

**Task Order Plan (TOP)**

**Contract Number:** NNM05AB50C  
**TO Title:** Launch Abort Systems Office Support  
**TO Number:** 43-030003 **Revision:** 13

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

**MSFC Initiator:** Mark Stucker

(b)(4)

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**Emergency:** No

Revision 13: 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. Subelement –EA closes with this revision. This revision affects Launch Abort System (LAS) support to the VP32 Exploration & Space Operations Programs & Projects Office.

Program	Subelement	WBS	Status
VP32, LAS	EA	644423.06.34.01.08 644423.06.34.06.01.08	Closed
VP32, LAS	EB	644423.06.34.01.08	Open
VP32, LAS	EC	644423.06.34.01.08	Closed

Revision 12: This Task Order (TO) revision has been created to increase Subcontract support to Subelement –EA and closes Subelement -EC at the request of the customer. The Schedule, Performance Plan, and Risk Assessment have not been changed. This change results in a net decrease of (b)(4). The overall combined total for this task is (b)(4). Resource estimates are summarized as follows:

Subelement -EA; Total cost is (b)(4). Increased Subcontract by (b)(4). Funding for this task is provided per MSFC Work Breakdown Structure (WBS) 644423.06.34.02.08 and WBS 644423.06.34.06.01.08.

Subelement -EB; No change. Funding for this task is provided per MSFC WBS 644423.06.34.01.08 and WBS 644423.06.34.02.08.

Subelement -EC; Total cost is (b)(4). Decreased Subcontract by (b)(4) and decreased Labor by (b)(4). Funding for this task is provided per MSFC (WBS) 644423.06.34.01.08.

Revision 11: This Task Order (TO) revision has been created to increase Subcontract to increase Earned Value Management support to full time for Subelement -EC and add travel for Subelement -EA

at the request of the customer. Subelement -EA will show a net decrease since Subcontract was reduced to account for the delta between the TO and the Subcontract Statement of Work. The Schedule, Performance Plan, and Risk Assessment have not been changed. This change results in a net increase of (b)(4). The overall combined total for this task is (b)(4). Resource estimates are summarized as follows:

Subelement -EA; Total cost is (b)(4). Reduced Subcontract by (b)(4). Increased Travel by (b)(4). This change results in a net decrease of (b)(4). Funding for this task is provided per MSFC Work Breakdown Structure (WBS) 644423.06.34.02.08 and WBS 644423.06.34.06.01.08.

Subelement -EB; Total cost is (b)(4). No change has been made with this revision. Funding for this task is provided per MSFC WBS 644423.06.34.01.08 and WBS 644423.06.34.02.08.

Subelement -EC; Total cost is (b)(4). Increased Subcontract by (b)(4). Funding for this task is provided per MSFC (WBS) 644423.06.34.01.08.

Note: The figures provided in narrative above for Revision 11 combine both Fiscal Year 2010 and 2011 estimates, since the Period of Performance for CY5 includes both. The figures provided in the narrative below for Revision 10 included only Fiscal Year 2010 estimates.

Revision 10: This Task Order (TO) revision establishes this task for Contract Year (CY) 5 of the NNM05AB50C ESTS contract. It is a continuation of the effort previously performed under TO 43-030003 from CY4. This task defines and estimates Launch Abort Systems Office support for the period 3 October 2009 through 14 October 2010. The Schedule, Performance Plan, and Risk Assessment reflect the estimates for task activities for the new period of performance. The overall combined total for this task is (b)(4). Resource estimates are summarized as follows:

Subelement -EA; Total cost is (b)(4). Labor has (b)(4) estimated man hours with an associated cost of (b)(4). Labor estimate is based on actual labor from CY4. Subcontract cost of (b)(4) is based on actual cost from CY4. Funding for this task is provided per MSFC Work Breakdown Structure (WBS) 644423.06.34.02.08 and WBS 644423.06.34.06.01.08.

Subelement -EB; Total cost is (b)(4). Labor has (b)(4) estimated man hours with an associated cost of (b)(4). Labor estimate is based on actual labor from CY4. Subcontract cost of (b)(4) is based on actual cost from CY4. Funding for this task is provided per MSFC WBS 644423.06.34.01.08 and WBS 644423.06.34.02.08.

