



Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

NASA Glenn Research Center
May 23, 2012





Agenda

9:00 - 9:05 AM	Welcome and Introductions	Nikki Brown
9:05 - 9:30 AM	Contract and RFP Overview	Nikki Brown
9:30-10:00 AM	Operational Safety & Occupational Health	Oswaldo Rivera
10:00 -10:15 AM	Energy and Environment	Don Easterling
10:15-10:30 AM	Aero/Space Systems/Ground Support Mission Assurance	Gary Kelm
10:30-11:00 AM	Questions & Answers	
11:00AM	Adjourn	



Introductions

- **Disclaimer**
 - The purpose of this call is for clarification of the Draft RFP (DRFP) and applicable documents. The Government will not provide advice to potential offerors on what to propose or what will elicit a favorable rating. NASA will not indulge in hypothetical questions (e.g. “if we propose this, how would NASA rate it?”)
- **Conference Call**
 - All lines except the presenters’ will be muted
- **Q&A Procedure**
 - Callers who wish to ask a question will press *1
 - Operator will place callers who wish to ask a question in a queue
 - Operator will open lines one at a time for caller to ask a question
 - 30 minutes will be allotted for Q&A session
 - Unanswered questions will need to be submitted in writing
 - If your question has been answered before your line is open, please indicate so that we can quickly move on to the next caller



Introductions

- The complete and final versions of all Industry Day materials will be posted on the Federal Business Opportunities (FBO) site for all potential offerors.
- Attendance at the Industry conference is neither required nor a prerequisite for proposal submission and will not be considered in the evaluation.
- **All Statement of Work (SOW) information provided during Industry Day is based on the DRFP as posted to the FBO site on 05/18/2012.** The Government anticipates a similar structure for the Final RFP, however it is subject to change.



Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

Nikki D. Brown
Contracting Officer
Contract and RFP Overview





Contract Overview

Overall Requirements

This contract provides Safety, Health, Environmental, and Mission Assurance Support Services to the Glenn Research Center, specifically Codes QS, QE and FE in the following areas:

- **Operational Safety (~ 32%)**

Safety management, engineering, and compliance; fire protection engineering; construction project support; and safety and health plans

- **Occupational Health (~32%)**

Industrial hygiene, health physics, hazard communication and chemical labeling, chemical hygiene, bulk sampling and chemical analysis in support of IH/Environmental

- **Energy and Environment (~24%)**

Energy and Environmental Compliance including conservation of resources through sustainability and proper waste disposals via Air, Water and Land

- **Aero/Space Systems and Ground Support Equip. Mission Assurance -IDIQ**

System safety, reliability and maintainability, Quality Assurance, Software Assurance, Materials and Processes, EEE Parts Assurance and Risk Management



Contract Overview

Contract Type	Cost+ Fixed Fee (CPFF) with Indefinite Delivery Indefinite Quantity (IDIQ) Element
Type of Competition	Full and Open
Contract Period	5 years (~ 19 month base, three 1-year options)
Place of Performance	NASA Glenn Research Center (Lewis Field and Plum Brook Station)
Phase-In	Approximately 30 days, Firm-Fixed Price
Government Provided Resources	Office space, furniture, IT equipment and telephones will be provided to accommodate up to 39 people. The Government will provide the Contractor use of existing and available Government owned tools and equipment for the performance of this contract. Lists of available GFP and GFE will be posted with the Final RFP
History/Follow-On	SHEMA is a consolidation of the Environmental Management and Safety Office Support Services (EMASS) and Safety and Mission Assurance Support Services (SMASS) contracts to achieve efficiencies in management and performance.



