Failure Modes and Effects Analysis/Critical Items List

Document Number:JSC-38378Document Rev. No.:CDocument Date:8/26/97Title:Risk Assessment Executive Summary Report (RAESR) for the USA SAFER

Subsystem Name: Propuls	Qty: 0-PL3VE, 269-538-PL3VE sion & GN ₂ working pressure	0	MEA Number: PRU Name: PRU Part Number:	US-SFR-090 SAFER SED33105900-311
Item Type Designator: Reference Designator/Find No Logistics Control Number:	C .: N/A N/A	PG/IP Identifier: Drawing Number	N/A r: SED33105904	, SED33105972
End Item Name:SAFEREnd Item Capability:Six degrees of freedom through 24 thrusters, each rated at 0.8 ± 0.08 lbs. force in vacuum.End Item Function:Provides emergency EVA self-rescue for separated crewmember.ISS Zone:EVAShuttle Zone:				
Critical Item: Yes: Success Paths:	No: <u>X</u>	Criticality Criticality Category Success Paths Ren		Shuttle 1R/3
Failure (Mode, Cause, Detection, Corrective Action) Failure Mode: Regulator fails open. Failure Mode Code: Evaluation (O-ring or spring failure) Failure Detection: Evaluation Flight: IVA – None. EVA – Increase in thruster response. LCD will display pressure drop with a flashing tank pressure message. The message "Excessive Leak" will be displayed. Ground: Functional Test. Time To Detect Quantity: 10 Time To Detect Units: Seconds Correcting Action: IVA – None.				
EVA - Remarks: None	- None. Operations	Affected Sta	i ge(S): EVA Opera	tions
Failure Effect On ORU/Assembly: First/Second Failure: Inadvertent EVA crewmember separation.				
	tor fails open. Relief valve scue. Depletion of GN ₂ tank. Prevents self rescue. Possible loss of EVA cre	vents high-pressure	-	of GN_2 flow to thrusters and
	Rad	lundancy Screen		
ISS (Shuttle) Checkout Pre-Launch (A): Checkout On-Orbit (B): Detection Flight Crew: Loss Of Redundancy From A Single Cause (C):	Pass N/A Pass Or N/A	-	Ground Crew: Fa	ail