

## **Task Order Plan (TOP)**

**Contract Number:** NNM05AB50C  
**TO Title:** Shuttle GH2 Vent Leak Investigation Support  
**TO Number:** 32-040313 **Revision:** 04

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**Period of Performance:** 10/02/2010 to 03/31/2011

**MSFC Initiator:** Melanie Bodiford

(b)(4)

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**Emergency:** No

**WBS #**            **524238.08.01.01.03**

### **Revision 04:**

This Task Order (TO) defines and estimates work for the period October 2, 2010 through March 31, 2011 for Contract Year 6 of the NNM05AB50C ESTS contract. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance. Specific changes are:

- The Subelement for this effort has been renamed SA to indicate that it is a Shuttle Transportation System task.
- The Team 2B weekly status report deliverable has been deleted due to the maturity of the STS program.
- The October 2010 subcontractor estimate of (b)(4) is the same as the October 2010 estimate shown in Rev 3.

### **Revision 03:**

Please note that the October 2011 subcontractor estimate is anticipated invoiced subcontractor cost occurring in September 2010. This task will end October 1, 2010

The purpose of this revision is to modify the task objectives to reflect the current objectives at the request of the customer. There is no increase to the cost estimate. The Task Order Description & Objectives and Technical Approach in the Task Order Plan were modified to reflect current task requirements. The Performance Plan was updated to reflect the current task objectives, and the Risk Assessment was updated to reflect the current revision number.

### **Revision 02:**

The purpose of this revision is to increase the total cost estimate by (b)(4) to accommodate the customer's request to provide additional shuttle support relative to the KSC and MSFC support testing and coordination. The Risk Assessment was updated to reflect the current revision number.

Labor estimate increased by (b)(4)  
Subcontract estimate increased by (b)(4)

### **Revision 01:**

The purpose of this revision is to extend the Period of Performance (POP) to October 1, 2010 in order to accommodate the customer's request to provide additional shuttle support relative to the KSC and MSFC support testing and coordination. There is no impact to the cost estimate. The Schedule in the Task Order Plan was updated to reflect the current POP. The Risk Assessment was updated to reflect the current POP and revision number.

**Revision 00;**

This Task Order (TO) defines and estimates work for the period October 3, 2009 through February 28, 2010 for Contract Year 5 of the NNM05AB50C ESTS contract. This task reflects a continuation of support previously provided under TO 32-040306-02.

**1.0 Task Order Description & Objectives [updated at Rev. 03]**

Provided support for the STS-127 Ground Umbilical Carrier Plate (GUCP) Gaseous Hydrogen (GH2) leak anomaly investigation, Team 2B: Testing. Support studies of shuttle derived Heavy Lift Vehicle (HLV) in areas relating to ground system interfaces, ground operations concept development, test planning, and vehicle integration with KSC and range facilities.

**2.0 Technical Approach (Including required input, guidelines & assumptions) [updated at Rev. 03]**

Primary functions include working with the KSC GH2 Vent Arm engineer to perform field measurements and tests of the vent arm and GUCP at Pads 39A and 39B. Additional functions will be to coordinate use of the KSC Launch Equipment Test Facility (LETf), review and communicate test plans, and coordinate equipment shipment between NASA KSC and MSFC to support testing. Participate in technical interchange meetings.

**3.0 Discussion of Skills Required**

Senior level engineer with Shuttle operations experience is required. Personnel should be capable of utilizing Microsoft Office software. The ability to create and manipulate Excel spreadsheets and PowerPoint presentations is required.

**4.0 Special Tools Required**

None.

**5.0 Participating Subcontractors**

(b)(4)

**6.0 Milestones & Deliverables [updated at Rev.04]**

- (1) Monthly Activity Reports (MARs).
- (2) Other presentations and documents, as required.

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

Six trips are estimated in support of this task and is included as part of the subcontract estimate.

**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.



# ESTS Contract Task Order Request Performance Plan

Task Order Title: Shuttle GH2 Vent Leak Investigation Support

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Category	Weighting Technical %	End of Period Technical Score
<b>Technical Objectives</b>	65%	X 65% = <b>Justification</b>
<p>Shuttle GH2 Vent Leak Investigation Support            Provided support for the STS-127 Ground Umbilical Carrier Plate (GUCP) Gaseous Hydrogen (GH2) leak anomaly investigation, Team 2B: Testing. Primary functions include working with the KSC GH2 Vent Arm engineer to perform field measurements and tests of the vent arm and GUCP at Pads 39A and 39B. Additional functions will be to coordinate use of the KSC Launch Equipment Test Facility (LETF), review and communicate test plans, and coordinate equipment shipment between NASA KSC and MSFC to support testing.            Support studies of shuttle derived Heavy Lift Vehicle (HLV) in areas relating to ground system interfaces, ground operations concept development, test planning, and vehicle integration with KSC and range facilities.</p>		
<b>Schedule Objectives (Milestones)</b>	Weighting Schedule % 10% (min 10%)	Schedule Score X 10% = <b>Justification</b>
<p>(1)Monthly Status/Activity Report            (3)Other presentations and documents, as required.</p>		
<b><u>Cost (actual vs. negotiated)</u></b>	Weighting Cost% 25% (min.25%)	Cost Score X 25% = <b>Justification</b>

# ESTS Contract Task Order Request Performance Plan

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Weighting	Total Score
Total %	
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

## ESTS Contract Task Order Request Performance Plan

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**Comments:**

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**Risk Assessment**

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MSFC Initiator: Melanie Bodiford



**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	4	Nominal support efforts are associated with the estimate for this task. If unforeseen schedule demands require increased workload, additional funds may be needed to meet the increased requirements.
Risk C2	Cost			
Risk T1	Technical			No technical risk has been identified with this task.
Risk T2	Technical			
Risk S1	Schedule			No schedule risk has been identified with this task.
Risk S2	Schedule			

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



