

TECHNICAL WORK MAY NOT BEGIN PRIOR TO CTR ACCEPTANCE

NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR:	CONTRACT NO./TASK NO.:	JOB ORDER NUMBER:	APPROV. FY:
QSS Group, Inc.	NASS- 99124 147 AMENDMENT	563-632-10-11-89	98

TASK TITLE: (NTE 80 characters; include Project name)
Evaluation of Li-Ion Cells

APPROVALS: (Type of title, date, and sign)

ASSISTANT TECHNICAL REPRESENTATIVE (OR TASK MONITOR)	DATE	ORG CODE	MAIL CODE	PHONE
Gopal Rao <i>[Signature]</i>	9/13/99	563	563	301-286-6654
Marlon Enciso <i>[Signature]</i>	9/13/99	563		301-286-5845
CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR)	DATE	CODE	PHONE	
Bob Lebar <i>[Signature]</i>	9/15/99	560	301-286-6588	
FLIGHT HARDWARE, CRITICAL GSE OR SOFTWARE? <small>(IF YES, NEED CODE 303 CONCURRENCE NEXT BLOCK)</small>	CONTRACTING OFFICER'S QUALITY REP.		DESIGNATED FAM:	
<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.

(To be completed by Contracting Officer)
C.O. Requested Quote on:
Date: SEP 17 1999

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 is October 8, 1999.

INCENTIVE FEE STRUCTURE (check one)

	No. 1	<input checked="" type="checkbox"/> No. 2	No. 3	No. 4	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 \$ 71,169.

The target fee of this task order is \$ 338.

The total target cost and target fee of this task order as contemplated by the Incentive Fee clause of this contract is \$ 71,507.

The maximum fee is \$ 494.

The minimum fee is \$0.

AUTHORIZED SIGNATURE:

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

[Signature] 10/8/99 Lorrie L. Eakin
 SIGNATURE OF CONTRACTING OFFICER DATE TYPED NAME OF CONTRACTING OFFICER

CONTRACTOR'S ACCEPTANCE:

 AUTHORIZED SIGNATURE DATE

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NASA/GODDARD SPACE FLIGHT CENTER

REQUEST FOR TASK PLAN / TASK ORDER

CONTRACTOR	CONTRACT NO./TASK NO.	TASK NO.	AMENDMENT
QSS Group, Inc.	NAS5- 99124	147	

Applicable paragraphs from contract Statement of Work: Function 2.D.7

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

The contractor shall provide services to study the lithium-ion cell performance. The Lithium-Ion Cells to tested are: Two (2) 12 Ah and Two (2) 40 Ah from SAFT, Seven (7) 20 Ah from YTP, Ten (10) 1.5 Ah from Wilson Greatbach, and Ten (10) from Lithium technology. and five (5) 3 Ah from ATK Polymer. These cells will be provided by GSFC as GFE items. The contractor shall provide the following services:

- Perform initial acceptance test
 - Provide cell capacities at 25, 10 and 0 degrees C.
 - Perform Charge retention test at 25 degrees C.
- After completion of the acceptance testing, the contractor shall present electrical performance data from the initial acceptance test to ATR and /or his representative per milestone schedule.
- Perform calorimetric study on one (1) cell per each size and per each vendor.
- Assemble six (6) cell series test pack of YTP cells, and four (4) cell series test of ATK cells:
- Perform 500 LEO cycles at 40 percent Depth-of-Discharge and 20 degrees C
 - Test orbit shall be 90 minutes: 60 minutes Charge and 30 minutes discharge
 - Clamp the voltage during the charge and provide a minimum 15 minutes trickle charge

The contractor shall submit the calorimetric study report within 21 days of completion of the work to ATR. The contractor shall notify the ATR of any cell failure within 48 hours of such a failure by email (Gopalakrishn.M.Rao.1@gsfc.nasa.gov) or fax (301-286-1751). The contractor shall prepare a written corrective action plan after such a failure, and submit it to ATR within 72 hours of the failure. The contractor shall email or fax a typical orbit data weekly to ATR. The contractor shall submit a written status report after completing cycling test. Upon completion of the cycling test program, the contractor shall submit a written final report to the ATR within 21 days.

PERFORMANCE SPECIFICATIONS:
All plans and testing under this task are to be produced and performed using aerospace test standards and practice.

APPLICABLE DOCUMENTS:
Lithium-Ion Test Plan by Gopal Rao, Code 563, GSFC

TASK END DATE: 11/30/99

MILESTONES/DELIVERABLES AND DATES:

Initial Acceptance Test Data Report	Within 72 hours of the completion of testing
Calorimetry Report	Within 21 days of the completion of testing
One orbit data	Weekly
Status Report	After five hundred Orbits
Cell Failure Notification	Within 48 hours of such a failure
Corrective Action Plan	Within 72 hours of the failure
Final Report	Within 21 days of the completion of testing

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

FINAL DELIVERY DESTINATION (NAME, BLDG, ROOM):
Gopal Rao, building 20, room 166