

Task Order Plan (TOP)

Contract Number: NNM05AB50C
TO Title: EEE Parts Engineering
TO Number: 37-040301 **Revision:** 12

Period of Performance: 10/02/2010 to 9/30/2011

MSFC Initiator: Michael Selby

(b)(4)

Emergency: No

Revision -12: The purpose of this revision is to extend this task into Contract Year 6 of the NNM05AB50C ESTS contract. This revision defines and estimates the 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 mapping:

New Sub-element	Previous subelement	WBS	Program
01	-01	724297.40.43.08	N/A
08	-08	N/A	N/A
JA	-05	401769.06.08.02.04.02	ISS
SA	-02	522632.08.01.01	Shuttle
SB	-03	522094.08.01.01.01	Shuttle
SC	-09	197009.10.01.01.05	Shuttle

The subelements have been renamed to conform to the project/program naming convention that has been established for FY11.

Revision -11: The purpose of this revision is to more accurately reflect the effort required during this period of performance. The purpose of this revision is to reflect the administrative changes to the Constellation sub-elements identified below.

Sub-element -02:

The scope of this sub-element has increased to require additional EEE parts support for the Solid Rocket Booster (SRB). The labor estimate has been correspondingly increased by (b)(4)

(b)(4)

Sub-element -03:

The scope of this sub-element has increased to require additional EEE parts support for the Space Shuttle Main Engine (SSME) and the SSME Advanced Health Monitoring System (AHMS). The labor estimate has been correspondingly increased by (b)(4) hours.

Sub-element -05:

The scope of this sub-element has increased to require additional EEE parts support for the ECLSS 2010 spares program. The labor estimate has been correspondingly increased by (b)(4) hours.

Sub-element -09:

The scope of this sub-element has increased to require additional EEE parts support for the Propulsion Systems Engineering & Integration (PSE&I) project office. The labor estimate has been correspondingly increased by (b)(4) hours.

Sub-element -CF: was administratively closed.

Sub-element -CJ: was administratively closed and the work corresponding to this sub-element is being continued under the TO# 37-000001 sub-element -CK.

Sub-element -CU: was administratively closed.

Sub-element -CV: was administratively closed

Revision -10: The purpose of this revision is to more accurately reflect the effort required during this period of performance. Sub-elements -04, -07, and -CI are identified on the schedule and in the table for visibility, but no cost was estimated per the customer's direction. The Performance Plan, Schedule, and Risk Assessment have not been revised since there are no expected changes in task activities for this period of performance.

Sub-element -01:

Other direct charges (ODC) has been increased by (b)(4) to reflect additional costs for participating in additional government and industry meetings.

Sub-element -02:

Support for this task has been increased by (b)(4) hours to more accurately reflect the effort required during this period of performance

Sub-element -03:

Support for this task has been reduced by (b)(4) hours to more accurately reflect the effort required during this period of performance.

Sub-element -08:

Support for this task has been reduced by (b)(4) hours to more accurately reflect the effort required during this period of performance.

Sub-element -09:

Support for this task has been reduced by (b)(4) hours to more accurately reflect the effort required during this period of performance.

Sub-element -CJ:

Support for this task has been reduced by (b)(4) hours to more accurately reflect the effort required during this period of performance.

Sub-element -CV:

Support for this task has been reduced by (b)(4) hours to more accurately reflect the effort required during this period of performance.

This revision affects the following ARES Program Office sub-elements:

- Ares -CJ (sub-element -CJ)
- Ares -CV (sub-element -CV)

Revision -09: The purpose of this revision is to extend this task into Contract Year 5 of the NNM05AB50C ESTS contract. This revision defines and estimates the work for the period October 3, 2009 through October 14, 2010. Additionally, the Schedule, Performance Plan, and Risk Assessment have been revised to reflect changes in task activities for the new period of performance. Sub-elements -04, -07, and -CI are identified on the schedule and in the table for visibility, but no cost was estimated per the customer's direction.

This revision affects the following ARES Program Office sub-elements:

- Ares -CF (sub-element -CF)
- Ares -CI (sub-element -CI)
- Ares -CJ (sub-element -CJ)
- Ares -CU (sub-element -CU)
- Ares -CV (sub-element -CV)

Revision -08: The purpose of this revision is to more accurately reflect the effort required during this period of performance. The Performance Plan, Schedule, and Risk Assessment have not been revised since there are no expected changes in task activities for this period of performance.

Sub-element -01:

Travel in the amount of (b)(4) was added to reflect increased support for this task and ODC was increased by (b)(4) for meeting expenses during this period of performance.