Subelement -EC; Total cost is (b)(4). Labor has (b)(4) estimated man hours with an associated cost of (b)(4). Labor estimate is based on actual labor from CY4. Subcontract cost of (b)(4) is based on actual cost from CY4 and accounting for a significant reduction in anticipated support due to sharing of resources. Funding for this task is provided per MSFC (WBS) 644423.06.34.01.08.

Revision 9: This Task Order (TO) revision was created to update the (b)(4) assigned and align scope, schedule and resources with current expectations. The Performance Plan has not been revised. This change results in a total decrease of (b)(4). In particular, resources estimates are modified as follows:

Subelement -EA; Total cost is (b)(4). Increased Labor by (b)(4) hours with a corresponding increase in cost of (b)(4). Decreased Subcontract by (b)(4). This results in a total decrease of (b)(4).

Subelement -EB; Total cost is (b)(4). Increased Labor by (b)(4) hours with a corresponding increase in cost of (b)(4). Decreased Subcontract by (b)(4). This results in a total decrease of (b)(4).

Subelement -EC; Total cost is (b)(4). Increased Labor by (b)(4) hours with a corresponding increase in cost of (b)(4). Decreased Subcontract by (b)(4). This results in a total decrease of (b)(4).

The result is a total net increase in Labor by (b)(4) hours to correct for previously estimated support and account for increased support required for Launch Abort System Preliminary Design Review. Subcontract decreased in all subelements to account actual support that can be invoiced in CY4, with the remainder to be invoiced in CY5. Specifically, the majority of subcontractors will invoice all September support at the beginning of October per their normal invoicing schedule. The result is that the charges will be recognized in CY5. This revision is effective August 10, 2009.

Revision 08: The purpose of this revision is to extend this task into Contract Year 4 of the NNM05AB50C ESTS Contract. This revision defines and estimates work for the period September 27, 2008 through October 2, 2009. 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 Ares program support sub-element Crew Exploration Vehicle, Launch Abort System.

The purpose for Revision -07 is to change the (b)(4) name, and to add additional subcontractors support to provide technical oversight support of the Orion Spacecraft Launch Abort System (LAS) with particular emphasis in all NASA and contractor efforts related to LAS Hardware Production & Assembly (HP&A), technical review support of LAS Pyrotechnic Systems, and add additional project planning and graphics support, and to adjust direct support and subcontract labor resources for Sub-elements -EA and -EB to better define actual task activities; specifically:

1. Add additional scope of work to the task order for technical oversight support of the Orion Spacecraft Launch Abort System by adding the level of effort for subcontractor (b)(4) (b)(4) ODC of (b)(4) and the subcontract administration direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -EA to the June 08 through September 08 estimate.
2. Add additional scope of work to the task order for LAS Pyrotechnic Systems technical support by adding the level of effort for subcontractor (b)(4) ODC of (b)(4) and the subcontract administration direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -EA to the July 08 through September 08 estimate.
3. Increase the scope of work for Project Lead/Engineering Support for Special Studies by increasing the level of effort subcontractor (b)(4) ODC of (b)(4) and the subcontract administration direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -EA to the July 08 through September 08 estimate.
4. Increase the scope of work for project planning and graphics support by increasing the level of effort for subcontractor (b)(4) ODC of (b)(4) and the subcontract administration direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -EB to the July 08 through September 08 estimate.

The purpose for Revision -06 is to extend this task into Contract Year 3 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period 29 September 2007 through 26 September 2008. This revision also removes a third sub-element (Sub-element -03) for Pyrotechnic Systems on Crew Exploration Vehicle (CEV) Service Module (SM) Technical Support. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance. Funding for this task is provided per MSFC PR 4200205955.