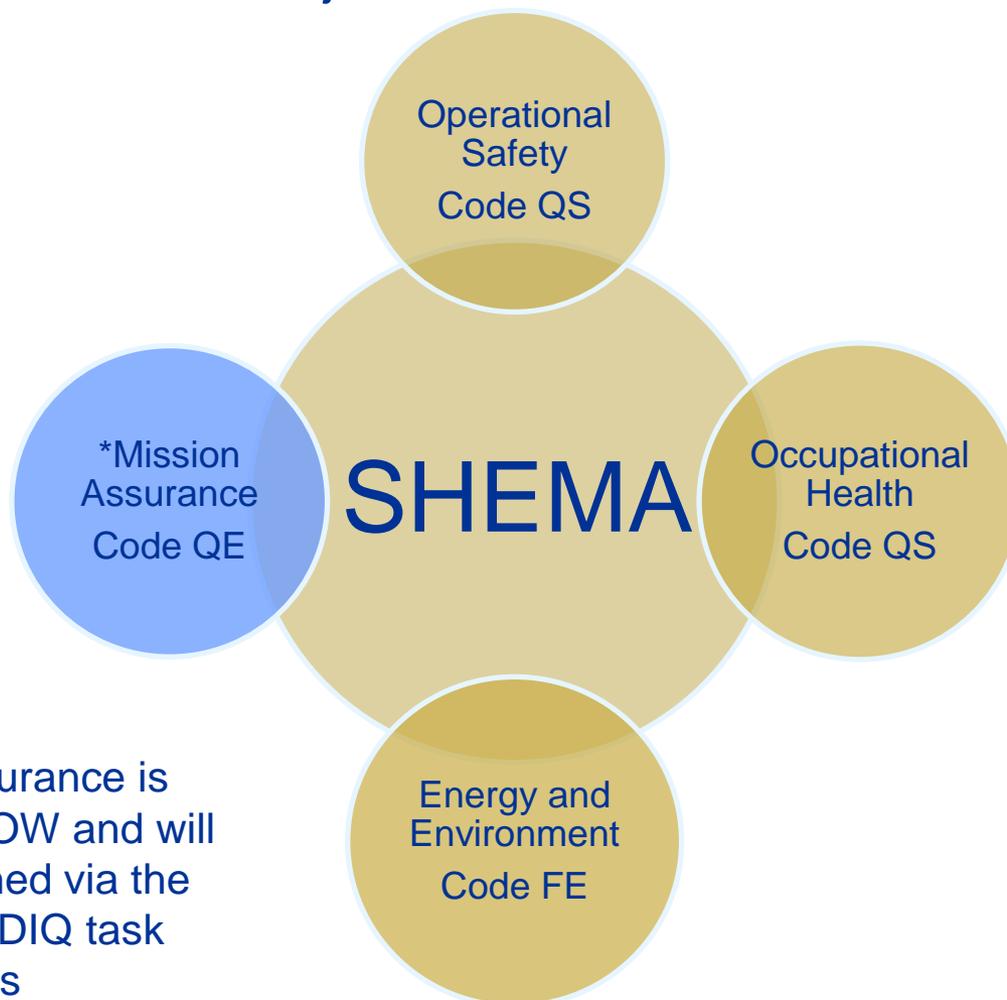
Definition of Base/IDIQ

- **Base**
 - On-going technical activities supporting the overall mission of the Center.
 - Example: Occupational Health and Safety staffing, Hazardous Waste Management
- **IDIQ – technical activities beyond the Base with defined:**
 - Start and end dates
 - Deliverables
 - Separate funding
 - Schedules – both program and deliverables
 - Discrete statements of work
 - Require task plans /task proposals
 - Examples: CoNNeCT, Ares, Environmental Sample Analysis



SHEMA at a glance

Four major elements of the work



*Mission Assurance is Sec. 4 of the SOW and will be accomplished via the issuance of IDIQ task orders



RFP Overview

- This procurement will use a best value selection approach. Best value selection will include Mission Suitability, Past Performance, and Cost.
- Contract award based on FAR Part 15 – Contracting by Negotiation
- ***Anticipated*** Evaluation factors:
 - **Mission Suitability ~ Past Performance ~ Cost**
 - **Mission Suitability plus Past Performance, when combined, are significantly more important than Cost.**
- Only Mission Suitability will be scored (1000) pts.- ***Anticipated scores***
 - Overall understanding of the Requirements (500)
 - Management Plan (350)
 - Small Business Subcontracting Plan (150)
- ***Cost templates and instructions will be included in the Final RFP posting***



RFP Overview

1) Mission Suitability

A. Overall understanding of the Requirements (500 pts)

- Technical Approach to Meeting the Requirements of the SOW
- Risk Management Plan
- Health and Safety Plan Overview
- Sample Tasks (4)

B. Management Plan (350 pts.)

- Organizational Structure and Management
- Subcontractor Management
- Recruitment, Retention, Staffing and Compensation
- Phase-In Plan
- Key Personnel
- Organizational Conflict of Interest (OCI) Avoidance Plan

C. Small Business Subcontracting Plan (150 pts.)

2) Relevant Experience/Past Performance

- a) Demonstrate relevant work experience similar in scope and size
- b) Past Performance ratings and questionnaires as it pertains to:
 - Technical/Schedule/Cost/ Performance
 - Business Relations /Effective communication and past record of interfacing with the Government

3) Cost/Price



SHEMA Tentative Schedule as of May 23, 2012

Issue Draft RFP	May 18, 2012
Industry Day	May 23, 2012
DRFP Questions/Comments Due	May 30, 2012
Issue Final RFP	June 15, 2012
Proposals Received	July 25, 2012
Initial Selection/Comp. Range	Aug. 24, 2012
Discussions (if necessary)	Sept. 5 – Sept. 19, 2012
Final Evaluation	Oct. 3, 2012
SSA Presentation	Oct. 24, 2012
Contract Award	Nov. 19, 2012
Phase-in Order Issued	Dec. 1 – Jan. 1, 2013
Full Performance Date	Jan. 1, 2013

Reminders



- **Response to Draft RFP Deadline**

May 30, 2012 - All questions/comments submitted IN WRITING ONLY to

Nikki.D.Brown@nasa.gov

All questions and answers will be posted on the FBO website and attached to the NNC12ZQ012R Solicitation Notice.