Sub-element -02:

Support for this task has been reduced by (b)(4) hours and ODC was increased by (b)(4) for relocation and recruiting expenses to more accurately reflect the effort required during this period of performance.

Sub-element -03:

Support for this task has been increased by (b)(4) hours and ODC was increased by (b)(4) for relocation and recruiting expenses to more accurately reflect the effort required during this period of performance.

Sub-element -07:

ODC was increased by (b)(4) for relocation and recruiting expenses during this period of performance.

Sub-element -09:

Support for this task has been increased by (b)(4) hours to more accurately reflect the effort required during this period of performance. ODC was increased by (b)(4) for relocation and recruiting expenses during this period of performance.

Sub-element -CF:

Support for this task has been increased by (b)(4) hours to more accurately reflect the effort required during this period of performance.

Sub-element -CJ:

Support for this task has been reduced by (b) hours to more accurately reflect the effort

required during this period of performance.

Sub-element -CV:

Support for this task has been reduced by (b)(4) hours to more accurately reflect the effort required during this period of performance.

This revision affects the following ARES Program Office sub-elements:

- First Stage (sub-element –CF)
- J-2X Engine (sub-element –CJ)
- Vehicle Integration (sub-element –CV)

Revision -07: The purpose of this revision is to more accurately reflect the effort required during this period of performance. The Performance Plan and Risk Assessment have not been revised since there are no expected changes in task activities for this period of performance.

Sub-element -01:

Estimated labor was reduced by (b)(4) hours. The WBS number for this sub-element is changed to 724297.40.43.08.

Sub-element -02:

Estimated labor was increased by (b)(4) hours. ODC was increased by (b)(4) for relocation and recruiting expenses.

Sub-element -03:

Estimated labor was reduced by (b)(4) hours. ODC was increased by (b)(4) for relocation and recruiting expenses.

Sub-element -07:

Estimated labor was reduced by (b)(4) hours.

Sub-element -09:

Estimated labor was reduced by (b)(4) hours.

Sub-element -CF:

Estimated labor was increased by (b)(4) hours. ODC was increased by (b)(4) for relocation and recruiting expenses.

Sub-element -CI:

Estimated labor was reduced by (b)(4) hours.

Sub-element -CJ:

Estimated labor was decreased by (b)(4) hours. ODC was increased by (b)(4) for relocation and recruiting expenses.

Sub-element -CU:

Estimated labor was increased by (b)(4) hours. ODC was increased by (b)(4) for relocation and recruiting expenses.

Sub-element -CV:

Estimated labor changed as follows: (b)(4) increased by (b)(4) hours and (b)(4) increased by (b)(4) hours, and (b)(4) were reduced by (b)(4) hours. Estimated total labor hours decreased by (b)(4). Estimated travel was decreased by (b)(4). ODC was increased by (b)(4) for relocation and recruiting expenses.

This revision affects the following ARES Program Office sub-elements:

- First Stage (sub-element –CF)

- Ares I-I (sub-element –CI)
- Ares J2-X (sub-element –CJ)
- Upper Stage (sub-element –CU)
- Vehicle Integration (sub-element –CV)

Revision -06: The purpose of this revision is to add additional hours to sub-element -01 (b)(4) hours) to reflect additional support. Additionally, travel in support of sub-element – 01 was increased by (b)(4) and travel was added in support of sub-element –02 (b)(4) and travel was added in support of sub-element –03 (b)(4). The labor estimate on sub-element –02 was reduced by (b)(4) hours with a corresponding reduction in cost of (b)(4). Labor estimate sub-element -08 was reduced by (b)(4) hours with a corresponding reduction in cost of (b)(4). The labor estimate on sub-element –CF was reduced by (b)(4) hours with a corresponding reduction in cost of (b)(4). Labor estimate for sub-element –CU was reduced by (b)(4) hours with a corresponding reduction in cost of (b)(4). In addition, the estimate for Other Direct Charges (ODC) was increased to reflect meetings attended during this period of performance for sub-element –01 (b)(4) and sub-element –CV (b)(4). The Schedule, Performance Plan and Risk Assessment have not been revised since there are no expected changes in task activities for this period of performance.

Revision -05: The purpose of this revision is to extend this task into Contract Year 4 of 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 period of performance. This revision affects the following ARES Program Office elements, First Stage (sub-element –CF), Ares I-1 (sub-element –CI), Upper Stage Engine J2X (sub-element –CJ), Upper Stage (sub-element –CU), and Vehicle Integration (sub-element –CV).

