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PRINT DATE: 09/07/94

**FAILURE MODES EFFECTS ANALYSIS (FMEA) - CRITICAL HARDWARE  
NUMBER: 05-6WA-2179HB -X**

**SUBSYSTEM NAME: EPD&C - WATER SPRAY BOILER**

**REVISION: 0 07/26/94**

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	<b>PART NAME VENDOR NAME</b>	<b>PART NUMBER VENDOR NUMBER</b>
LRU	: AFT PCA 4, 5, AND 6	VO70-765280
SRU	: REMOTE POWER CONTROLLER	MC450-0017-3200
SRU	: REMOTE POWER CONTROLLER	MC450-0017-2200
SRU	: REMOTE POWER CONTROLLER	MC450-0017-1200

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**PART DATA**

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**EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:  
REMOTE POWER CONTROLLER, RPC (20 AMPS), WSB CONTROLLER "B".**

**REFERENCE DESIGNATORS: 54V76A134RPC19  
54V76A134RPC20  
55V76A135RPC19  
55V76A135RPC20  
56V76A136RPC19  
56V76A136RPC20**

**QUANTITY OF LIKE ITEMS: 6  
SIX**

**FUNCTION:  
THE REMOTE POWER CONTROLLER (RPC) POWERS THE ASSOCIATED WATER SPRAY  
BOILER (WSB) CONTROLLER "B". WSB CONTROLLER "A" FOR EACH WSB IS POWERED  
FROM A DIFFERENT MAIN BUS.**

**FAILURE MODES EFFECTS ANALYSIS (FMEA) - NONCRITICAL FAILURE MODE  
NUMBER: 05-6WA-2179HB- 01**

REVISION# 0 07/26/94

SUBSYSTEM NAME: EPD&C- WATER SPRAY BOILER

LRU: AFT PCA-4, 5, 6

ITEM NAME: REMOTE POWER CONTROLLER

CRITICALITY OF THIS  
FAILURE MODE: 1R3

**FAILURE MODE:**

LOSS OF OUTPUT, FAILS TO CONDUCT, FAILS TO TURN ON

**MISSION PHASE:**

PL	PRE-LAUNCH
LO	LIFT-OFF
OO	ON-ORBIT
DO	DE-ORBIT
LS	LANDING/SAFING

**VEHICLE/PAYLOAD/KIT EFFECTIVITY:**

102	COLUMBIA
103	DISCOVERY
104	ATLANTIS
105	ENDEAVOUR

EFFECTIVE FOR WSB INLET LINE ELECTRICAL  
HEATER MOD ONLY

**CAUSE:**

PIECE PART FAILURE, CONTAMINATION, VIBRATION, MECHANICAL SHOCK, PROCESSING ANOMALY, THERMAL STRESS

**CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO**

**REDUNDANCY SCREEN**

A) PASS
B) PASS
C) PASS

**PASS/FAIL RATIONALE:**

- A)
- B)
- C)

**- FAILURE EFFECTS -**

**(A) SUBSYSTEM:**

LOSS OF POWER TO CONTROLLER "B" OF ASSOCIATED WATER SPRAY BOILER

**(B) INTERFACING SUBSYSTEM(S):**

LOSS OF REDUNDANCY FOR CONTROL OF AFFECTED WSB.

**(C) MISSION:**

NO EFFECT - FIRST FAILURE.

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FAILURE MODES EFFECTS ANALYSIS (FMEA) - NONCRITICAL FAILURE MODE  
NUMBER: 05-6WA-2179HB-01

(D) CREW, VEHICLE, AND ELEMENT(S):  
NO EFFECT - FIRST FAILURE.

(E) FUNCTIONAL CRITICALITY EFFECTS:  
POSSIBLE LOSS OF CREW/VEHICLE WITH THIS FAILURE AND LOSS OF CONTROLLER 'A'  
AND LOSS OF A SECOND APU/HYD SYSTEM.

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- APPROVALS -

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PRODUCT ASSURANCE ENGR : C. RESSIA  
DESIGN ENGINEERING : G. SCHWARTZ

*Carlo J. P. P. P.*  
*09-23-94*