- **Communications**

Regarding the SHEMA procurement, RFP, schedule, etc. should be submitted to the above email address

- **Offeror Responsibilities**

Monitor the Federal Business Opportunities website for updates and amendments to the current notice. In the event of any discrepancy, the information contained in the Request for Proposals (RFP), when posted to the FBO site, shall take precedence.

- **Meetings with potential offerors**

Requests to meet with the SHEMA contracting officer and other technical representatives can be made (up until the blackout period) through Nikki Brown. The Contracting Officer does not guarantee that certain individuals will be available to meet at the requested times. Meetings will be scheduled as availability allows.



Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

Oswaldo Rivera

Chief, Safety Health and Environmental Division

Operational Safety & Occupational Health SOW Sections 3.1 and 3.2





Operational Safety and Occupational Health

- The “base” components of elements 3.1 and 3.2 under the SHEMA scope of work represent on-site support to the Center’s Safety and Health Division (SHeD) in implementing various safety and occupational health programs.
- SHeD provides support to programs, projects, test and research facilities, laboratories, institutional tasks, and construction activities throughout GRC’s two geographic locations.
 - Descriptions of many of the test facilities at Lewis Field and Plum Brook Station are available on the public GRC website. http://facilities.grc.nasa.gov/explore/explore_all.html
 - The scope of research is extensive, leading to a myriad of potential health and safety concerns.



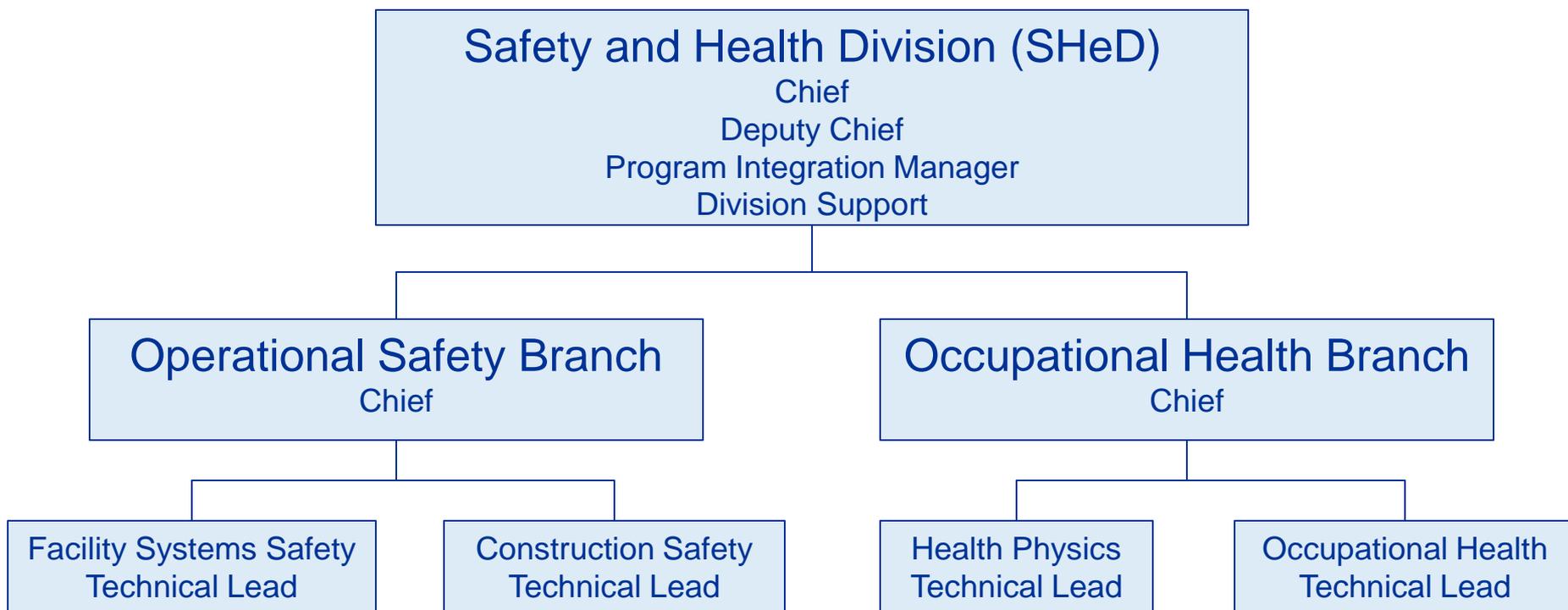
Operational Safety and Occupational Health

- SHeD is comprised of a blended workforce of support service contractors (SSC) and civil servants (CS) with an approximate one-to-one ratio. Both SSC and CS groups are comprised of professional-level and technician/specialist-level employees.
- Within the scope of the contract, specific programs or functions tasked to the SSC can be turned on or off, based upon the needs of the government.
- The estimated staffing profiles in the Request for Proposal represent the government's anticipated needs for the SSC supporting SHeD based upon both historical information and budget expectations.



