

**TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL**

NASA/GODDARD SPACE FLIGHT CENTER

**REQUEST FOR TASK PLAN / TASK ORDER**

<b>CONTRACTOR</b>	<b>CONTRACT NO./TASK NO.</b>	<b>JOB ORDER NUMBER</b>	<b>APPROP. FY</b>
OSS Group, Inc.	NAS5- 99124      TASK NO. 85      AMENDMENT	415-616-43-29-89	99

**TASK TITLE:** (NTE 80 characters; include Project name)  
**GOES Project Mission Operations Services -- GOES N-Q**

**APPROVALS:** (Type or print name and sign)

<b>ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR)</b>	<b>DATE</b>	<b>ORG CODE</b>	<b>MAIL CODE</b>	<b>PHONE</b>
William Lebar <i>[Signature]</i>	9/13/99	415	415	301-286-3004
<b>BRANCH HEAD</b>	<b>DATE</b>	<b>CODE</b>	<b>PHONE</b>	
Martin A. Davis <i>[Signature]</i>	9/24/99	415	301-286-8998	
<b>CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR)</b>	<b>DATE</b>	<b>CODE</b>	<b>PHONE</b>	
Robert S. Lebar, Jr. <i>[Signature]</i>	9/29/99	560	301-286-6588	

<b>FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE?</b> <small>(IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK)</small>	<b>CONTRACTING OFFICER'S QUALITY REP.</b>	<b>DESIGNATED FAM:</b>
<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	Larry Moore	

The contractor shall identify and explain the reason for any deviations, exceptions, or conditional assumptions taken with respect to this Task Order or to any of the technical requirements of the Task Order Statement of Work and related specifications. The contractor shall complete and submit the required Reps and Certs.	<i>(To be completed by Contracting Officer)</i> <b>C.O. Requested Quote on:</b> <b>Date:</b> MAY 17 1999
---	--

Contractor will develop specification or statement of work under this task for a future procurement.	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
Flight hardware will be shipped to GSFC for testing prior to final delivery.	<input type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A
Government Furnished Property/Facilities:	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES -- SEE LIST OF GFP (offsite only) / FACILITIES (onsite only)
Onsite Performance:	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES    If yes: <input type="checkbox"/> TOTAL <input type="checkbox"/> PARTIAL <small>If partial, indicate onsite work in SOW by asterisk (*)</small>
Surveillance Plan Attached:	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES

**Highlighted Contract Clauses:** *(to be completed by Contracting Officer)*  
 Per Clause H.14, Task Ordering Procedure, subparagraph (f), the effective date of this task order shall be May 17, 1999.

**INCENTIVE FEE STRUCTURE** (check one)  
(See Contract NAS5-99124, Attachment K, Incentive Fee Plan)

	<input checked="" type="checkbox"/> No. 1	<input type="checkbox"/> No. 2	<input type="checkbox"/> No. 3	<input type="checkbox"/> No. 4	<input type="checkbox"/> No. 5
Cost	10%	50%	25%	25%	%
Schedule	15%	25%	25%	50%	%
Technical	75%	25%	50%	25%	%

*(To be completed by Contracting Officer)*

The target cost of this task order is \$ 666,656.

The target fee of this task order is \$ 22,796.

The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is \$ 689,452.

The maximum fee is \$ 33,317.

The minimum fee is \$0.

**AUTHORIZED SIGNATURE:**

THIS TASK ASSIGNMENT IS ISSUED ACCORDING TO THE CONTRACT CLAUSE "TASK ASSIGNMENTS AND REPORTS"

*[Signature]*      11/19/00      Lorrie L. Eakin  
 SIGNATURE OF CONTRACTING OFFICER      DATE      TYPED NAME OF CONTRACTING OFFICER

