

CRITICAL ITEMS LIST (CIL)

SYSTEM:	Thermal Protection System	FUNCTIONAL CRIT:	1
SUBSYSTEM:	LH2 Aft Dome	PHASE(S):	b, c
REV & DATE:	J, 12-19-97	HAZARD REF:	T.02
DCN & DATE:			
ANALYSTS:	B. Burkes/R. Lauts		

FAILURE MODE: Loss of SLA Material

FAILURE EFFECT: b) Loss of mission and vehicle/crew due to early engine shutdown or fire/explosion caused by loss of propellant quality.
 c) Loss of life caused by EF impacting outside the footprint due to early breakup during reentry.
 Loss due to debris impacting Orbiter in critical areas during TAL abort.

TIME TO EFFECT: Seconds

FAILURE CAUSE(S): A: Material Deficiency
 B: Process Deficiency

REDUNDANCY SCREENS: Not Applicable

FUNCTIONAL DESCRIPTION: This ablative material provides thermal protection for the LH2 Aft Dome Apex/Marhole area from ascent and reentry environments.

<u>FMEA ITEM CODE(S)</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY</u>	<u>EFFECTIVITY</u>
5.1.3.1	B0971028426	Manhole Cover, TPS Appl	2	LWT-54 & Up
	B0974038417	SLA Panel Instl	1	LWT-54 & Up
	B0971068422	TPS C/O, SLA & Foam, Bldg 420 (Views H & C)	1	LWT-54 & Up

REMARKS: The Apex/Marhole Cover SLA-561 applications are grouped as the failure mode, causes and effects are the same.

CRITICAL ITEMS LIST (CIL)
CONTINUATION SHEET

SYSTEM: Thermal Protection System
SUBSYSTEM: LM2 Aft Dome
FMEA ITEM CODE(S): 5.1.3.1

REV & DATE: J, 12-19-97
DCR & DATE:

RATIONALE FOR RETENTION

STP1506, 1508, 1510, 1522, 3003, 3004, 5009, 5013 and 6005-II are applicable to this FMEA Item Code. See Page 1 for Retention Rationale specified by these STP's. The following additional Retention Rationale is also applicable to this FMEA Item Code:

DESIGN:

No additional Rationale for Retention is applicable.

TEST:

The Apex/Manhole Cover SLA Applications are certified. Reference RCS's MMC-ET-TM08-L-T001, T503 and T505. Refer to the RCS(s) for effectivity data applicable to specific part numbers and material type.

INSPECTION:

No additional Rationale for Retention is applicable.

FAILURE HISTORY:

Current data on test failures, unexplained anomalies and other failures experienced during ground processing activity can be found in the PRACA data base.