Operational Safety and Occupational Health

- The Safety and Health Division consists of two branches focusing on the operational safety and occupational health disciplines.





Operational Safety and Occupational Health

- The Operational Safety Branch is comprised of 10 CS (safety engineers & specialists) and 8 SSC (safety engineers & specialists)
- The Occupational Health Branch is comprised of 8 CS (industrial hygienist, health physicist, technician, specialists, & analyst) and 8 SSC (industrial hygienists, chemical management staff, chemist, systems engineer)



Operational Safety

- Current roles of the SSC within the Operational Safety Branch include implementation of requirements associated with the following programs:
 - Combustible Gas, Toxic Gas, and Low Oxygen Monitoring
 - Confined Space
 - Construction Safety
 - Construction Design Review
 - Cryogenics Safety
 - Digging, Trenching & Excavation
 - Electrical Safety
 - Emergency Evacuation Planning
 - Fall Protection
 - Fire Protection
 - Pressurized Systems Safety
 - Hazardous Operations
 - Propellants and Oxidizers
 - Job Hazard Analysis
 - Lockout/Tagout
 - Personal Protective Equipment and Clothing
 - Process Systems Safety
 - Safety Permit Process
 - Vacuum System Safety
 - Safety Support to Occupational Health Programs



Occupational Health

- Current roles of the SSC within the Occupational Health Branch include implementation of requirements associated with the following programs:
 - Asbestos and Inorganic Fibers
 - Biological Health Hazards
 - Bloodborne Pathogens
 - Chemical Hygiene
 - Environmental, Industrial Hygiene and Drinking Water Analysis
 - Chemical Management
 - Health & Safety Equipment Management
 - Exposure and Hazard Assessments
 - Hazard Communication
 - Hearing Conservation, Community Noise, Buy Quiet/Quiet by Design
 - Indoor Air/Environmental Quality
 - Lead and Mercury
 - OSHA-regulated Materials
 - Reproductive Hazards
 - Respiratory Protection
 - Ventilation – Local Exhaust
 - Industrial Hygiene Support to Operational Safety Programs



Operational Safety and Occupational Health

- The Safety and Occupational Health Manuals referenced in Appendix B of the Statement of Work, provide information about the roles and responsibilities of SHed staff (both CS and SSC) in implementing the Center's safety and health programs.
- Other tasking for the SSC includes
 - Involvement in external audits of the Center, including preparation and follow-up;
 - Support for development and tracking of organizational business plan elements and metrics
 - Support of Incident Response and Emergency Response functions.
- In terms of potential or anticipated IDIQ tasks, the contractor may be called upon to provide temporary, supplemental, staff to address a specific, on-site, need, or, to coordinate the services of a consulting group.