The purpose for Revision -05 is to add Sub-element -03 Pyrotechnic Systems on Crew Exploration Vehicle (CEV) Service Module (SM) Technical Support, and to adjust direct support and subcontract labor resources for Sub-elements -00, -01 and -02 to better define actual task activities; specifically:

1. Add additional scope of work to the task order for Pyrotechnic Systems on CEV SM Technical Support by adding the level of effort for subcontractor (b)(4) ODC for Sub-element -03 of (b)(4) and the subcontract administration direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -03 to August 07 through September 07 estimate.
2. Increase the Project Lead/Engineering Support for Special Studies technical and subcontract administration direct support (total of (b)(4) hours (b)(4) and (b)(4) hours (b)(4) cost categories) for Sub-element -00 from June 07 through September 07 estimate.
3. Increase the scope of work for Project Lead/Engineering Support for Special Studies by increasing the level of effort subcontractor (b)(4) ODC for Sub-element -00 of (b)(4) to June 07 through September 07 estimate.
4. Increase the scope of work for Project Planning, Management, Documentation and Reporting Support by increasing the level of effort for subcontractor (b)(4) ODC for Sub-element -01 of (b)(4) from June 07 through September 07 estimate.
5. Decrease the scope of work for Scheduling, Risk Assessments, and Earned Value Management Support by reducing the level of effort for subcontractor (b)(4) ODC for Sub-element -02 of (b)(4) from June 07 through September 07 estimate.

The purpose for Revision -04 is to adjust subcontract labor resources for Sub-elements -01 and -02 to better define actual task activities; specifically:

1. Decrease the scope of work for Project Planning, Management, Documentation and Reporting Support by reducing the level of effort for subcontractor (b)(4) ODC for Sub-element -01 of (b)(4) from March 07 through September 07 estimate.
2. Decrease the scope of work for Scheduling, Risk Assessments, and Earned Value Management Support by reducing the level of effort for subcontractor (b)(4) ODC for Sub-element -02 of (b)(4) from March 07 through September 07 estimate.

The purpose for Revision -03 is to change the MSFC Initiator name, and to adjust direct support and subcontract labor resources for Sub-elements -00 and -01 to better define actual task activities; specifically:

1. Increase the Project Lead/Engineering Support for Special Studies direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -00 to December 06 through September 07 estimate.
2. Increase the scope of work for Project Lead/Engineering Support for Special Studies by adding level of effort for subcontractor (b)(4) ODC for Sub-element -00 of (b)(4) to December 06 through September 07 estimate.
3. Decrease the task order subcontract administration and technical direct support (total of (b)(4) hours (b)(4) cost category) for Sub-elements -00, and -01 from December 06 through September 07 estimate.
4. Decrease the scope of work for Project Planning, Management, Documentation and Reporting Support by reducing the level of effort for subcontractor (b)(4) ODC for Sub-element -01 of (b)(4) from December 06 through September 07 estimate.

The purpose for Revision -02 is to extend this task into Contract Year 2 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period 30 September 2006 through 28 September 2007. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance. This Task Order supports the Constellation work.

The purpose for Revision -01 is to adjust direct support and subcontract labor resources for Sub-elements -00, -01, and -02 to better define actual task activities; specifically:

1. Decrease the Project Lead/Engineering Support for Special Studies direct support (total of (b)(4) hours (b)(4) cost category) for Sub-element -00 from August and September 06 estimate.
2. Decrease the task order subcontract administration direct support (total of (b)(4) hours (b)(4) cost category) for Sub-elements -01 and -02 from August and September 06 estimate.

3. Decrease the scope of work for Project Planning, Management, Documentation and Reporting Support by reducing the level of effort for subcontractor (b)(4) ODC for Sub-element - 01 of (b)(4) from August and September 06 estimate.
4. Decrease the scope of work for Scheduling, Risk Assessments, and Earned Value Management Support by reducing the level of effort for subcontractor (b)(4) ODC for Sub-element - 02 of (b)(4) from August and September 06 estimate.

This Task Order establishes support for the Launch Abort Systems Office (VP32). This TO defines and estimates work for the period of performance 20 July 2006 through 30 September 2006. Funding for this task is provided per MSFC PR 4200167301. Additionally, the Schedule, Performance Plan and Risk Assessment have been defined to reflect task activities for this period of performance.

## **1.0 Task Order Description & Objectives**

MSFC is currently performing project support activities in support of Langley Research Center (LaRC), the lead center for development of the Crew Launch Vehicle (CEV) Launch Abort System (LAS). MSFC has created an LAS Project Office to support the development of the CEV LAS, and is conducting special studies to prepare for and mature the technologies necessary to proceed into potential follow-on development projects. These activities are primarily being conducted in-house with the participation of other NASA centers, industry, and academia.

