety panels)
- EHP Pressurized Lunar Rover SMA flight lead and support

Quality and Flight Equipment Division

- QA (inspection) and QE for all JSC Programs and Projects
- Safety and reliability engineering for EVA (EHP) and GFE SMA requirement definition for projects
- Software Assurance
- Perform mechanical and electrical part testing and failure analysis
- Specialized training in NASA workmanship standards
- Assurance and certification of special manufacturing and engineering processes (e.g., welding, NDE, and EEE parts)
- Procurement Quality Assurance
- GIDEP and NASA AI ERTS

Safety and Test Operations Division

- Pressure Vessels and Pressurized Systems Engineering and Inspection
- Quality and System Safety Engineering and Assurance for WSTF Operations

Separate NA Contract – CSFO II

- Occupational Safety Program
- Explosives Safety
- Voluntary Protection Program
- Emergency Preparedness & Services
- Fire Protection
- Facility Risk Mgmt.
- Training and Awareness



Technical Overview Summary

- As noted herein, the anticipated contract requirements are the same as SMAEC II
- SMA requirements cover both spaceflight and institution-based activities for related programs and projects
- SMA requirements are primarily focused on assurance activities but also include in-line development, as necessary
- Spaceflight programs/projects are continuously evolving as exploration activities are becoming more defined
 - ISS is scheduled for operations through 2030
 - Artemis campaign is evolving with planned annual lunar crewed missions
 - Developing studies underway for lunar surface missions and associated architecture for sustained human presence
- SMA must always remain agile to enhance our products and services to align with the needs of our partners and stakeholders



Procurement Schedule and Next Steps

Ryan Gregory, Contracting Officer



Procurement Schedule

- The Government does intend to issue a Draft Request For Proposal (DRFP).
- Following the release of the DRFP, Industry will have an opportunity to submit anonymous questions in writing so that the Government may officially respond.

Anticipated Milestone Schedule:

- Release Draft Request for Proposal: April 19, 2023
 - Release Request for Proposal: June 12, 2023
 - Proposal receipt: July 12, 2023
 - Preproposal Conference: June 19, 2023
 - Contract Award: January 23, 2024
 - Phase-In Begins: March 31, 2024
 - Contract Start: 1 June 2024
- A more detailed procurement schedule will be posted to the procurement website as soon as it is available.



Question Schedule

- Thank you in advance for your questions
- Reminder that email questions will be accepted through Friday (2/3/2023) by 5pm CT
 - jsc-SMAEC3@mail.nasa.gov
- Answers will be provided in writing and posted at SAM.gov
 - <https://sam.gov/opp/2f47b1cd25e540b6ab8db9b516e31035/view>



One-on-One Communication with Industry

- February 2, 2023 via TEAMS.
 - Meetings will be the top of each hour starting at 9am CT.
- No more than 4 individuals may represent any party or team of parties.
- Only one meeting will be allowed per company.
- Meetings will not exceed 25 minutes in length.



How to Get Connected

- SMAEC III Public Websites
 - <https://www.nasa.gov/jsc/procurement/smaec3>
 - <https://sam.gov/opp/2f47b1cd25e540b6ab8db9b516e31035/view>
- NASA/JSC Contract Opportunities
 - <https://sam.gov/content/home>
- JSC Procurement Website
 - <https://www.nasa.gov/jsc/procurement>
- Industry Assistance Office, JSC Bldg. 1
 - jsc-industry-assistance@mail.nasa.gov



Thank You for Attending!

Visit:

<https://www.nasa.gov/jsc/procurement/smaec3>



Backup



Safety and Mission Assurance

"Safe human space exploration for the world"



Acronyms

CAS	Cost Accounting Standards
CCP	Commercial Crew Program
CFE	Commercial Furnished Equipment
CLDP	Commercial LEO Development Program
CoFR	Certification of Flight Readiness
CPAF	Cost-Plus-Award-Fee
CPFF	Cost-Plus-Fixed-Fee
CSFO	Center Safety and Fire Operations
DCAA	Defense Contract Audit Agency
DRFP	Draft Request for Proposal
EEE	Electrical, Electronic, and Electromechanical
EHP	EVA and Human Surface Mobility Program
EVA	Extra Vehicular Activity
FAR	Federal Acquisition Regulation
FFP	Firm Fixed Price
FMEA	Failure Mode and Effects Analysis
FMECA	Failure Modes, Effects, and Criticality Analysis
GFE	Government Furnished Equipment
GIDEP	Government-Industry Data Exchange Program
GPE	Government-wide Point of Entry



Safety and Mission Assurance

"Safe human space exploration for the world"



Acronyms (cont.)

HLS	Human Landing System
HRP	Human Research Program
IHA	Integrated Hazard Analysis
ISSP	International Space Station Program
IDIQ	Indefinite-Delivery/Indefinite-Quantity
LEO	Low Earth Orbit
LOE	Level of Effort
LTV	Lunar Terrain Vehicle
NAICS	North American Industry Classification System
NDE	Nondestructive Evaluation
QA	Quality Assurance
QE	Quality Engineering
QMS	Quality Management System
PRA	Probabilistic Risk Assessment
R&M	Reliability and Maintainability
RDT	Requirements Development Team
RITF	Receiving Inspection and Testing Facility
SE&I	Systems Engineering and Integration
SMA	Safety and Mission Assurance
SMAEC	Safety and Mission Assurance Engineering Contract
WSTF	White Sands Test Facility