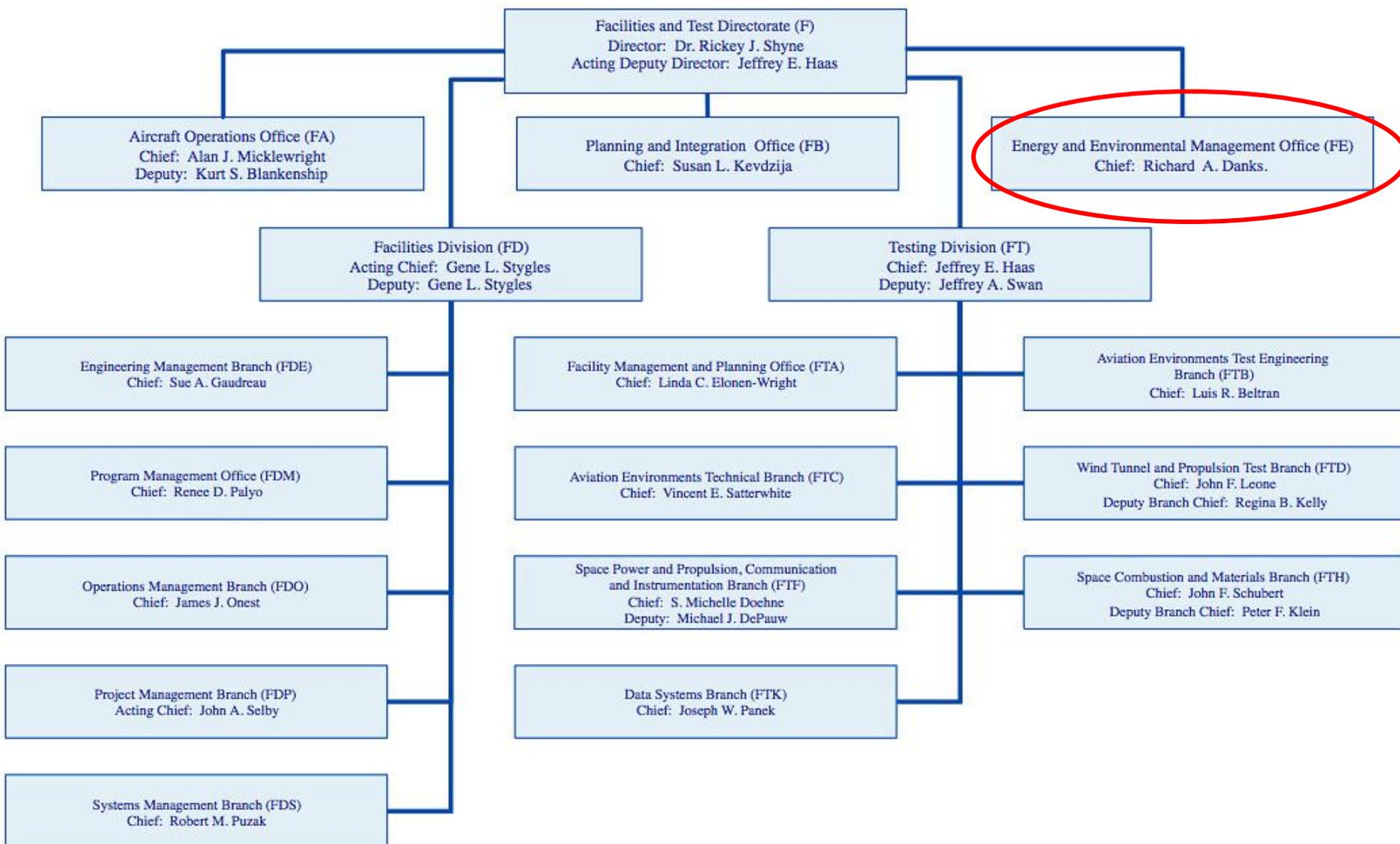
Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

Don Easterling
Environmental Program Manager
Energy and Environment SOW Section 3.3





Energy and Environment





Energy and Environment

Distribution of Work

- FE depends upon a blended workforce of civil servants (CSs) and support service contractors (SSCs).
- CSs in FE are mostly engineers. Currently SSCs are a mix of professionals and technicians.
- Functions tasked to the SSC can be turned on or off, based upon the needs of the government.
- Estimated staffing in the Request for Proposal represent anticipated needs - based upon historical information and budget expectations.
- See EMS manual for list of all environmental programs.



Energy and Environment Overview

Glenn Today





Energy and Environment

Lewis Field Environmental

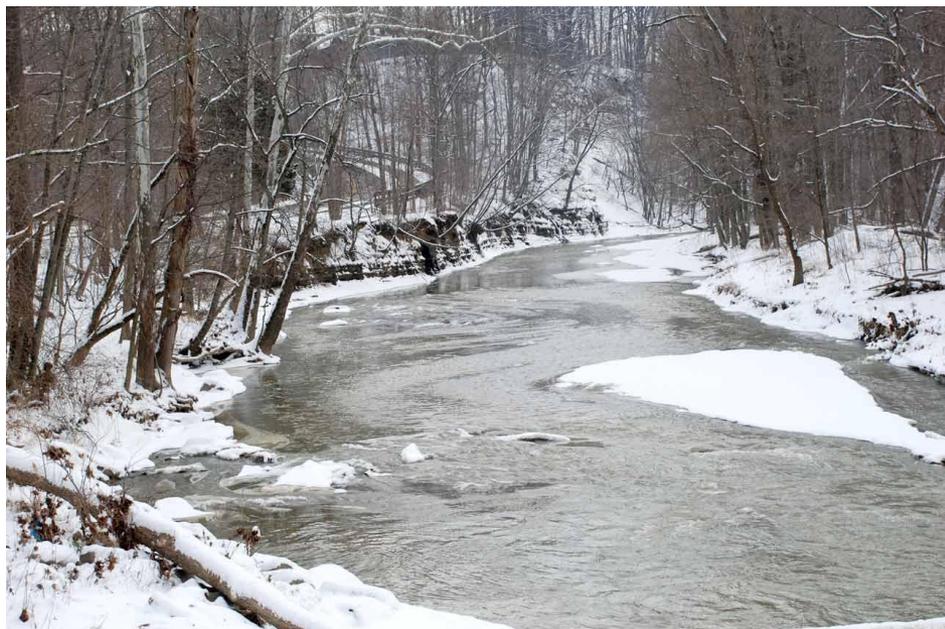
- Title V air permit
 - Major source for criteria pollutants
 - Area source for HAPs (synthetic minor limits)
- Natural gas boilers
- Combustion Research Rigs