Revision -04: The purpose of this revision is to increase the estimate for Other Direct Charges (ODC) to reflect conferences and meetings attended and relocation and recruiting expenses during this period of performance for sub-element -01 (b)(4) sub-element -03 (b)(4) sub-element –CF (b)(4) sub-element –CJ (b)(4) and sub-element –CV (b)(4). The Schedule, Performance Plan and Risk Assessment have not been revised since there are no expected changes in task activities for this period of performance.

Revision -03: The purpose of this revision is to more accurately reflect the effort required during this period of performance. Labor estimate on Sub-element -02 was reduced by (b)(4) hours with a corresponding reduction in cost of (b)(4). The Schedule, Performance Plan and Risk Assessment have not been revised since there are no expected changes in task activities for this period of performance. No additional budget is required.

Revision -02: The purpose of this revision is to add additional hours in order to provide EEE Parts Engineering support to sub-element -03 (b)(4) sub-element -06 (b)(4) sub-element -07 (b)(4) (b)(4), sub-element -08 (b)(4) sub-element -09 (b)(4) and to Constellation sub-elements CU ((b)(4) and CV (b)(4). In addition, travel in support of sub-element -06, the DC/DC Converter Working group has been removed to reflect task completion. This revision defines and estimates work for the period of 2 June 2008 through 26 September 2008.

Revision -01: The purpose of this revision is to add sub-element -09 in order to provide support to the Shuttle Propulsion System Engineering and Integration project office and to add EEE Parts Engineering Parts Obsolescence support to sub-element -03 and Constellation sub-elements CF, CJ, and CV. In addition, travel in support of sub-element -07 has been added to participate in a Technical Interchange Meeting with an SRB connector manufacturer. In addition, task order has been revised to indicate Team Lead change.

This Task Order (TO) is a continuation of work being performed on TO 31-040201 of the NNM05AB50C ESTS contract. This TO realigns work performed previously in EI42, and now supports ES43 within the new ED organizational structure. This TO defines and estimates work for the period of

1 March 2008 through 26 September 2008. For Subcontracted efforts, this TO authorizes work for the same period. TO 31-040201 will be revised for closure in March with an effective date of 29 February 2008.

This Task Order added Sub-elements -07 and -08 to the TO. In addition, funding for Sub-element -07 was added. Sub-element -08 has minimal funding added to it, as a place holder for small jobs that would require support from this task.

1.0 Task Order Description & Objectives

The Jacobs ESTS Group will provide Electrical, Electronic and Electromechanical (EEE) parts support to the EEE Parts Engineering & Analysis Team in the Engineering Directorate. The Jacobs ESTS Group will provide EEE parts support to ongoing and future MSFC programs and projects. Support will also be provided to the NASA EEE Parts Assurance Group (NEPAG) Parts Assurance Office/Steering Committee.

The work to be performed includes the following:

- Determine the viability of proposed component parts for space flight applications.
- Review the EEE parts database for alternate parts and support parts selection.
- Recommend replacement parts that meet flight requirements.
- Review EEE parts lists for compliance with requirements (to include as-designed and as-built parts lists)
- Evaluate EEE parts NSPARs, waivers, deviations, and analyses.
- Assist in troubleshooting EEE parts failures.
- Assist in developing and reviewing parts plans and determining appropriate screening of parts.
- Participate in Defense Supply Center Columbus (DSCC) audits of semiconductor and microcircuit manufacturers.
- Participate in the G12 Solid State Devices Committee of the Government Electronics Information and Technology Association (GEIA) coordination meetings.
- Participate in the Space Parts Working Group (SPWG) meetings.
- Review Military and industry EEE parts specifications, standards and studies for application to NASA programs.
- Review and comment on Military parts drawings, specifications and slash sheets.
- Attend weekly teleconferences with NEPAG members, work action items, support group action items, and provide inputs to NEPAG for NASA Headquarter requested items.

Sub-element -01: EEE Parts Support to NEPAG

This sub-element provides EEE parts support described above to ES43 and the NEPAG Parts Assurance Office/Steering Committee.

Sub-element -04: EEE Parts Support for MSRR

This subelement is closed.

Sub-element -06: EEE Parts Support for DC-DC Converter Working Group

This subelement is closed.

Sub-element -07: EEE Parts Support for the ET

This subelement is closed.

Sub-element -08: EEE Parts Support to Miscellaneous Jobs

This sub-element provides EEE Parts support described above to ES43 and to project offices for small programs requiring immediate support.

Sub-element -CF: EEE Parts Support for Ares First Stage Program

This subelement was administratively closed on July 3, 2010.

