

# THEMIS System Change Notice

SCN#: To Be Completed By CMO

Date: 20 August 2003

**Proposed Change Level (1, 2, 3, 4): 3**

**Proposed Change: Replace baseline PSI Titanium propulsion tanks with Arde' Inconel tanks**

**Lead Engineer: Ajluni**

**Subsystem: Probe Propulsion**

## Reason for Change:

ARDE' tank holds more fuel, is less expensive and has a quicker delivery schedule. Inconel material has been proven by UCLA to meet THEMIS magnetic requirements

## Reference Documentation Summary

See Attached Power Point Presentation

## Subsystem Impacted: (Bold indicates an impact)

|               |                |                   |                   |            |          |
|---------------|----------------|-------------------|-------------------|------------|----------|
| ACS           | C&DH           | <b>Mechanical</b> | <b>Propulsion</b> | Booms      | IDPU S/W |
| Battery       | EGSE           | MGSE              | RF Comm           | <b>EFI</b> | SST      |
| Bus           | Harness        | Mission Ops       | Solar Array       | ESA        | SCM      |
| Avionics Unit | I&T            | Power             | Thermal           | FGM        |          |
| BUS S/W       | Launch Vehicle |                   |                   | IDPU       |          |

## Minutes Summary (Systems Engineering Meeting):

Telcon in July obtains UCB general concurrence. Discussion includes review of the vendor down selection process and detailed cost, schedule, and production data on the selected vendor Arde'.

Early August Ellen Taylor give formal concurrence to buy larger Arde Tanks but requests updated SCN with latest mass estimate and EFI added to signoff.

This Revision A (including attachment) completes all required actions.

## **Approval**

### **PROPRIETARY**

YES ☐ NO ☐

**Project Manager**

**Date**

**Systems**

**Impacted Subsystem Lead**

## Distribution

- Subsystem trades (level 4) can be made within the resources of the subsystem. Systems Engineer insight and involvement.
- Trades that impact subsystem/system interfaces or resource allocations (level 3/level 2) require concurrence by the Configuration Control Board (CCB): Principal Investigator, Project Manager, Mission Systems Engineer (MSE), Probe Systems Engineer, Mission Operations Manager and affected Team Leads. GSFC Mission Manager insight.
- Trades that impact Level 1 *baseline* science/programmatic requirements must include approval by Principal Investigator and GSFC Mission Manager.
- Trades that impact Level 1 *minimum* science/programmatic requirements must include approval by NASA HQ.

**Date**