Energy and Environment

Lewis Field Environmental

- NPDES permitted discharge to Rocky River
 - Salmonid spawning site
 - Strict Great Lakes mercury limits – 12 & 1.3 ppt



Energy and Environment

Lewis Field Environmental Status

- Small, nontraditional municipal separate storm sewer system (MS4)
- Construction storm water management



Energy and Environment

Lewis Field Environmental

- Large quantity hazardous waste generator
- Petroleum/oil tank management
- Natural resources management
- Spill response –onsite and subcontractor



Energy and Environment

Restoration at Lewis Field

- 2009 – One site remained
- 2010 – Added 2 sites
 - Fuel UST at Building 104
 - Building 170 site
- 2011 – Remediated fuel UST site at Bldg 104
- 2012 – Doing PA on Building 170 site
- Restoration of Building 104 CERCLA site on hold





Energy and Environment

Plum Brook Environmental

- Air - No title V permit – rural county
- NPDES permit – decreasing discharges
- Stormwater - construction general permits
- Hazardous waste generator – LQG vs. SQG
- Natural resources management - significant
- One RCRA site expected to meet clean closure in June



Energy and Environment

Challenges

- Continuing reductions – staff and budget
- Increased NEPA requirements
- New air pollution regulations
 - MACT standards for area sources - May 2013
 - Rapid & poor quality
 - Permitting of new and existing units
- Maintaining currency of plans and documents
- Wastewater and stormwater compliance



Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

Gary Kelm

Chief, Program and Project Assurance Division

**Aero/Space Systems/Ground Support Equip. Mission Assurance
SOW Section 4**



Aero/Space Systems/Ground Support Mission Assurance



Scope of Work

- This contract includes providing safety and mission assurance (S&MA) support to programmatic, research and institutional activities at Glenn
- Tasks orders will be prepared defining the S&MA support needed, including the required disciplines and deliverables. S&MA support may include:
 - **System Safety Engineering / Risk Management**
 - Hazards analysis, fault tree analysis, safety risk assessment
 - **Reliability Engineering / EEE Parts**
 - FMEA, PRA, R&M analysis, parts selection / de-rating
 - **Quality Engineering and Assurance**
 - Establish inspection points, apply Lessons Learned / GIDEP
 - **Software Safety and Assurance**
 - Software safety analysis; code inspection; V&V
 - **Materials and Processes**
 - Material selection (flammability, toxicity) MIULs, MUAs, welding



Aero/Space Systems/Ground Support Mission Assurance

Code QE (effective June 3, 2012)

Program and Project Assurance
Division (PPAD) (QE)
Chief: Gary G. Kelm
Deputy Chief: Cynthia C. Calhoun
Mission Assurance Manager:
Gary G. Kelm (Acting)

Quality Engineering & Assurance
Branch (QEA)

Chief: Timothy D. Best

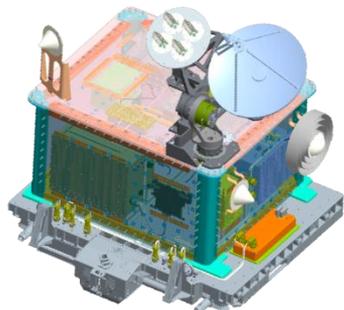
Reliability & System Safety
Engineering Branch (QER)

Chief: Mark M. Kowaleski (Acting)



Aero/Space Systems/Ground Support Mission Assurance

Glenn Current Flight Projects



CoNNeCT

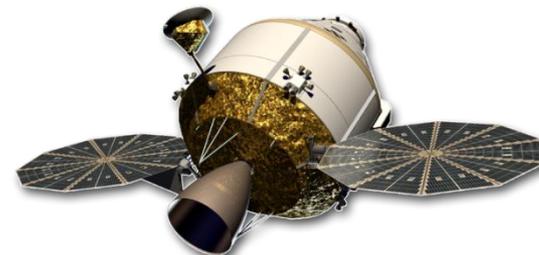
ISS validating key technologies in communications, networking and navigation with reconfigurable Software Defined Radios



Radioisotope Power Systems (RPS)

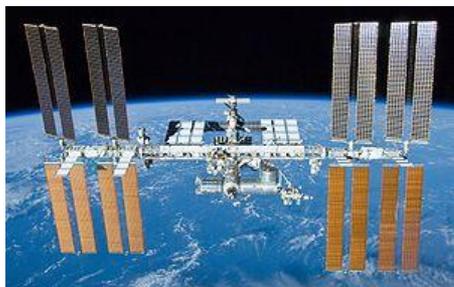
Agency Level Program Office assigned to GRC