This Task Order will provide support to the Exploration & Space Operations Programs & Projects Office in support of the new CEV Launch Abort System project.

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

- Project Integration Support
- Project Reporting via Windchill
- Project Coordination
- Technical Interchange Meetings (TIMs)/Workshops Coordination and Support

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

Task Order personnel will provide the following support for the Launch Abort System Project Office through the VP32 Exploration & Space Operations Programs & Projects Office. Where specialized skills and experience are required, subcontractor support will be sought to provide the best capability and efficiency to the NASA customer.

### **Sub-element -EA Project Lead/Engineering Support for Special Studies (Closed with Revision 13)**

#### **Sub-element -EB Project Integration, Coordination, and Reporting Support**

Personnel will provide project planning, management, documentation, reporting and graphics support to the Exploration & Space Operations Programs & Projects Office to support the Launch Abort System Project Office.

The subcontractor shall assist in developing and maintaining a Project Plan that addresses project risk. The subcontractor shall identify, track, and support resolution of action items and support project planning and control activities. The subcontractor shall prepare, maintain, and provide project status reports, calendar of events, action item status, and a project status booklet (Smart Book).

The subcontractor shall maintain plans and documentation, and generate new documentation as required. The subcontractor shall produce reports and presentations to provide project status to MSFC, Science and Mission Systems (S&MS), and CEV management. The subcontractor 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 subcontractor shall manage the folder structure and ensure that appropriate project documentation is maintained on the system.

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

**Sub-element -EC Scheduling, Risk Assessments, and Earned Value Management Support (Closed with Revision: 12)**

**3.0 Discussion of Skills Required**

Sub-element -EB Project Planning, Management, Documentation and Reporting Support

(b)(4)

**4.0 Special Tools Required**

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

**5.0 Participating Subcontractors**

Subelement -EB:

(b)(4)

**6.0 Milestones & Deliverables**

Sub-element -EB:

Meeting notes, review comments, reports, & briefing charts as requested.  
Monthly Activity Reports.

**7.0 Special Considerations (Travel)**

No special considerations.

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

Task Order #	Subelement	Task Work Element	2011															
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		
43-030003		<b>LAS Office Support</b>																
43-030003	EB	Project Integration, Coordination, & Reporting																

# ESTS Contract Task Order Request Performance Plan

Task Order Title: [Launch Abort Systems Office Support](#)

Task Order Number: [43-030003](#) Revision: 13

Category	Weighting Technical %	End of Period Technical Score
<b>Technical Objectives</b>	55%	X <u>55%</u> = <b>Justification</b>
Support the Launch Abort System (VP31) and S&MS (VP01). Typical tasks include, but are not limited to, the following: <ul style="list-style-type: none"> <li>- Project Integration Support</li> <li>- Project Reporting via Windchill</li> <li>- Project Coordination</li> <li>- Technical Interchange Meetings (TIMs)/Workshops Coordination and Support</li> </ul>		
<b>Schedule Objectives (Milestones)</b>	Weighting Schedule % <u>20%</u> (min 10%)	Schedule Score X <u>20%</u> = <b>Justification</b>
Monthly reports of activity and accomplishments are required. Documents will be delivered to meet LAS Office and S&MS schedule needs as negotiated by the task initiator or their designated representative. Products may include, but are not limited to, the following: <ul style="list-style-type: none"> <li>- Development schedules</li> <li>- Briefings (both internal and external)</li> </ul>		
<b>Cost (actual vs. negotiated)</b>	Weighting Cost% <u>25%</u> (min.25%)	Cost Score X <u>25%</u> = <b>Justification</b>
	Weighting Total % 100.00%	<b>Total Score</b>

## 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

Task Order Number: [Launch Abort Systems Office Support](#)

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**Comments:**

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**Risk Assessment**

**Contract Number:** NNM05AB50C  
**TO Title:** Launch Abort Systems Office Support  
**TO Number:** 43-030003 **Revision:** 13

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

**MSFC Initiator:** Mark Stucker

(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 costs to within 5% of estimate.
Risk C2	Cost			None identified
Risk T1	Technical	1	1	Meet all technical objectives.
Risk T2	Technical			None identified
Risk S1	Schedule	1	1	Meet all schedule objectives.
Risk S2	Schedule			None identified

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



