Marshall Space Flight Center
Engineering, Science & Technical Services

JACOBS
ESTS Group

Task Order Plan (TOP)

Contract Number: *NNM05AB50C*
TO Title: *Nano Energetics Propulsion Project (NEPP) Support*
TO Number: *43-030005* **Revision:** *02*

Period of Performance: *10/02/2010* to *09/30/2011*

MSFC Initiator: *Mark Stucker*

(b)(4) [redacted]

Emergency: *No*

Revision 02: The purpose of this revision is to extend this task into Contract Year 6 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period October 2, 2010 through September 30, 2011. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance. This revision affects Nano Energetics Propulsion Project (NEPP) support to the VP32 Exploration & Space Operations Programs & Projects Office.

Program	Subelement	WBS	Status
VP32, NEPP	00	811540.16.14.08	Open
VP32, NEPP	01	811540.16.14.08	Open

Revision 01: This Task Order (TO) revision has been created to respond to a customer request to reduce the Subcontract support to Subelement -01 in order to allocate a significant portion of those Subcontract resources to support another TO. Sections 2 & 3 have been updated to account for this change in scope that impacts technical approach and skills required. The Performance Plan, Schedule, and Risk Assessment have not been changed. This change decreases Subcontract on Subelement -01 by (b)(4) [redacted] The total cost for this TO is now estimated at (b)(4) [redacted]

This Task provides technical support for the Nano Energetics Propulsion Project (NEPP). This TO defines the task, including scope, schedule, and resource estimates throughout the period of performance. Costs have been estimated for resources and the associated management hours. This TO includes a Risk Assessment, Performance Plan, and baseline schedule. Support for this TO is planned to begin on August 4, 2010. The total cost for this TO in Contract Year 5 is estimated at (b)(4) [redacted]

1.0 Task Order Description & Objectives

Marshall Space Flight Center (MSFC) has been assigned by NASA-HQ as the lead for the Nano Energetics Propulsion Project (NEPP). NEPP is part of the Agencies proposed new Space Technology Program (STP) whose intent is to explore innovative and game changing technology as a means of creating a technology-enabled space exploration strategy. For the NEPP, MSFC will lead the management of NASA's efforts to identify, nurture and mature nano energetics propulsion ideas and technologies by moving them from a technology concept phase into either a laboratory, flight-test or in-space demon-

strations. Part of these NEPP duties will require MSFC to competitively sponsor research in academia, industry, and the NASA Centers based on the quality of the research proposed; and, to leverage the technology investments of NASA's international, other government agency, academic and industrial partners.

This Task Order Request solicits project programmatic support to the MSFC based Nano Energetics Propulsion Project (VP32) in support of the new Space Technology Program (STP).

2.0 Technical Approach (Including required input, guidelines & assumptions)

Typical Task Order requirements include, but are not limited to, the following:

Project Reporting/Windchill Support **(Suspended as of Revision: 01)**
The contractor shall maintain plans and documentation, and generate new documentation as required. The contractor shall produce reports and presentations to provide project status to MSFC, S&MS, and STP NEPP management. The contractor shall manage access and content for the project's documentation/ information systems currently Windchill (i.e., status reports, calendar, schedules, and applicable technical information). The contractor shall manage the folder structure and ensure that appropriate project documentation is maintained on the system.

Typical tasks include, but are not limited to:

- Support project planning and control activities
- Liaison to personnel between centers/customers
- Prepare, maintain, and provide project calendar of events
- Provide meeting notes and review comments as requested
- Compile and maintain various NEPP distribution lists
- Internal communications; Identify, track, and provide action item support, status, and resolution
- Aide in producing reports and presentations to provide project status to MSFC, S&MS, and HQ management
- Assist in coordination and support for organizing on-/off-site project meeting functions and events (e.g., Technical Interchange Meetings (TIMs) and Workshops)
- Assist in the locating and uploading on the project's documentation/information system (currently Windchill)
- Provide minutes, technical notes, reports, and editorial support for project elements. Web-based (PBMA, Webex, Projectlink, Windchill, PKI, ViTS) data support to NEPP team as required. Assist in support on planning and conduct of project meeting functions and events (e.g., TIMs and Workshops).
- Backup to other support staff as required

Product deliverables will include:

- Project Calendar Events
- Meeting notes, minutes, actions; i.e., SE&I, NASA Tag Ups
- Input and Support to the ICE NEPP Portal Page
- Monthly Activity Report

Project Integration Support **(Suspended as of Revision: 01)**
The contractor shall assist in developing and maintaining all internal Nano Energetics Propulsion Project (NEPP) plans (e.g. Project implementation Plan, Surveillance Implementation Plan). Also, the contractor shall identify, track, and support resolution of action items and support project planning and control activities. The contractor shall prepare, maintain, and provide project status reports, calendar of events, action item status, and a project status booklet (Smart Book).

