

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

NASA/GODDARD SPACE FLIGHT CENTER

P. 1 of 6

**REQUEST FOR TASK PLAN / TASK ORDER**

CONTRACTOR	NASS- TASK NO. AMENDMENT	JOB ORDER NUMBER	APPROVAL
QSS Group, Inc.	99124 249	480-615-33-32-89	99

TASK TITLE: (NTE 80 characters; include Project name)  
**Mission Operations & On-Orbit Verification**

**APPROVALS** (type or print name and sign)

ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR)	DATE	ORG CODE	MAIL CODE	PHONE
Johnny Ferry <i>[Signature]</i>	3-23-00	480	480	301-286-2577
BRANCH HEAD Karen Halterman <i>[Signature]</i>	3/23/00		480	301-286-8633
CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR) Robert S. Lebair, Jr. <i>[Signature]</i>	3/31/00		560	301-286-6588
FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE? (IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK)	CONTRACTING OFFICER'S QUALITY REP. Larry Moore	DESIGNATED FAM:		
<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				

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 Reqs and Certs.

(To be completed by Contracting Officer)  
**C.O. Requested Quote on:**  
**Date:**

Contractor will develop specification or statement of work under this task for a future procurement.  NO  YES

Flight hardware will be shipped to GSFC for testing prior to final delivery.  NO  YES  N/A

Government Furnished Property/Facilities:  NO  YES -- SEE LIST OF GFP (offsite only) / FACILITIES (onsite only)

Onsite Performance:  NO  YES If yes:  TOTAL  PARTIAL  
 If partial, indicate onsite work in SOW by asterisk (\*)

Surveillance Plan Attached:  NO  YES

Highlighted Contract Clauses: (to be completed by Contracting Officer)

The effective date of this task order is the date of the Contracting Officer's signature below.

**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 \$ 1,469,351.  
 The target fee of this task order is \$ 95,308.  
 The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is \$ 1,564,659.  
 The maximum fee is \$ 139,296.  
 The minimum fee is \$0.

**AUTHORIZED SIGNATURE**  
*[Signature]* 4/23/00  
 SIGNATURE OF CONTRACTING OFFICER DATE TYPED NAME OF CONTRACTING OFFICER  
**ELIZABETH J. AUSTIN**  
**CONTRACTING OFFICER**

**CONTRACTOR'S ACCEPTANCE:**  
 \_\_\_\_\_  
 AUTHORIZED SIGNATURE DATE

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QSS Group, Inc.	NAS5- <b>99124</b>	TASK NO. <b>249</b>	AMENDMENT

Applicable paragraphs from contract Statement of Work:

Function 2!

**STATEMENT OF WORK:**

*(This is a follow-on to Task 35 under this contract; uninterrupted transition is required.)*

NOTE: This Statement of Work covers both on-site and offsite performance

**ACTIVITIES**

In order for the POES Project to prepare, analyze and verify operational readiness of the NOAA-L-N' missions as well as perform on-orbit checkout and verification, mission operations will utilize the contractor's services to accomplish the following:

**A. GENERAL**

1. Review manpower allocations and requirements to ensure that the NOAA-L-N' missions have the proper levels of expertise and support for launch and on-orbit checkout and verification.

**B. NOAA-L PRE-LAUNCH ACTIVITIES**

2. Plan, conduct, evaluate and report on Interface Testing to verify the interfaces from the following sites to the SOCC:
  - o McMurdo Sound (National Science Foundation Internet)
  - o JPL/Deep Space Network Sites
3. Plan, conduct, evaluate, and report on End-To-End (ETE) testing to assess capabilities, performance, and compatibility between the ground system and the spacecraft. Conduct ETE-3 prior to s/c shipment to the launch pad at VAFB.
4. Plan, conduct, evaluate, and report on proficiency testing, which will provide training opportunities at the SOCC and for each crew at the following sites :
  - o McMurdo (MCM)
  - o JPL/DSN
  - o OAS/AFSCN
5. Participate in the Air Force conducted AFSCN Compatibility Test by verifying the SOCC capability to record and process real time NOAA-L spacecraft data.
6. Plan, coordinate, conduct, and evaluate pre-mission simulations. Perform on-console proficiency training of the SOCC/POES operators. Perform detailed simulation scripting for all pre-mission simulations and rehearsals.
7. Utilize the TTS to support simulation script development, validation, and execution during all pre-mission simulations.
8. Plan, coordinate, monitor, and report the status of the NOAA SOCC development, validation, and certification of PACS Databases for the NOAA-L mission.
9. Review and update, where required, nominal and contingency ground system procedures.
10. Review and update, where required, the nominal and contingency procedures for the NOAA-L spacecraft subsystems and instruments.
11. Review the following Air Force NOAA-L launch documentation:
  - o Program Support Plan (PSP)
  - o Operations Requirements (OR)
  - o Operations Directive (OD)
12. Perform SOCC console activities, as required, during NOAA-L pre-mission testing and simulations.

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STATEMENT OF WORK: (Continued)

**C. NOAA-L LAUNCH AND EARLY ORBIT (LEO) AND ACTIVATION & EVALUATION (A&E) ACTIVITIES**

13. Perform real time flight operations duties in support of the NOAA-L LEO and A&E phases as defined in the Launch Management Plan (LMP).
14. Plan, coordinate, and conduct the NOAA-L post LEO launch review.
15. Chair the NOAA-L Launch Lessons Learned, develop and maintain the Lessons Learned database and manage the resolution of the action items.