**CONTRACTOR'S ACCEPTANCE:**

\_\_\_\_\_  
 AUTHORIZED SIGNATURE      DATE

**TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL**

NASA/GODDARD SPACE FLIGHT CENTER

**REQUEST FOR TASK PLAN / TASK ORDER**

CONTRACTOR	CONTRACT NO./TASK NO.		
	NAS5-	TASK NO.	AMENDMENT
QSS Group, Inc.	99124	85	

Applicable paragraphs from contract Statement of Work: Function 2 I

**STATEMENT OF WORK:** (Continue on blank paper if additional space is required)

The contractor shall establish a Mission Operations Support Team (MOST) at an off-site facility to provide services to the GOES Project at the NASA/Goddard Space Flight Center in conducting the GOES-N-Q Mission. The MOST shall provide expertise to perform systems engineering services and shall use the computing resources of the Satellite Operations Control Center (SOCC) at NOAA in Suitland, Maryland, to support mission operations. The task activities are described below:

- a. **Engineering Services:** The MOST shall provide personnel and facilities to perform the following systems engineering functions. Some travel is required to the spacecraft contractor's plant for conducting/participating in reviews, tests, etc.
  1. **Requirements Development Services:** The MOST shall participate with the NASA GOES Project in the development of detailed operations requirements. This effort shall include the development of flight operations requirements End-to-End (ETE) test goals and requirements, PLT goals and requirements, and spacecraft hand-over criteria.
  2. **Review and Evaluate Products:** The MOST shall participate with the NASA GOES Project in the review and evaluation of all products for flight operations generated by the spacecraft contractor. These products include mission operations plans, transfer orbit operations plans, ground system equipment (GSE) design, interfaces and implementation plans, training and simulations plans, spacecraft operations documentation, spacecraft bus command procedures, spacecraft bus contingency operations procedures, scripts, and databases.

**PERFORMANCE SPECIFICATIONS:**

**Transition Plan:** Establish CSC to QSS transition approach and associated deliverables/milestones

**CDR Services:** Attend System/Sub-system CDR's as required by GOES Project and provide report inclusive of significant events, problems/issues

**Review/Evaluate Contractor Deliverables:** Review and evaluate contractor deliverables. Provide report on results of review/evaluation.

**Monthly Status Reports:** Monthly reports shall contain summary of activities completed during month, planned activities for the next month, problems/issues, and recommended action(s).

**Travel/Trip Status Reports:** Travel/trip reports shall contain summary of activities completed during travel item, problems/issues, and recommended action(s).

**APPLICABLE DOCUMENTS:**

None.