Advanced Stirling Radioisotope Generator (ASRG) flight system development



Crew/Service Module

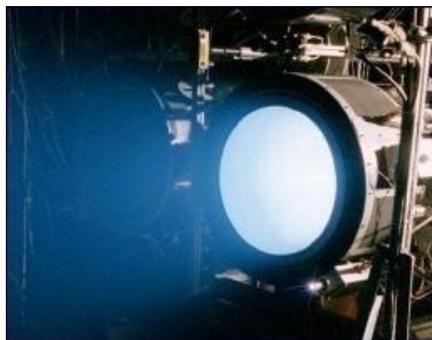
Co-lead with JSC the management of the design, development, verification and certification Crew & Service Module (CSM)



International Space Station (ISS)

Microgravity Space Experiments: fluid physics, combustion science, and materials experiments

Sustaining engineering for the ISS Electrical Power System



In-Space Propulsion

NASA Evolutionary Xenon Thruster (NEXT)



Launch Systems

Support MSFC Heavy Lift Program
Lead payload shroud element, TVC, power, and other vehicle subsystems



Aero/Space Systems/Ground Support Mission Assurance

PPAD provides our expertise, tools, processes and procedures to provide assurance/oversight to Glenn Research, Technology, Missions, and Center Operations.

- Exploration Missions (MPCV, SLS, ISS Research)
- Aeronautics Research and Flight Programs
- Technology Programs
- Space propulsion stages and systems
- Power Systems
- Aero propulsion
- Advanced capability spacecraft and subsystems
- Stationary and mobile infrastructure for surface exploration
- Advanced Communications
- Engineering Science for aeronautics, space flight, and human adaptation



Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

Questions & Answers





Questions & Answers

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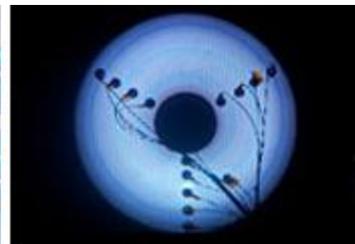
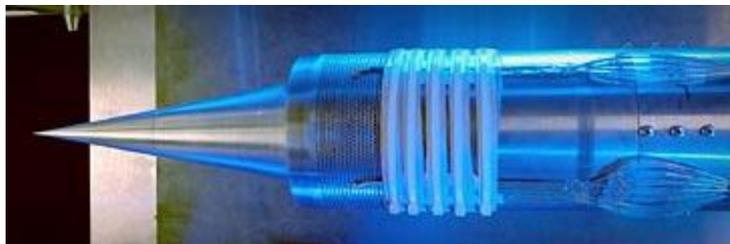


Safety, Health, Environmental, & Mission Assurance (SHEMA) Support Services Contract

Additional Information



Lewis Field Sample Facilities



Propulsion Systems Laboratory

Test Section: 38-ft long and 24-ft wide in diameter

Mass Flow: Inlet air flow up to 480 lbs/sec

Exhaust air flow up to 750 lbs/sec



2.2 Second Drop Tower

Microgravity Duration: 2.2 seconds

Free Fall Distance: 79 feet

Drop Package Weight: 1075 lbs.



8'x6' Supersonic Wind Tunnel

Dynamic Pressure: 200 - 1340 psf

Temperature: 520 – 720 °R



9'x15' Low Speed Wind Tunnel

Dynamic Pressure: 0 - 72 psf

Temperature: 550 °R



10'X10' Supersonic Wind Tunnel

Dynamic Pressure: 20-720 psf

Total Temperature: 520-1140 °R



Advanced Subsonic Combustion Rig

Inlet Pressure: 150-900 psig

Inlet Temperature: 250 to 1300 °F

Inlet Airflow: 5 to 50 lb/sec



Aero-Acoustic Propulsion Laboratory

Aero Test Rigs: Nozzle Acoustic Test Rig

Small Hot Jet Acoustic Rig

Advanced Noise Control Fan

Dimensions: 130 ft in diameter, 65 ft high



Electric Propulsion Research Building

40,000 SF area with nine Vacuum Facilities

and variety of Testbeds



Engine Research Building

Testing Aerodynamic Flow Physics

Capabilities: Aero-propulsion Heat Transfer

Combustion and Aero-chemistry

Mechanical Components

Tribology

Turbo-machinery

Area: 152,235 ft²

Plum Brook Station Sample Facilities

PBS is a 6400-acre test installation site near Sandusky, Ohio, home to four unique, and world-class test facilities



Space Power Facility

Test Area:
100 ft diameter by 122 ft high

Key Features:
Thermal vacuum chamber
Inherent vibration isolation
Space simulation facility
Low earth orbit plasma simulation
Cryogenic shrouds (cold walls)
Large clean high bays
Accessibility by air, ground, or water transportation
Class 100,000 clean room



