

**Task Order Plan (TOP)**

**Contract Number:** NNM05AB50C  
**TO Title:** *Systems Engineering Branch Integration Lead*  
**TO Number:** 37-010306 **Revision:** 00

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

**MSFC Initiator:** Kevin McCarley

(b)(4)  


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**Emergency:** YES

Revision -00: This Task Order (TO) is a continuation of work being performed on TO 37-010301-09 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 the following Science program(s) or Project(s): ISS ECLSS.

Sub-element	Previous Sub-element	Sub-element Title	WBS	Status
37-010306-JA	37-010301-09	ECLSS Spares	401769.06.08.02.04.05	Added with Rev - 00

**1.0 Task Order Description & Objectives**

This Task Order provides system engineering products and support. This function includes the discipline areas of System Stakeholder Expectations Definition, System Technical Requirements Definition, System Logical Decomposition, System Requirements Management, System Verification/Validation, System Decision Analysis, System Technical Risk Management, and System Technical Assessment.

Support will be provided to the assigned project in the area of general systems engineering and in support of the Lead Systems Engineer (LSE)/Designated Lead Engineer (DLE). ESTS Group shall be responsible for assisting in program coordination within the Space Systems Department. Duties will include coordinating scheduling, coordinating design and fabrication activities, and providing periodic status inputs to project and ES management, resolving technical issues and supporting reviews.

**Sub-element -JA**

This sub-element provides support to the ECLSS Spares project in the area of general systems engineering and provide support to the LSE. ESTS Group shall be responsible for assisting in program coordination within the Engineering Directorate. Duties will include coordinating scheduling, coordinating design and fabrication activities, and providing periodic status inputs to project and ES management.

Products include System Requirements documents/databases, System Requirement Allocation Matrix and Requirements Traceability, System Requirement/Spec Trees, System/Subsystem Architecture and functional decomposition documents, Interface Requirements documentation, Stakeholder needs defi-

nition and operational concept development, Verification/Validation Requirements, Planning, and Compliance Tracking documents/databases, Systems Trade Study Reports/Presentations, Technical Risk Assessment and Tracking databases, System Analysis & Modeling analyses and reports, monthly activity reports, updates to MSFC Space Systems Department Systems Engineering & Integration Branch monthly review charts, Review Item Discrepancies/Request For Actions, presentations, and technical papers where appropriate. Use of systems engineering tools such as CRADLE and ARM may be required depending on specific Project/Program needs.

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

The Jacobs ESTS Group will perform the work described above using standard office automation software including Microsoft Project, Excel, Word and PowerPoint. The Internet will be used to obtain NASA standards, military standards, and contractor documents as appropriate. Use of systems engineering tools such as CRADLE and ARM may be required depending on specific Project/Program needs.

The Jacobs ESTS Group will support meetings, teleconferences, Technical Interchange Meetings, (TIMs), etc., as required by the MSFC Space Systems Department Systems Engineering & Integration Branch. The Jacobs ESTS Group may be asked to travel to support reviews, working meetings, & training as determined by project or the MSFC Space Systems Department Systems Engineering & Integration Branch. Travel is not estimated in this revision.

## **3.0 Discussion of Skills Required**

This Task Order requires (b)(4)

(b)(4) Experience in technology development, operations, and systems engineering is required. Systems engineering or integration experience with payloads or flight systems is also required. Working knowledge of NASA or DoD Systems Engineering processes is required. Independent initiative with good "follow-up" and organizational skills is required. Experience with systems engineering tools such as CRADLE and ARM is desired.

## **4.0 Special Tools Required**

None.

## **5.0 Participating Subcontractors**

None.

## **6.0 Milestones & Deliverables**

Monthly Activity Reports, updates to MSFC Space Systems Department Systems Engineering & Integration Branch monthly review charts, and project documentation as determined by project or MSFC Space Systems Department Systems Engineering & Integration Branch.

Milestones:

December 10, 2010: Delivery of Firmware Control Assembly (FCA) SN 003

January 1, 2011: Delivery of Distillation Assembly (DA) SN 003

April 13, 2011: Delivery of Power Supply Module (PSM) SN 003

August 10, 2011: Delivery of Pressure Control & Pump Assembly (PCPA) SN 003

August 31, 2011: Delivery of Fluid Control & Pump Assembly (FCPA) SN 003

November 1, 2011: Delivery of DA SN 004

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

None.