**TASK END DATE:** 4/30/00

**MILESTONES/DELIVERABLES AND DATES:**

**Transition Plan:** Preliminary ~~XX/XX~~ 8/1/99  
Final ~~XX/XX~~ 11/30/99

**CDR Services:** 5/1/99 thru 8/31/99

**Review/Evaluate Contractor Deliverables:** 5/1/99 thru 4/30/00

**Monthly Status Reports:** Last working day of month

**Travel/Trip Status Reports:** 5 days after return from trip

**PERFORMANCE STANDARDS:**

**Schedule:** On-time delivery/completion of the above  
**Technical:** ATR's acceptance of the above

**FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM):**

William Lebar, building 6, room W229

**TECHNICAL WORK MAY NOT BEGIN PRIOR TO CO APPROVAL**

NASA/GODDARD SPACE FLIGHT CENTER

**REQUEST FOR TASK PLAN / TASK ORDER**

CONTRACTOR	CONTRACT NO./TASK NO.		
QSS Group, Inc.	NAS5- <b>99124</b>	TASK NO. <b>85</b>	AMENDMENT

**STATEMENT OF WORK:** (Continued)

3. Review and Evaluate Pre-Launch Preparation Activities: The MOST shall participate with the NASA GOES Project in the review and evaluation of all pre-launch preparation activities performed by the spacecraft contractor to ensure the readiness for launch. These activities include data flow tests, ETE compatibility tests, training and simulations.
  4. Participate in Program Reviews and Technical Reviews: The MOST shall participate with the NASA GOES Project in all key program reviews and technical reviews conducted by the spacecraft contractor. These reviews shall include flight operations reviews, ground systems reviews, operations-related documentation reviews, all technical reviews on operations scripts, databases, spacecraft command procedures, contingency operations procedures, and operations handbooks. In addition, the MOST shall participate with the NASA GOES Project in instrument related reviews and related working group meetings.
  5. Imager/Sounder Re-Engineered Test Program Services: The MOST shall provide engineering support to the instrument contractor in developing the Re-engineered Test Program (RTP), as required.
  6. Spacecraft I&T Services:
    - Provide engineering services on the I&T of the Telemetry and Command Subsystem and the Communications subsystem at the spacecraft manufacturer's plant.
    - Provide engineering services on mechanical/vibration tests, thermal vacuum chamber tests, and radio frequency interference tests at the spacecraft manufacturer's plant.
    - Provide engineering services on the spacecraft/launch vehicle integration and test at the launch site of the NASA/Kennedy Space Center.
- b. **Mission Operations Services:** The MOST shall provide personnel and facilities to perform the following functions. Some travel is required to the spacecraft contractor's plant for conducting/participating in reviews, tests, etc.
1. Launch Preparation and Operations:
    - Develop and maintain Command Procedures for instruments
    - Develop and maintain Operations Scripts for instruments
    - Develop and maintain Contingency Operations Procedures for instruments
    - Develop Post-Launch Test (PLT) plan and test procedures
    - Provide services on mission simulations, rehearsals, and training
    - Provide services while the spacecraft contractor is conducting orbit raising operations
    - Provide around the clock engineering services in monitoring spacecraft/instruments health and safety
    - Provide engineering services in conducting PLT and test data analysis
  2. Spacecraft and Ground System Testing:
    - Plan and conduct ground system ETE tests with the spacecraft using the NOAA SOCC to send instrument commands and to process telemetry
    - Provide services to the Mission Readiness Manager in the coordination of resources (i.e., Ground Network [GN], NOAA ground systems, and SOCC) and tests required for Integration Testing (I&T), network interface testing, compatibility testing, network proficiency testing and ETE testing
    - Provide ground system requirements, assist in validating changes to the NOAA SOCC ground systems
  3. On-Orbit Engineering Services:
    - Participate with NOAA on special event operations, such as yaw-flip maneuver, station-keeping, and battery reconditioning
    - Provide real-time anomaly investigation and resolution on operational GOES spacecraft
    - Analyze engineering trending data and document analysis results as well as any anomalous phenomena
  4. System Maintenance and Configuration Management
    - Provide enhancement and maintenance effort on the Imager/Sounder simulators
    - Provide enhancement and maintenance effort on the MOST Local Area Network (LAN), servers and nodes
    - Provide CM effort on all systems, LAN databases, command procedures and scripts
  5. Operations Reviews and Working Groups Services/Coordination:
    - Provide and coordinate MOST inputs to Mission Readiness Working Group (MRWG)

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR	CONTRACT NO./TASK NO.		
QSS Group, Inc.	NAS5- 99124	TASK NO. 85	AMENDMENT

STATEMENT OF WORK: (Continued)

- Provide and coordinate MOST inputs to Flight Operations Review (FOR)
- Provide and coordinate MOST inputs to Operations Readiness Review (ORR)
- Provide and coordinate MOST inputs to External Independent Readiness Reviews (EIRR)
- Provide and coordinate MOST inputs to Network Operations Working Groups (NOWG)
- Provide and coordinate MOST inputs to Mission Operations Working Groups (MOWG)
- Provide and coordinate MOST inputs for all other reviews/working groups.

6. Documentation Support:

- Produce and deliver PLT Plan and PLT Report
- Produce and deliver mission operations procedures
- Produce and deliver change pages to the user's guide and programmer's maintenance manual for Imager/Sounder Simulators

c. **Imager/Sounder Simulator Support/Monitoring:** The MOST shall provide personnel and facilities to perform the following functions. Some travel may be required to the spacecraft contractor's plant for conducting/participating in reviews, tests, etc.

1. Participate in/monitor the development of the Imager and Sounder Simulators: The effort shall include participation/monitoring in requirement development, system design, implementation, testing and documentation
2. Participate in/monitor the delivery of the Imager and Sounder simulators for further integration: These simulators shall be delivered to the spacecraft contractor for integration. They are also to be provided to the Instruments contractor for their incorporation into the Re-engineered Test Program's (RTP) Ground Support Equipment.