Sub-element -CI: EEE Parts Support for Constellation System Ares I-1 Program

This subelement was administratively closed on July 3, 2010.

Sub-element -CJ: EEE Parts Support for Ares J2-X Program

This Sub-element was administratively closed and the work corresponding to this sub-element is being continued under the TO# 37-000001 sub-element -CK.

Sub-element -CU: EEE Parts Support for Ares Upper Stage Program

This subelement was administratively closed on July 3, 2010.

Sub-element -CV: EEE Parts Support for Ares Vehicle Integration Program

This subelement was administratively closed on July 3, 2010.

Sub-element -JA: EEE Parts Support for ECLSS 2010 Spares

This sub-element provides EEE parts project/program support described above to ES43 and the Environmentally Controlled Life Support System (ECLSS) Spares.

Sub-element -SA: EEE Parts Support for the SRB

This sub-element provides EEE parts project/program support described above to ES43 and the Solid Rocket Booster (SRB) project office including in-house hardware and contractor supplied hardware.

Sub-element -SB: EEE Parts Support for SSME/AHMS

This sub-element provides EEE parts project/program support described above to ES43 and the Space Shuttle Main Engine (SSME) and the SSME Advanced Health Monitor System (AHMS).

Sub-element -SC: EEE Parts Support for PSE&I

This sub-element provides EEE parts project/program support described above to ES43 and the Propulsion Systems Engineering & Integration (PSE&I) project office including in-house hardware and contractor supplied hardware.

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 and Adobe Acrobat will be used to obtain NASA standards, military standards, and contractor documents as appropriate.

The Jacobs ESTS Group will support team meetings, teleconferences, Technical Interchange Meetings, (TIMs), etc., as required by the ES43, the supported projects, and NEPAG.

Travel will be taken to support project reviews and technical meetings, such as PDRs, CDRs, TIMs, etc, and for training or conferences as approved by ES43 or the supported project offices. The Jacobs ESTS Group will also support travel as necessary to provide support for NEPAG tasks such as Defense Supply Center Columbus audits, G12 meetings, and SPWG meetings. In addition, The Jacobs ESTS Group will also support travel as necessary to support EEE Parts related activities for the DC-DC Converter Working Group task, sub-element -06.

EEE parts lists, NSPARs, waivers, deviations and analyses, military parts drawings, parts specifications and slash sheets are required as inputs to perform this Task Order.

3.0 Discussion of Skills Required

ESTS Contract Task Order Request Performance Plan

Task Order Title: [EEE Parts Engineering](#)

Task Order Number: [37-040301](#) Revision: 12

Category	Weighting Technical %	End of Period Technical Score
Technical Objectives	65%	X 65% = Justification
1. Support weekly telecons with NASA EEE Parts Assurance Group (NEPAG) members. 2. Work action items. Support group action items. 3. Provide inputs to NEPAG for HQ requested items. 4. Initiate and respond to requests for changes to the NASA Parts Selection List (NPSL). Provide the wording and rationale for changes. 5. Support the maintenance of the NSPL product by providing technical inputs to implement recommended and accepted changes. 6. Review military/industry EEE parts specifications, standards and studies for the benefit of NASA programs. 7. Review EEE parts lists and support parts selection for compliance with project requirements. 8. Evaluate EEE parts NSPAR's, waivers, deviations, and analyses. 9. Support the resolution of EEE parts ALERT issues, anomalies, and failures.		
Schedule Objectives (Milestones)	Weighting Schedule % <u>10%</u> (min 10%)	Schedule Score X 10% = Justification
Provide response to EEE parts action items in a timely manner. Monthly activity reports.		
	Weighting Cost%	Cost Score

ESTS Contract Task Order Request Performance Plan

Task Order Title: [EEE Parts Engineering](#)

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<u>Cost (actual vs. negotiated)</u>	<u>25%</u> <i>(min.25%)</i>	X <u>25%</u> =
		Justification <div style="border: 1px solid black; height: 75px; width: 100%;"></div>
	Weighting Total % 100.00%	Total Score <div style="border: 1px solid black; height: 20px; width: 100%;"></div>

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: [EEE Parts Engineering](#)

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Comments:

Risk Assessment

Contract Number: NNM05AB50C
TO Title: EEE Parts Engineering
TO Number: 37-040301 **Revision:** 12

Period of Performance: 10/02/2010 to 9/30/2011

MSFC Initiator: Michael Selby

(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 risks have been identified.
Risk C2	Cost			
Risk T1	Technical			No technical risks have been identified.
Risk T2	Technical			
Risk S1	Schedule			No schedule risks have been identified.
Risk S2	Schedule			

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