## 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/Sub-element	Description	Due Date	Skill
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## 9.0 Schedule

Task Order #	Subelement	Task Work Element	2011											
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
37-010306	00	<input type="checkbox"/> Systems Engineering Branch Integration Lead												
37-010306	JA	ECLSS Spares												
37-010306	00	<input type="checkbox"/> Monthly Activity Report												

# ESTS Contract Task Order Request Performance Plan

Task Order Title: [Systems Engineering Branch Integration Lead](#)

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Category	Weighting Technical %	End of Period Technical Score
<b>Technical Objectives</b>	65%	X <u>65%</u> =
<p>1) Provide System Engineering Integration Lead function to assigned Projects. Support Dept. Lead Engineer in lead duties as assigned. Provide status, coordinate engineering support, resolve technical issues, and support reviews.</p> <p>2) Perform system engineering based on established engineering best practices as defined in agency, center, and branch requirements and processes.</p>		<p><b>Justification</b></p>
<b>Schedule Objectives (Milestones)</b>	Weighting Schedule % <u>10%</u> (min 10%)	<b>Schedule Score</b>
<p>1) Provide System Engineering Integration Lead function to assigned Projects. Support Dept. Lead Engineer in lead duties as assigned. Provide status, coordinate engineering support, resolve technical issues, and support reviews.</p> <p>2) Perform system engineering based on established engineering best practices as defined in agency, center, and branch requirements and processes.</p>		<p>X <u>10%</u> =</p> <p><b>Justification</b></p>
<b><u>Cost (actual vs. negotiated)</u></b>	Weighting Cost % <u>25%</u> (min.25%)	<b>Cost Score</b>
		<p>X <u>25%</u> =</p> <p><b>Justification</b></p>
	Weighting Total % 100.00%	<p><b>Total Score</b></p>

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## 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

## ESTS Contract Task Order Request Performance Plan

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**Comments:**

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**Risk Assessment**

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**MSFC Initiator:** Kevin McCarley

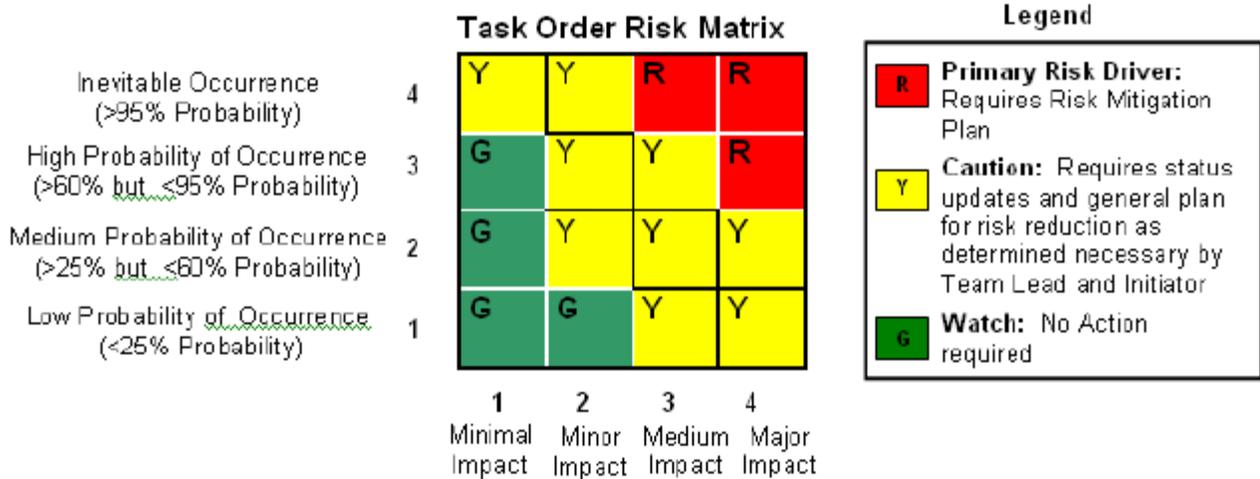
(b)(4)

**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			No cost risk identified.
Risk C2	Cost			
Risk T1	Technical			No technical risk identified.
Risk T2	Technical			
Risk S1	Schedule			No schedule risk identified.
Risk S2	Schedule			

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



1	2	3	4
Minimal Impact	Minor Impact	Medium Impact	Major Impact