**D. NOAA-L ON-ORBIT VERIFICATION (OV) ACTIVITIES**

16. Provide a lead engineer to plan, develop, and coordinate the OV activities.
  - o Train specialists in the OV s/c subsystems and instrument anomaly procedures.
  - o Assist in the planning and conduct of simulations exercises to provide training in the execution of contingency operations procedures.
  - o Train specialists in the execution of the OV test procedures.
17. Perform Checkout & Activation Team leader duties as defined in the Launch Management Plan (LMP) in support of the NOAA-L A&E phase
  - o Provide members to the Checkout & Activation Team.
  - o Execute the OV Test Plan and reschedule tests, as required.
  - o Coordinate the OV Test data analysis activities.
  - o Organize, coordinate, plan, and present the NOAA-L OV test results.
  - o Organize, coordinate, develop, and distribute the NOAA-L OV Test Results documents.

**E. NOAA-M PRE-LAUNCH ACTIVITIES**

18. Plan, conduct, evaluate and report on Interface Testing to verify the interfaces from the following sites to the SOCC:
  - o McMurdo Sound (National Science Foundation Internet)
  - o Western Range (NASA TLM)
  - o JPL/Deep Space Network Sites
  - o AFSCN/Remote Tracking Stations
  - o ARIA launch support aircraft.
19. Plan, conduct, evaluate, and report on End-To-End (ETE) testing to assess capabilities, performance, and compatibility between the ground system and the spacecraft. Conduct two tests: ETE-2 prior to spacecraft shipment to VAFB, & ETE-3 prior to spacecraft shipment to the launch pad at VAFB.
20. Plan, conduct, evaluate, and report on proficiency testing, which will provide training opportunities at the SOCC and for each crew at the following sites:
  - o McMurdo (MCM)
  - o JPL/DSN
  - o OAS/AFSCN
21. Participate in the Air Force conducted AFSCN Compatibility Test by verifying the SOCC capability to record and process real time NOAA-L spacecraft data.
22. Participate in the LMMS NOAA-M SEPET by utilizing the NOAA-M SEPET Test Plan and Procedures. Data will be recorded and archived and a report generated on the test results.
23. Plan, coordinate, conduct, and evaluate pre-mission simulations. Perform on-console proficiency training of the SOCC/POES operators. Perform detailed simulation scripting for all pre-mission simulations and rehearsals.

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**STATEMENT OF WORK:** (Continued)

- 24. Utilize the TTS to support simulation script development, validation, and execution during all pre-mission simulations.
- 25. Plan, coordinate, monitor, and report the status of the NOAA SOCC development, validation, and certification of PACS Databases for the NOAA-M mission.
- 26. Review and update, where required, nominal and contingency ground system procedures.
- 27. Review and update, where required, the nominal and contingency procedures for the NOAA-L spacecraft subsystems and instruments.
- 28. Review the following Air Force NOAA-M launch documentation:
  - o Program Support Plan (PSP)
  - o Operations Requirements (OR)
  - o Operations Directive (OD)
- 29. Perform SOCC console activities, as required, during NOAA-M pre-mission testing and simulations.
- 30. Chair the NOAA-L Launch Lessons Learned review committee, maintain the Lessons Learned Database and manage the resolution of the action items.

**F. SUSTAINING ENGINEERING ACTIVITIES**

- 31. Provide engineering services to resolve spacecraft anomalies.
- 32. Coordinate and co-chair the activities of the TIROS Orbital Anomaly Review Board (TOARB).
- 33. Coordinate and co-chair the activities of the Polar Action Review Board (PARB).
- 34. Coordinate and chair the activities of the Training/Simulation Integration Working Groups (TSIWG) as well as the Simulation Team activities.
- 35. Manage the NOAA Test Problem Report (NTPR) and the POES Incident Reports (PIR) databases.
- 36. Maintain the Mission Operations schedule and present the status of the launch readiness activities at the Mission Operations Working meetings.

**PERFORMANCE SPECIFICATIONS:**

Monthly Technical Progress Report to include: summary of present monthly progress, identification of next month's activities, defining of problems encountered, assessment of impact to the program, and issues or items that should be reviewed.

Examples will be provided to the contractor for all deliverables and requirements contained in the SOW.

**APPLICABLE DOCUMENTS:**

None

**TASK END DATE:** 4/30/01

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DELIVERABLES AND DATES: (Continued)

o Other Documentation

- NOAA-M Program Requirements Document (PRD): (12/15/00)
- NOAA-M Launch Management Plan (LMP): (2/15/01)
- NOAA-M SOCC Mission Operations Rqmts Doc (SMORD): (12/15/00)
- NOAA-M Requirements Verification Matrix: (1/2/01)
- NOAA-M OV Plan: (1/15/01)
- NOAA-M OV Support Plan: (1/15/01)
- NOAA-M OV Test Descriptions and Analysis Plan: (2/15/01)
- NOAA-M OV CMD Procs (Nominal & Contingency): (3/1/01)
- NOAA-M OV Instrument 1B data Analysis SW Tool: (2/15/01)
- OV events merged into Flight Timetable: (4/1/01)
- NOAA-M Test Chronology: Initial (7/00), Bi-monthly updates to launch)
- NOAA-L Lessons Learned Matrix (Status of Open Issues) (Bi-weekly updates, as required)
- MOWG Schedule (Milestone schedule of Mission Operations activities) (Bi-weekly updates, as required)

PERFORMANCE STANDARDS:

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

FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM):

Johnny Ferry, building 6, room S234