Typical tasks include, but are not limited to:

- Perform integrated project reporting; Identify, track and support action items
- Support project planning and control activities

- Prepare, maintain, and provide project status reports, and a project notebook; Produce reports and presentations to VP32, S&MS, MSFC and HQ management
- Manage access and content for project's documentation/information systems (Windchill)
- Manage folder structure and ensure appropriate project documentation is maintained on the system (Windchill)
- Provide Windchill support to the NEPP team - getting documentation, uploading, downloading, access, etc.
- Assist and support organizing on-site and off-site meetings and events
- Provide any additional support to VP32 and NEPP for general project support.
- Assist in support on planning and conduct of project meeting functions and events (e.g., TIMs and Workshops).
- Assist in development and maintenance of all internal plans (e.g. Project implementation Plan, Surveillance Implementation Plan)
- Backup to other support staff as required

Product deliverables will include:

- NEPP Weekly Notes
- Smartbook
- Monthly Activity Report

<u>Project Coordinator Support</u>

The contractor shall provide coordination and support for organizing on-site/off-site project meeting functions and events (e.g., Technical Interchange Meetings and Workshops).

Typical tasks include, but are not limited to:

- Perform providing assistance/advice to the NEPP, relative to various administrative, logistical, secretarial/clerical duties.
- Independently manage, prioritize and screen supervisor's calendar, screen requests and expedite matters not requiring the supervisor's attention or refer to appropriate organizational elements.
- Arrange meeting space and support details for meetings/conferences.
- Arrange preferred hotel accommodations and coordinate travel and transportation to/from various meetings via the travel office and the travel manager system, and ensure that all are appropriate with the attending personnel.
- Provide correspondence and clerical services to ensure all outgoing correspondence is correct.
- Use detailed knowledge for current program requirements, projected needs of the office and understanding of the office to conduct research, evaluate and validate specific data and prepare drafts and notes to be used in reports and studies offered by others to the office.
- Act as a liaison to other managers and staff within the NEPP organization and provide accurate advice on procedures, reports, requirements, and other matters necessary to implement supervisor's instructions, directives, and policies.
- Assist with projects such as graphics and posters displayed in our building area. Update visual org chart for our organization.
- Assist with NEPP Weekly notes when needed.
- Assist in support on planning and conduct of project meeting functions and events (e.g., TIMs and Workshops).
- Backup to support staff as required

Product deliverables will include:

- NEP/MSFC Management and Facility Calendars
- Building Graphics and Posters
- Monthly Activity Report

<u>Cost/Schedule Risk Assessments and Earned Value Management Support</u>

The contractor shall coordinate with project engineers at MSFC, HQ, academia, industry, and other Government organizations affiliated with NASA's NEPP to develop detailed logically linked schedules and maintain weekly status using scheduling software. The contractor shall develop and/or evaluate project critical path(s) and track project schedule metric data. The contractor shall collect, manage, and assess earned value data relative to the program schedule. The contractor shall provide detailed assessments of the contractors supplied schedule and earned value data to include cost/schedule risk assessments.

Product deliverables will include:

- Schedules
- EVM Updates
- Providing meeting notes and review comments as requested
- Reports on independent analysis in the form of briefing charts and notes-page text
- Monthly Activity Report

3.0 Discussion of Skills Required

Project Reporting/Windchill Support **(Suspended as of Revision: 01)**

(b)(4) [redacted]

Project Integration Support **(Suspended as of Revision: 01)**

(b)(4) [redacted]

Project Coordinator Support

(b)(4) [redacted]

Cost/Schedule Risk Assessments and Earned Value Management Support

(b)(4) [redacted]

4.0 Special Tools Required

N/A

5.0 Participating Subcontractors

Subelement 01:

(b)(4) [redacted]

6.0 Milestones & Deliverables

Monthly Activity Report due the 20th of each month via email to the ESTS Group Team Lead/Task Lead and the (b)(4) [redacted] The Team Lead/Task Lead will provide the template to submit monthly activity reports.

Deliverables listed in the Technical Approach under the specified areas of support.

7.0 Special Considerations (Recruiting, Special Equipment / Material, Safety, etc.)

This Task Order requires access to the following databases and or software: Windchill and MS Project.

The “Cost/Schedule Risk Assessments and Earned Value Management” support is to be part-time not to exceed 10 direct labor hours per week.

Classes, training, creating DVDs and physical concept models, etc., may be required to support this task.