Cryogenic Propellant Tank Facility

**Test 25 ft diameter,
Chamber: spherical space environment
Temperature: down to -423°F
Vacuum: capable of 5×10^{-7} torr**



Cryogenic Components Laboratory

**CCL-1: 3000-gallon LOx tank
CCL-2: 1300-gallon LH2 tank
Test Control: 7500 sq. ft. modern control facility**



Spacecraft Propulsion Research Facility

Vacuum Chamber:
38 ft diameter by 62 ft tall
Vacuum Range:
Local atmospheric pressure to 200 statute miles altitude
Thrust Capability:
Up to 400,000 lb of thrust



Other Points of Contact

- NASA GRC Freedom of Information Act (FOIA)

Angela Pierce –FOIA Officer

Angela.L.Pierce@nasa.gov

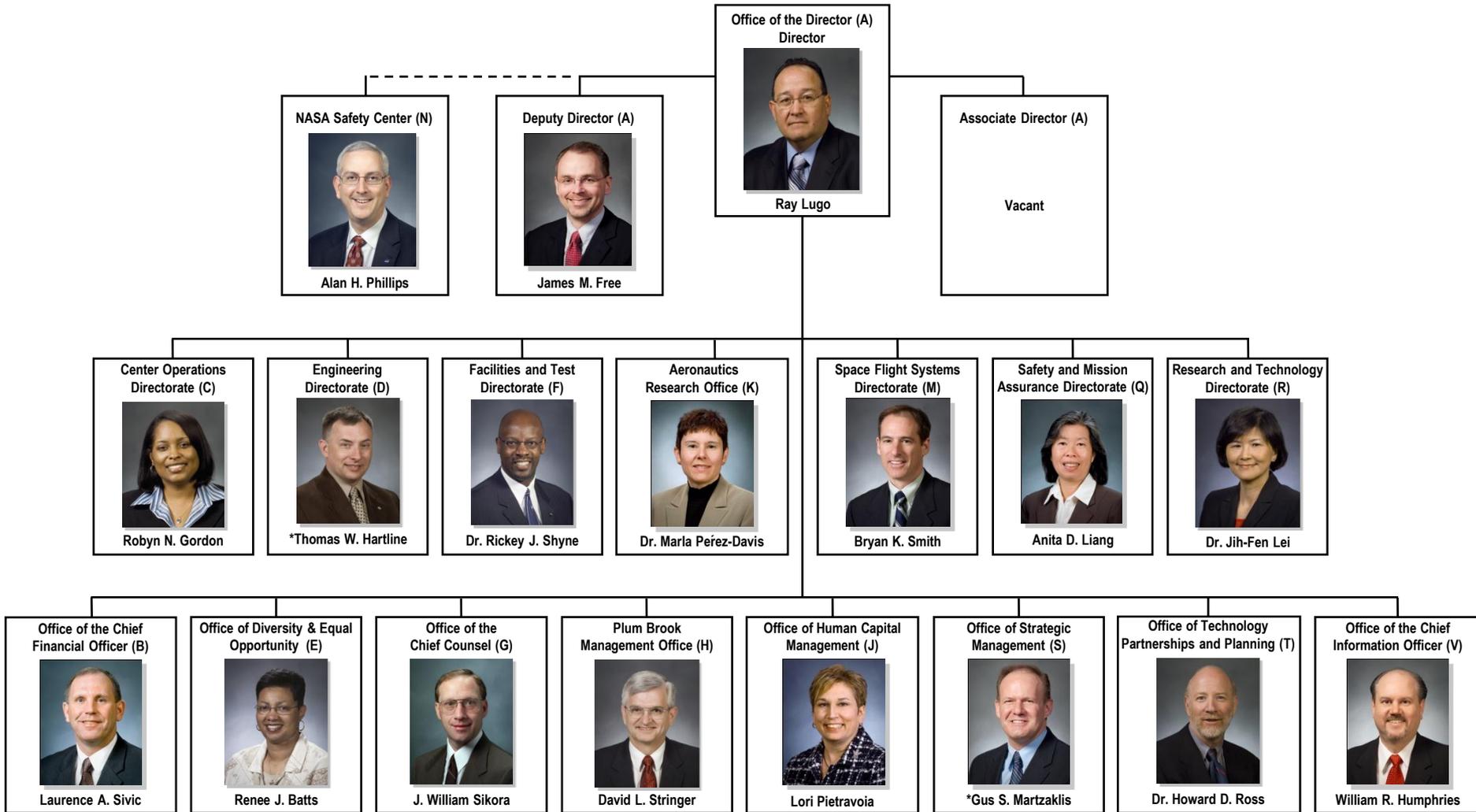
- NASA GRC Small Business Specialist

Teresa Monaco

Teresa.L.Monaco@nasa.gov



NASA Glenn Research Center Senior Management



*Acting