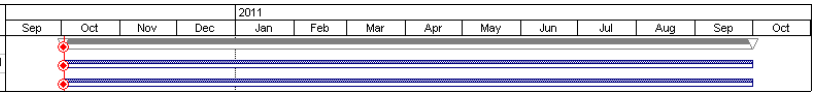
8.0 Work Shelf

The following activities could be accomplished as part of the Task Order performance by personnel that are temporarily available due to program or funding delays on other Tasks. Specific assignments will be coordinated with the Task Initiator to ensure appropriate skills and experience.

TO/Subelement	Description	Due Date	Skill

9.0 Schedule - Schedule is baseline only. Reference Monthly Activity Report for detailed, updated schedule with milestones.

Task Order #	Subelement	Task Work Element
43-030005		**Nano Energetic Propulsion Project**
43-030005	00	Cost/Schedule Risk Assessments and Earned Val
43-030005	01	Project Reporting, Integration, & Coordination



ESTS Contract Task Order Request Performance Plan

Task Order Title: Nano Energetics Propulsion Project (NEPP) Support

Task Order Number: 43-030005 Revision: 02

Category	Weighting Technical %	End of Period Technical Score
Technical Objectives	65%	X 65% =
		Justification
Support the Nano Energetics Propulsion Project (VP32) and S&MS (VP01) by providing project programmatic support. Typical tasks include, but are not limited to: - Project Reporting/Windchill Support - Project Integration Support - Project Coordinator Support - Cost/Schedule Risk Assessments & EVM		
	Weighting Schedule %	**Schedule Score**
Schedule Objectives (Milestones)	10% *(min 10%)*	X 10% =
		Justification
Monthly reports of activity and accomplishments are required. Final documents will be delivered to meet NEPP and S&MS schedule needs as negotiated by the task initiator or their designated representative.		
	Weighting Cost%	**Cost Score**
Cost (actual vs. negotiated)	25% *(min.25%)*	X 25% =
		Justification
	Weighting Total %	**Total Score**
	100.00%	

Technical, Schedule, and Cost Grading Scale

Score	Description
9.0-10.0	Exceeded TO Performance Plan objectives resulting in major benefit(s)
8.0-8.9	Exceeded TO Performance Plan objectives resulting in modest benefit(s)
7.0-7.9	Met TO Performance Plan objectives
3.0-6.9	Did not meet all TO Performance Plan objectives resulting in minimal impact or requiring additional agency funds
0.0-2.9	Did not meet TO Performance Plan objectives resulting in substantial impact and/or requiring additional agency funds

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Comments:

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Risk Assessment

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(b)(4)

Task Order Risk Assessment to Cost, Technical, and Schedule

List identified risk associated with Task Order performance as related to task cost, technical, and schedule. Classify the risk(s) according to probability of occurrence and impact as defined below and enter the risk into risk matrix.

Risk	Risk Type	Probability (1-4)	Impact (1-4)	Risk Description
Risk C1	Cost	1	1	Meet cost estimates to within 5%
Risk C2	Cost			
Risk T1	Technical	1	1	Meet all technical objectives
Risk T2	Technical			
Risk S1	Schedule	1	1	Meet schedule deadlines
Risk S2	Schedule			

*Note: See page 2 for risk mitigation plan for those risks which are Primary Risk Drivers.

Task Order Risk Matrix

		1 Minimal Impact	2 Minor Impact	3 Medium Impact	4 Major Impact
Inevitable Occurrence (>95% Probability)	4	Y	Y	R	R
High Probability of Occurrence (>60% but <95% Probability)	3	G	Y	Y	R
Medium Probability of Occurrence (>25% but <60% Probability)	2	G	Y	Y	Y
Low Probability of Occurrence (<25% Probability)	1	G	G	Y	Y

Legend

- R — **Primary Risk Driver:** Requires Risk Mitigation Plan
- Y — **Caution:** Requires status updates and general plan for risk reduction as determined necessary by Team Lead and Initiator
- G — **Watch:** No Action required

Impact Level	Cost Impact Definition	Technical Impact Definition	Schedule Impact Definition
(1) Minimal Impact	No significant cost impact	No significant technical impact	No significant schedule impact
(2) Minor Impact	Potential to recover cost	Potential to gain required technology without impact	Minor delay in deliverables but no impact to customer
(3) Medium Impact	>0 but <10% subtask cost overrun	Some technical impact but potential to recover	Delay in subtask deliverables but work arounds available and acceptable to customer
(4) Major Impact	>10% subtask cost overrun	Unable to meet technical requirements to perform subtask	Delay in subtask deliverables with impact to customer

Risk Mitigation Plan

Complete the following chart for those risks identified on page 1 as “Primary Risk Drivers”. The following chart will serve as the Risk Mitigation Plan.

Risk No.: Risk Description:		
Mitigation Step No.	Planned Completion Date	Mitigation Step Description